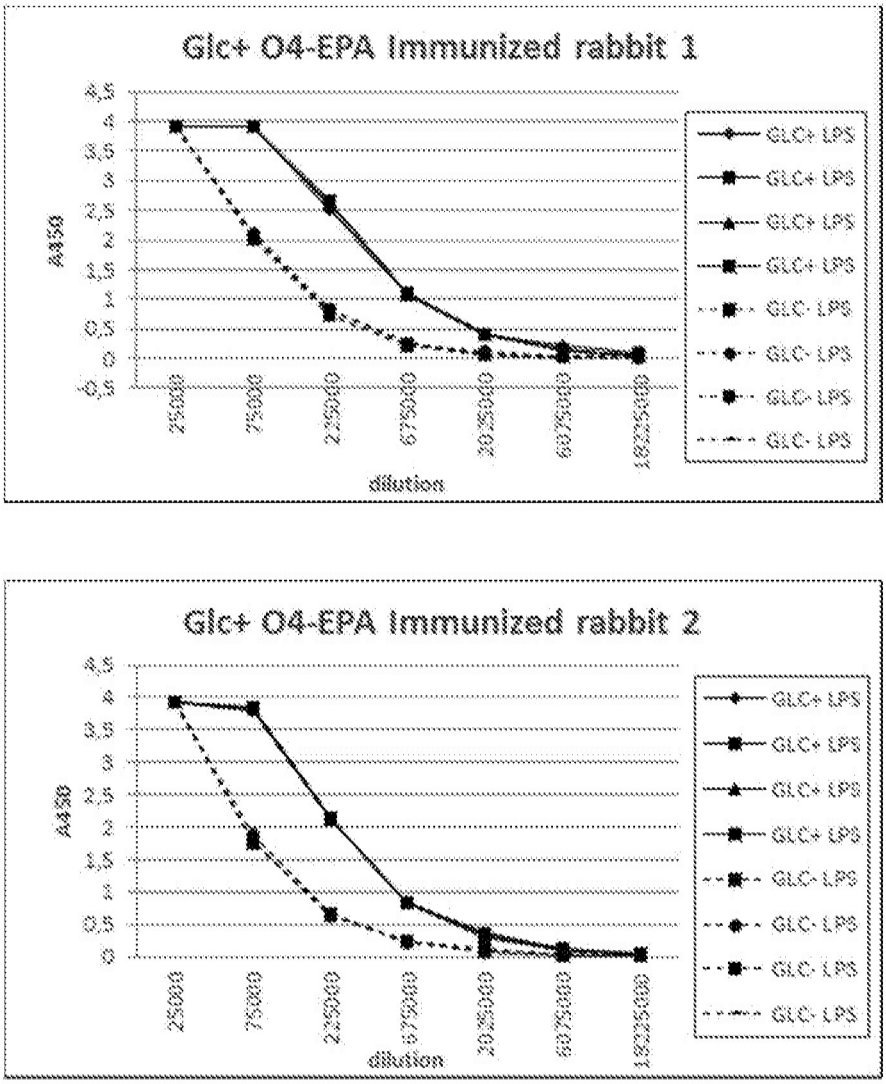

Glc+ O4-EPA Immunized rabbit 1
A450
dilution
GLC+ LPS
GLC+ LPS
GLC+ LPS
GLC+ LPS
GLC- LPS
GLC- LPS
GLC- LPS
GLC- LPS
Glc+ O4-EPA Immunized rabbit 2
A450
dilution
GLC+ LPS
GLC+ LPS
GLC+ LPS
GLC+ LPS
GLC- LPS
GLC- LPS
GLC- LPS
GLC- LPS

Fig. 1

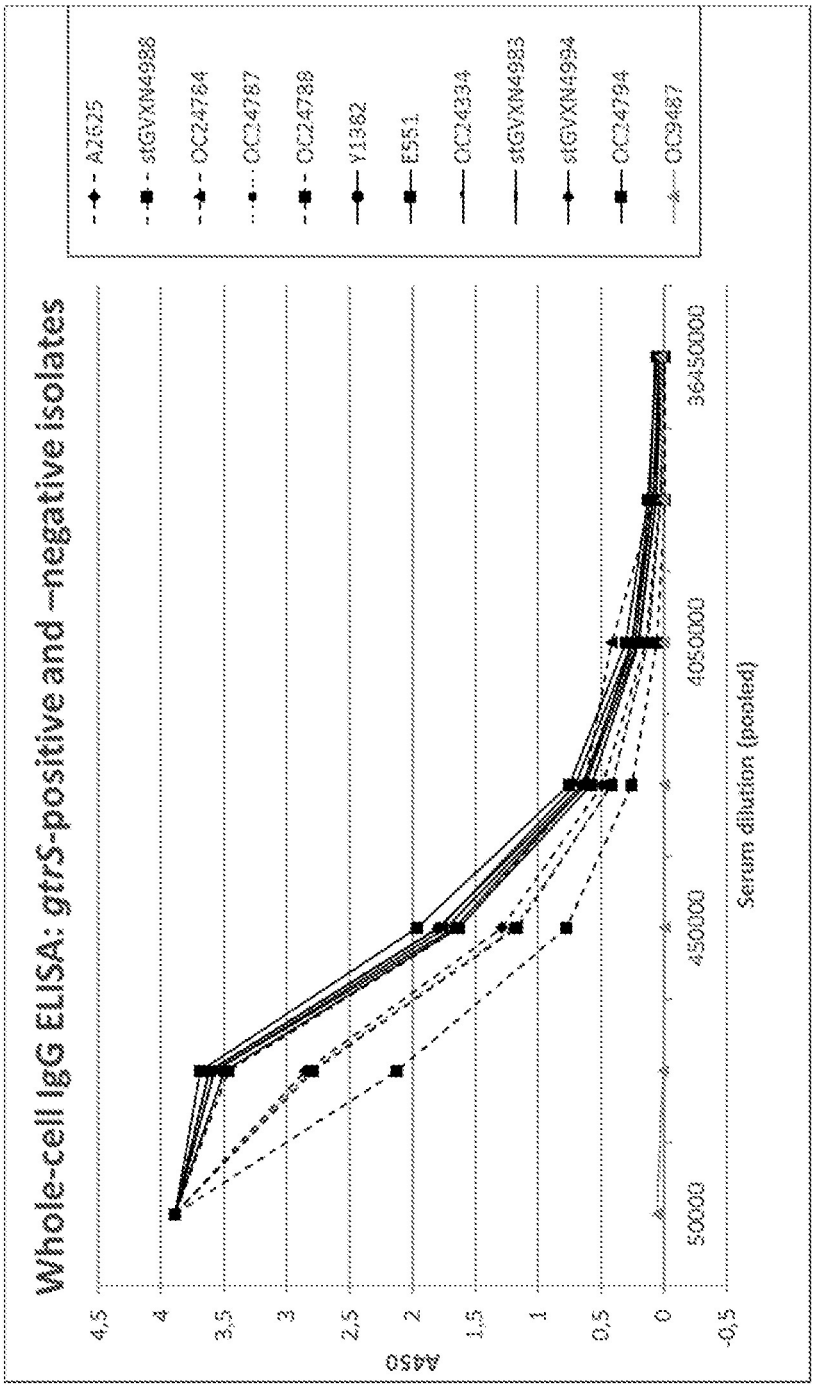
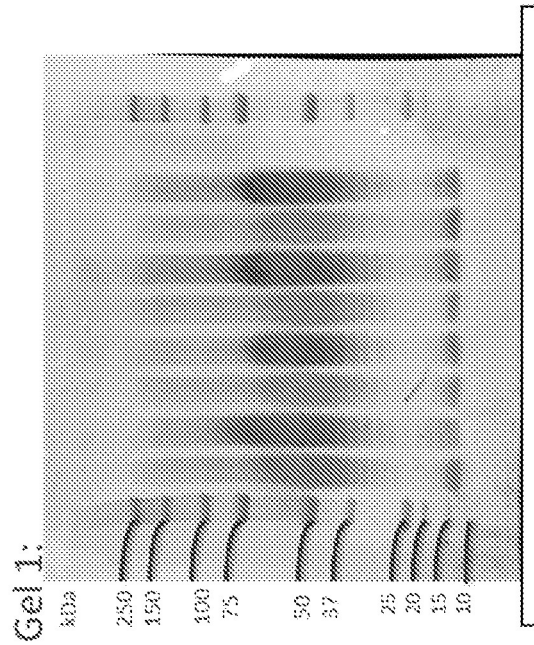
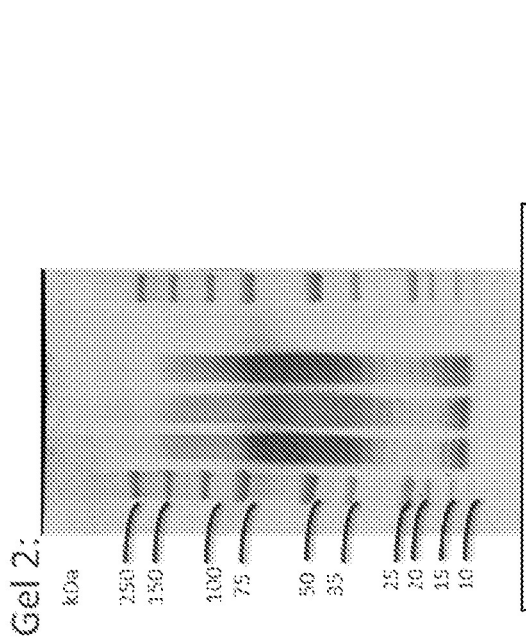

Whole-cell IgG ELISA: grtS-positive and –negative isolates
A450
Serum dilution (pooled)
50000
450000
4050000
36450000
4.5
4
3.5
3
2.5
2
1.5
1
0.5
0
-0.5
A2625
stGVXM4988
OC24784
OC24787
OC24788
Y1382
ES51
OC24334
stGVXM4983
stGVXM4994
OC24794
OC9487

Fig. 2

Fig. 3



Lane	Sample Name	gtr5	Amount loaded (µl)
1	Marker	NA	5.0
2	A2625	Negative	4.0
3	Y1382	Positive	3.8
4	sIGVXM4966	Negative	4.2
5	E551	Positive	3.9
6	GC24784	Negative	4.3
7	GC24334	Positive	4.1
8	GC24787	Negative	4.2
9	sIGVXM4983	Positive	3.9
10	GC9487 neg. control	NA	4.1
11	Marker	NA	5.0
12	EMPTY		



Lane	Sample Name	gtr5	Amount loaded (µl)
1	Marker	NA	5.0
2	sIGVXM4994	Positive	4.0
3	GC24788	Negative	4.2
4	GC24798	Positive	3.9
5	GC9487 neg. control	Rejected	4.1
6	Marker	NA	5.0

Fig. 4A

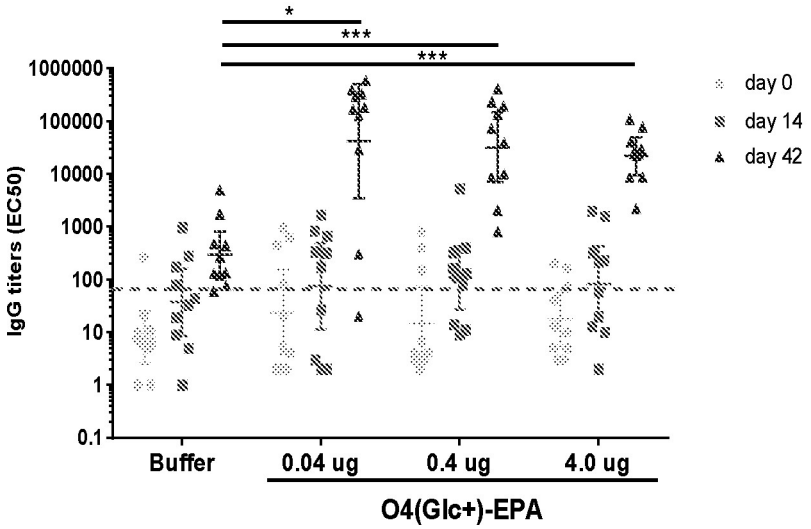

*
***
***
1000000
100000
10000
1000
100
10
1
0.1
IgG titers (EC50)
day 0
day 14
day 42
Buffer
0.04 ug
0.4 ug
4.0 ug
O4(Glc+)-EPA

Fig. 4B

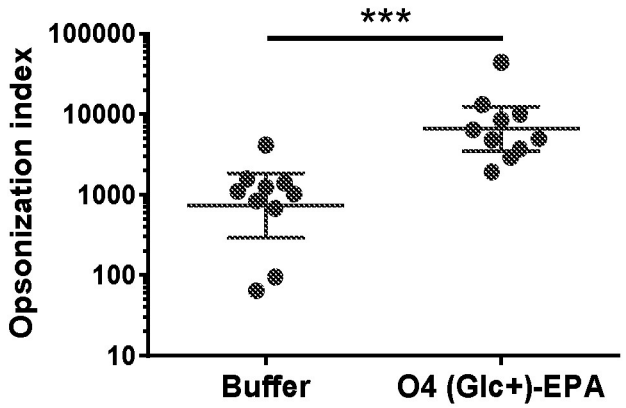

***
100000
10000
1000
100
10
Opsonization index
Buffer
O4 (Glc+)-EPA

Fig. 5

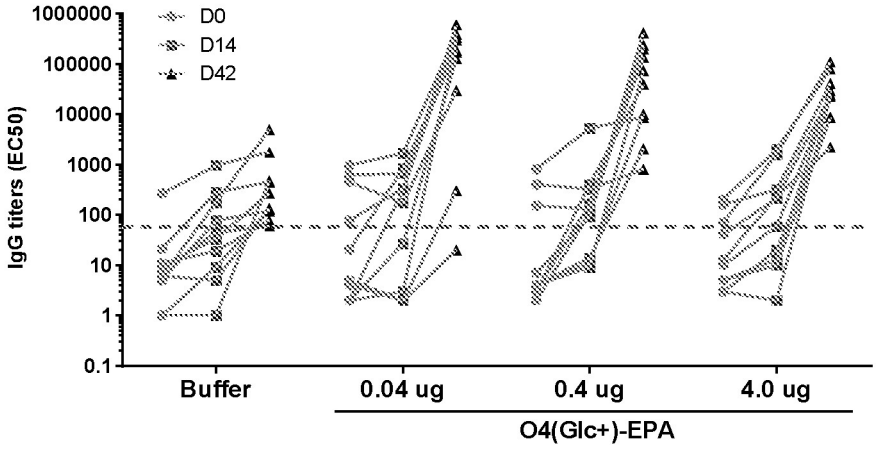

D0
D14
D42
IgG titers (EC50)
1000000
100000
10000
1000
100
10
1
0.1
Buffer
0.04 ug
0.4 ug
4.0 ug
O4(Glc+)-EPA

Fig. 6

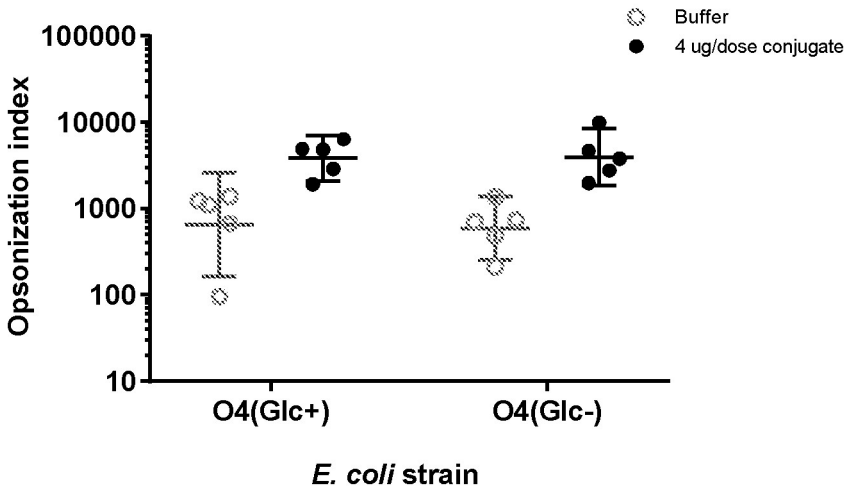
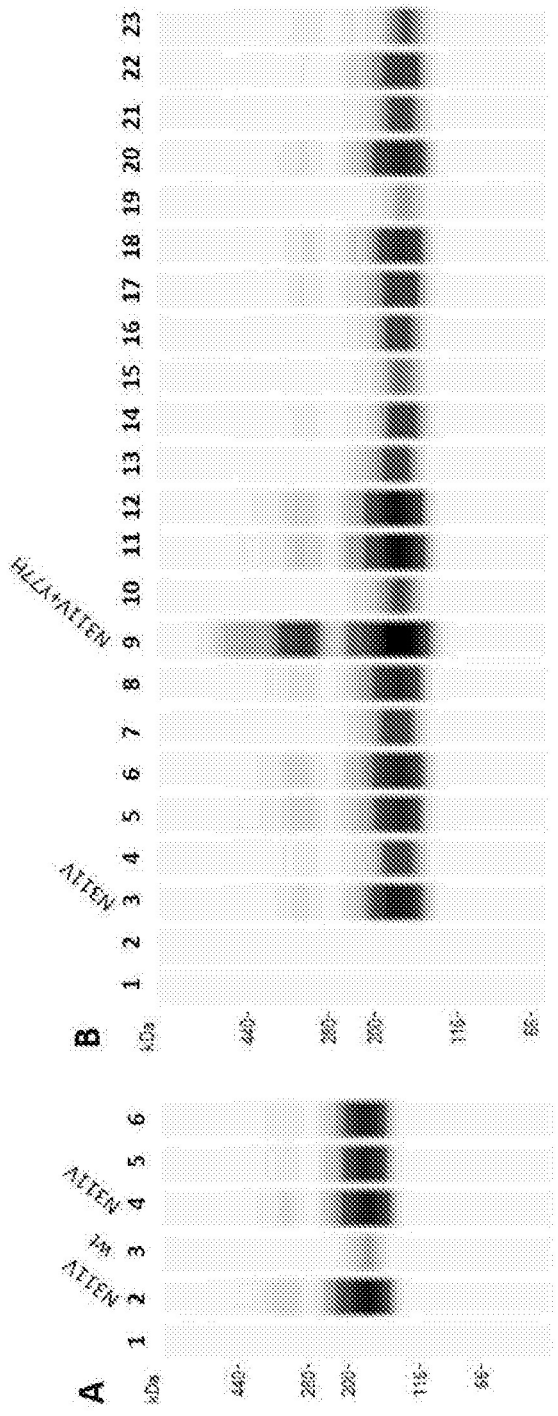

Buffer
4 ug/dose conjugate
Opsonization index
100000
10000
1000
100
10
O4(Glc+)
O4(Glc-)
E. coli strain

Fig. 7


A
kDa
460
260
160
110
60
1
2
3
4
5
6
ATTEN
ATTEN
B
kDa
460
260
160
110
60
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
ATTEN
HELA/ATTEN

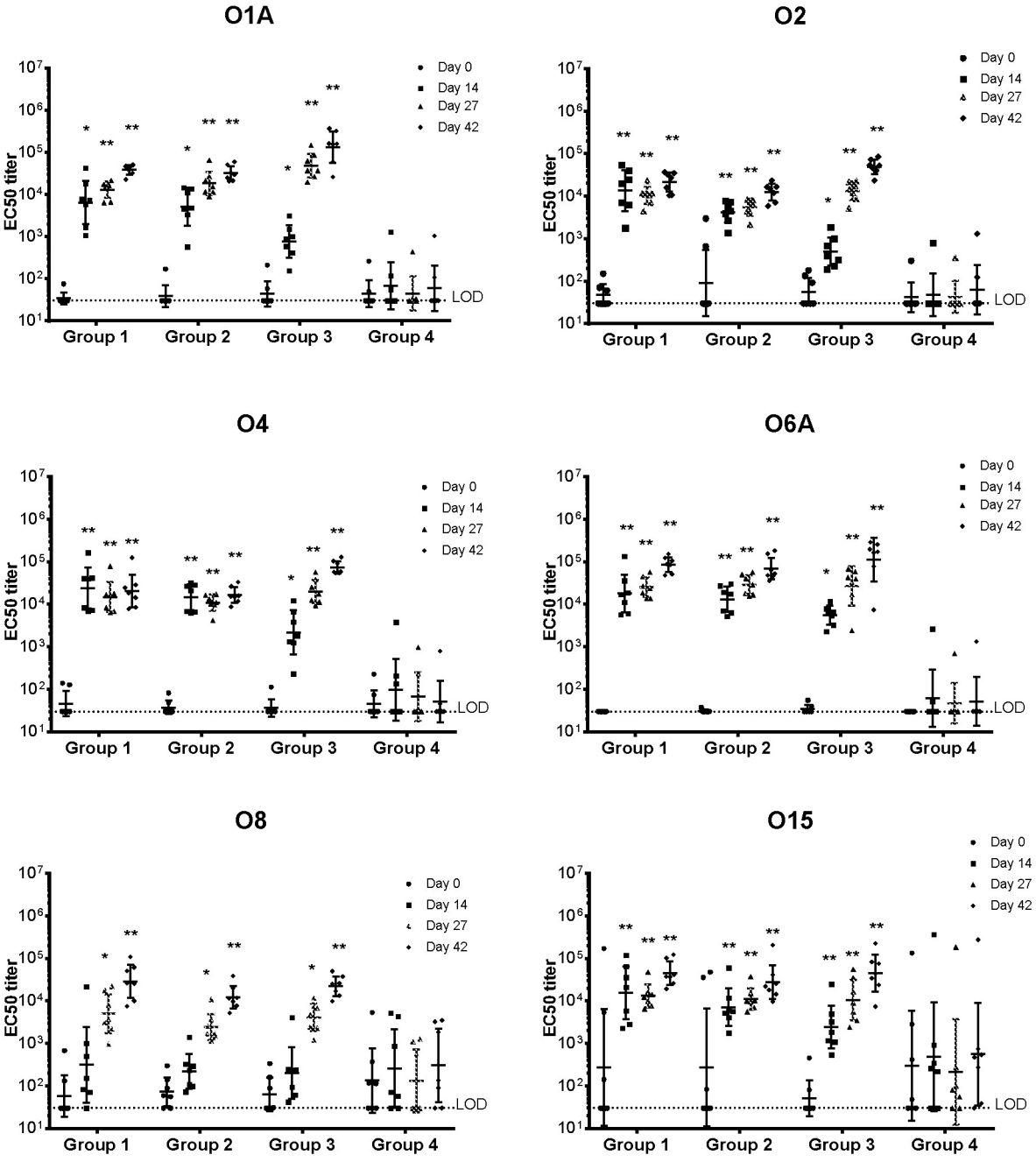

O1A
O2
O4
O6A
O8
O15
EC50 titer
Day 0
Day 14
Day 27
Day 42
LOD
Group 1
Group 2
Group 3
Group 4

Fig. 8

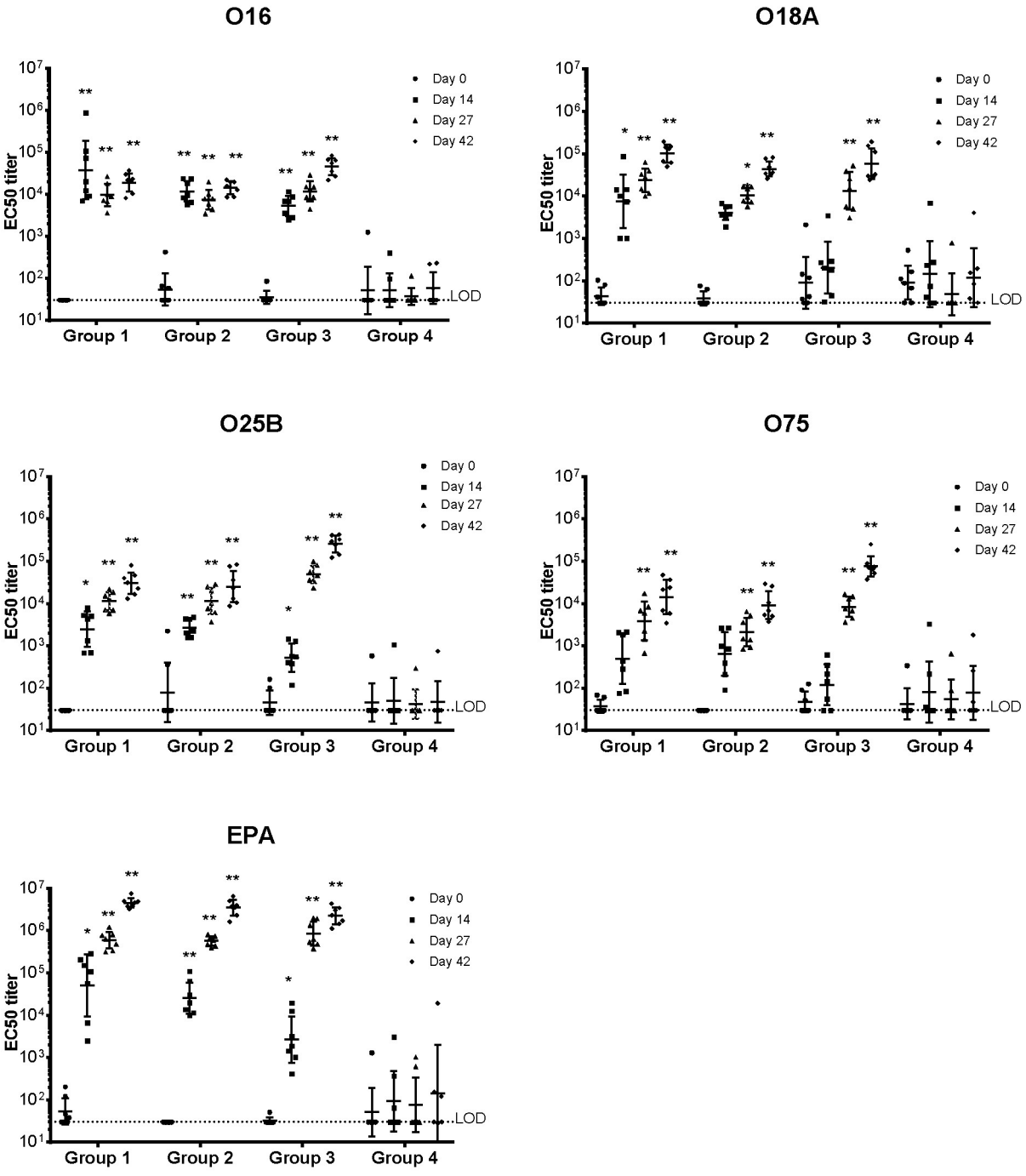


Fig. 8 - continued

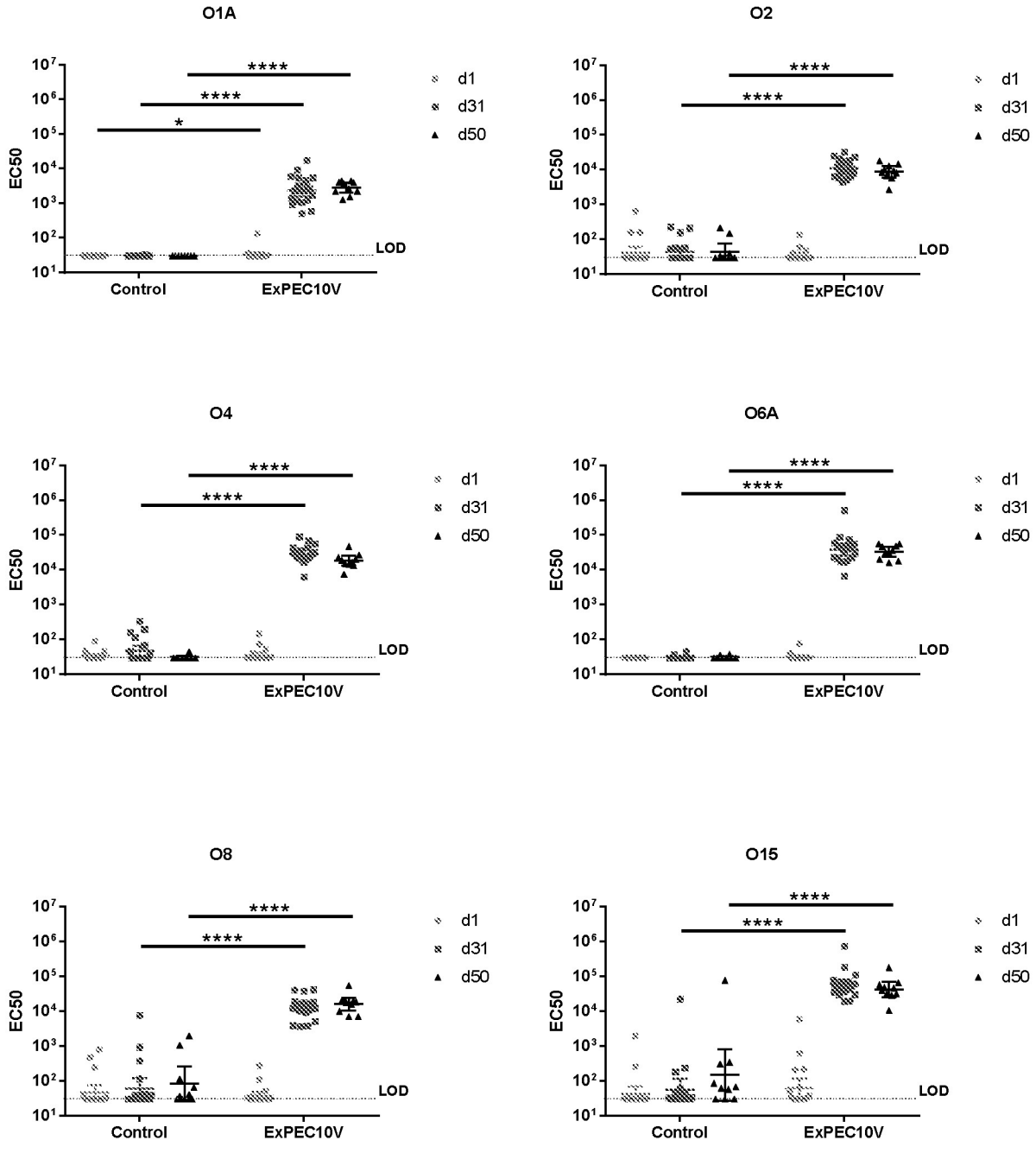


Fig. 9

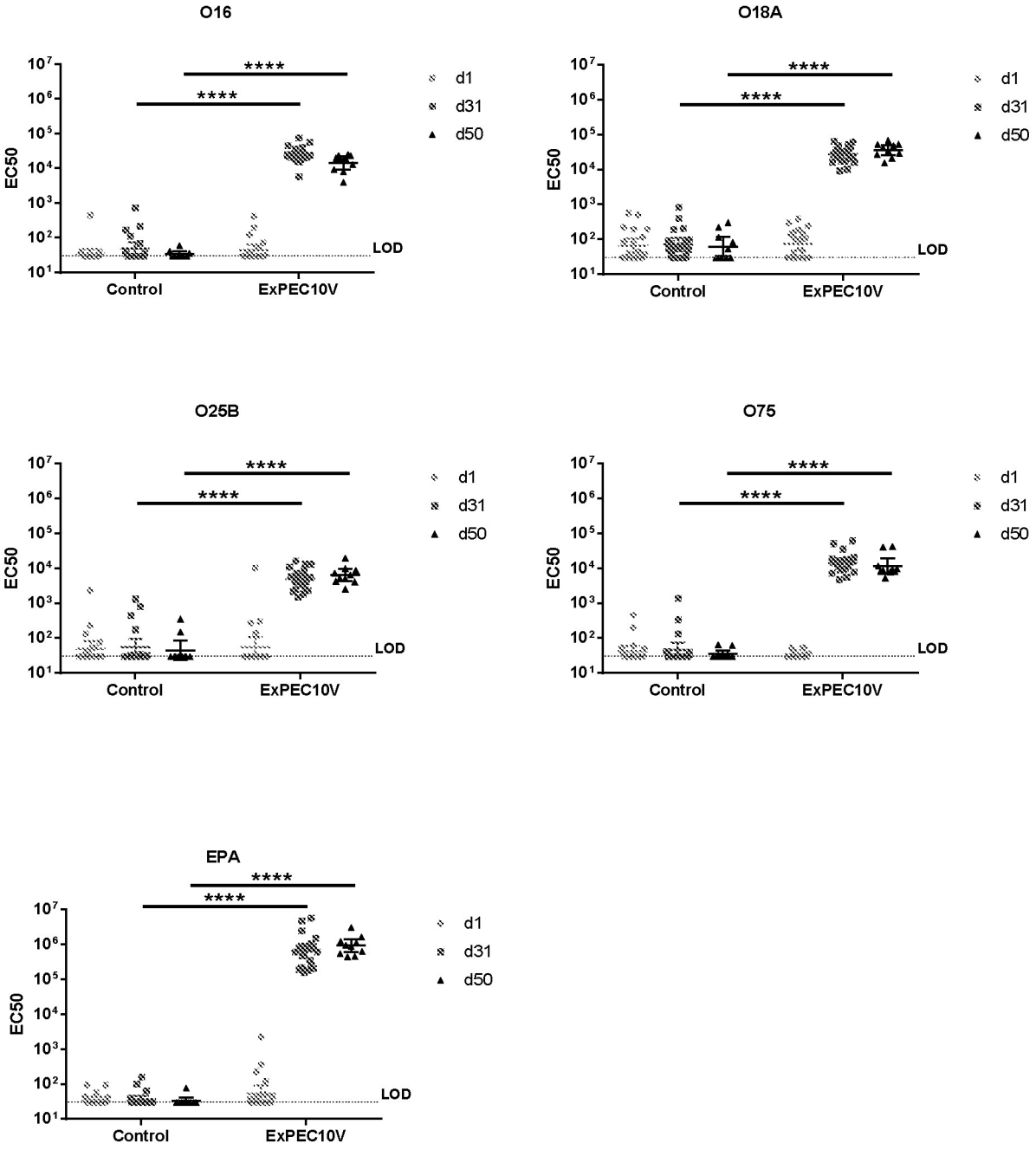
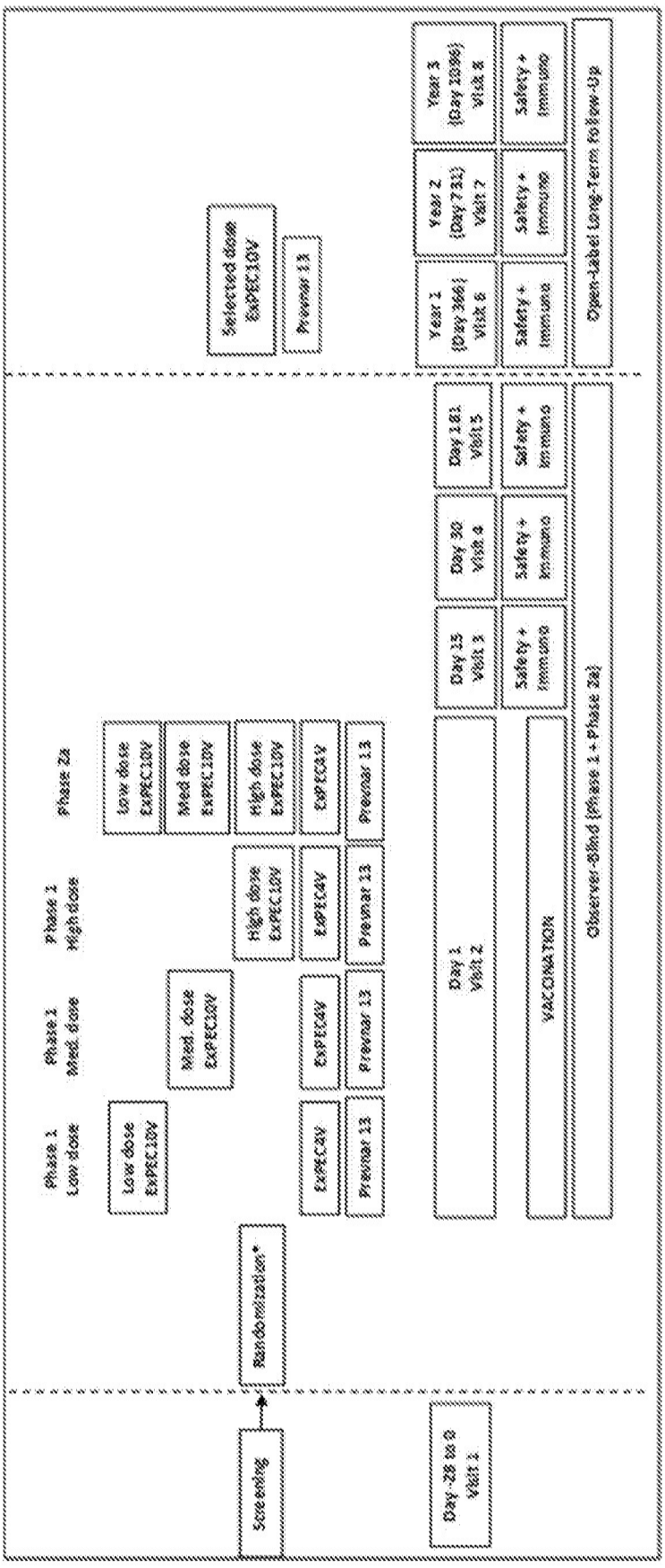


Fig. 9 - continued

Fig. 10A


Screening
Day -28 to 0
Visit 1
Randomization*
Phase 1
Low dose
Low dose
EXPEC10V
EXPEC4V
Prevnar 13
Phase 1
Med. dose
Med. dose
EXPEC10V
EXPEC4V
Prevnar 13
Phase 1
High dose
High dose
EXPEC10V
EXPEC4V
Prevnar 13
Phase 2a
Low dose
EXPEC10V
Med dose
EXPEC10V
High dose
EXPEC10V
EXPEC4V
Prevnar 13
Day 1
Visit 2
Day 15
Visit 3
Day 30
Visit 4
Day 181
Visit 5
Safety +
Immuno
VACCINATION
Observer-Blind (Phase 1 + Phase 2a)
Year 1
(Day 366)
Visit 6
Year 2
(Day 731)
Visit 7
Year 3
(Day 1096)
Visit 8
Safety +
Immuno
Open-label Long-Term Follow-Up
Selected dose
EXPEC10V
Prevnar 13

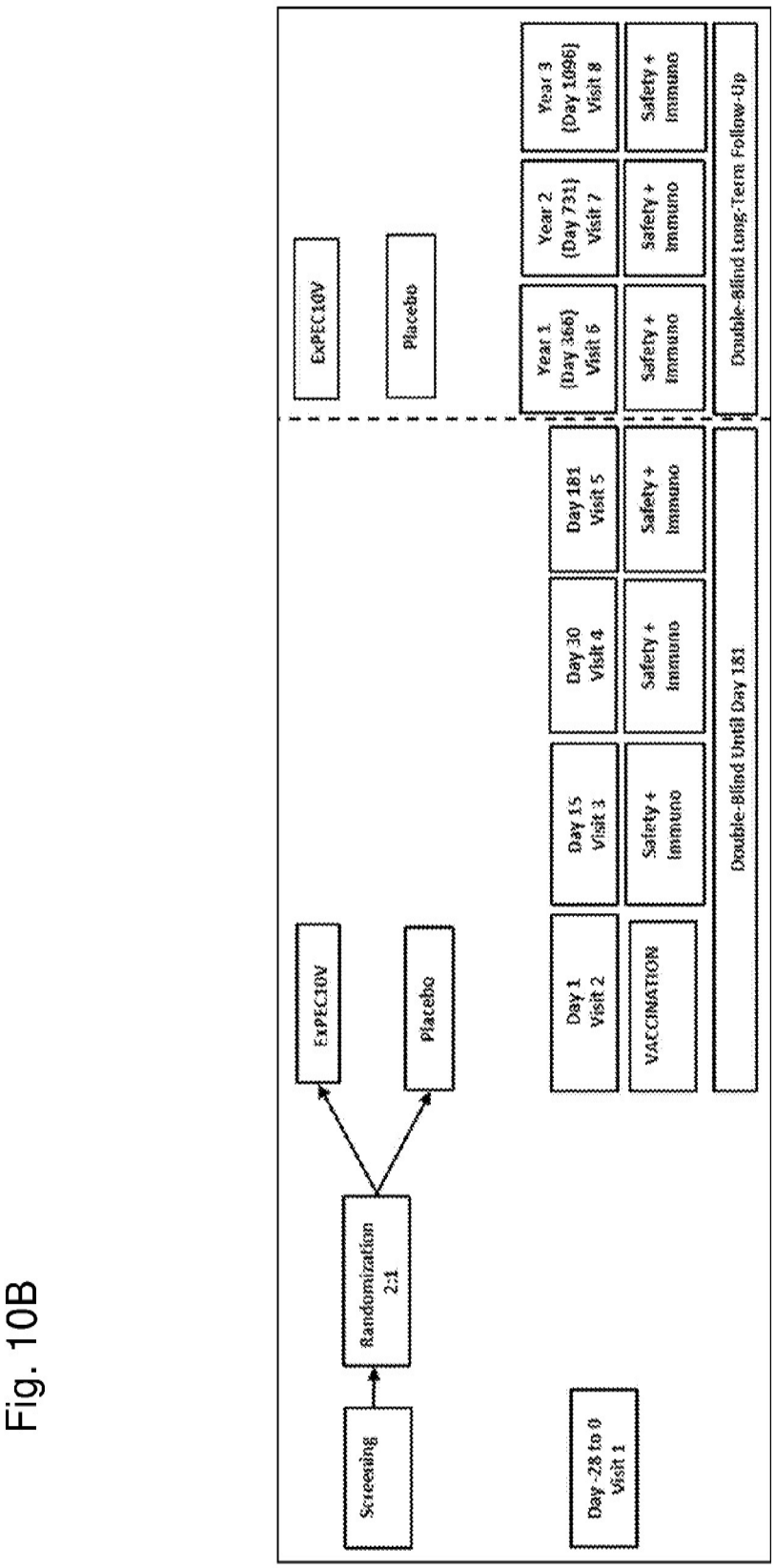

Screening
Day -28 to 0
Visit 1
Randomization
2:1
EXPEC10V
Placebo
Day 1
Visit 2
Day 15
Visit 3
Day 30
Visit 4
Day 181
Visit 5
VACCINATION
Safety +
Immuno
Double-Blind Until Day 181
Year 1
(Day 366)
Visit 6
Year 2
(Day 731)
Visit 7
Year 3
(Day 1096)
Visit 8
Double-Blind Long-Term Follow-Up

Fig. 10B