Figure 1

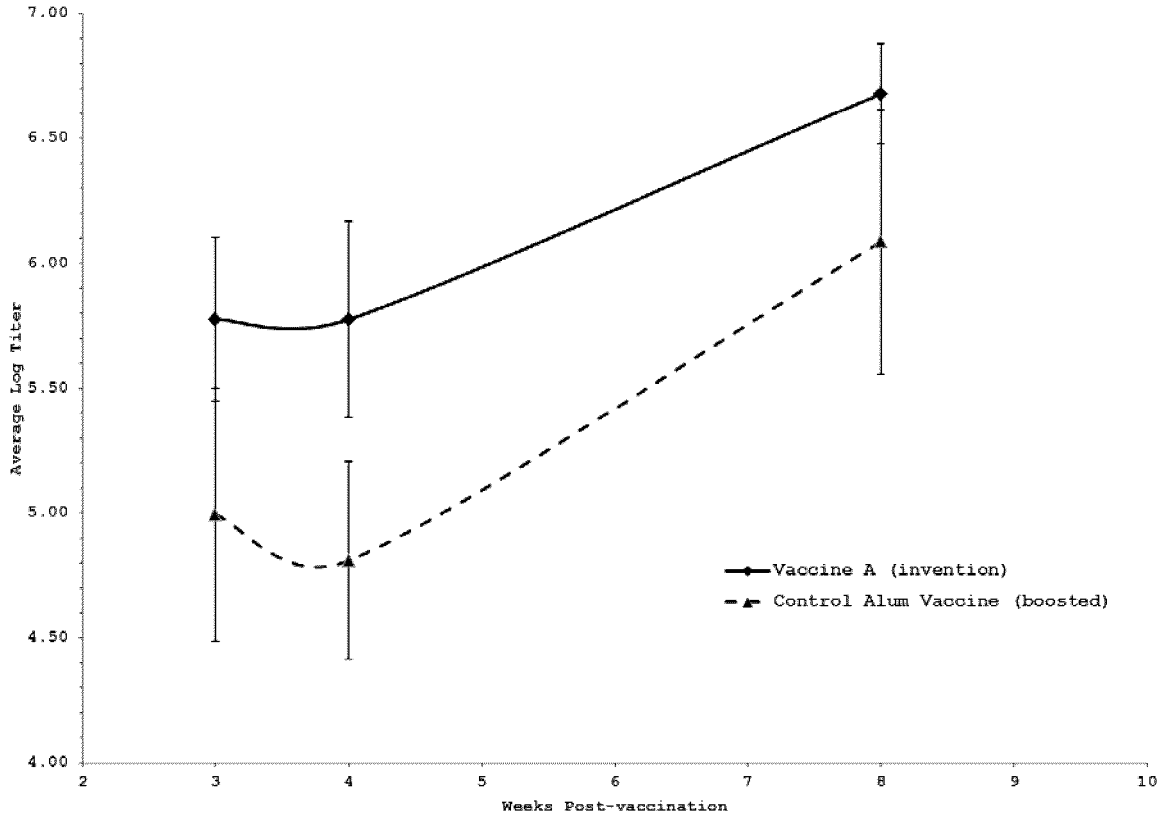

7.00
6.50
6.00
5.50
5.00
4.50
4.00
Average Log Titer
2
3
4
5
6
7
8
9
10
Weeks Post-vaccination
Vaccine A (invention)
Control Alum Vaccine (boosted)

Figure 2

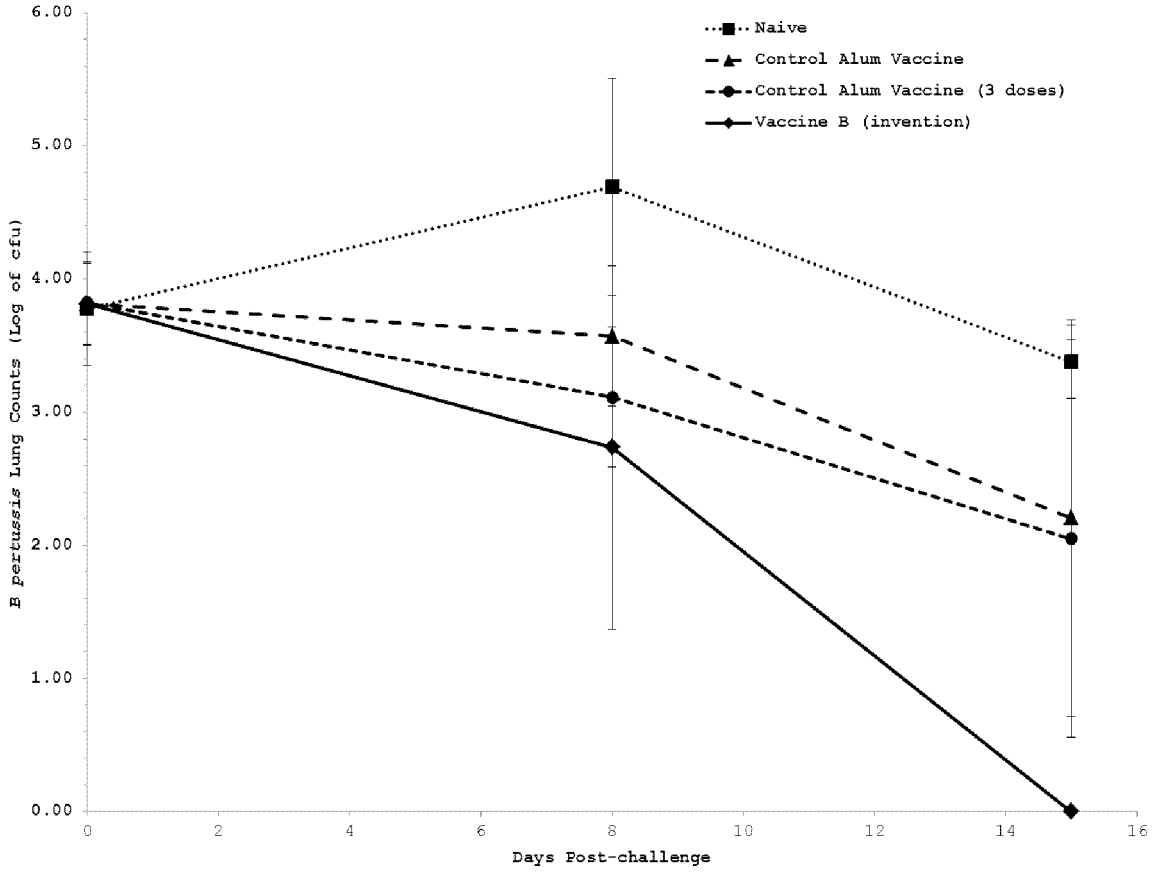

Naive
Control Alum Vaccine
Control Alum Vaccine (3 doses)
Vaccine B (invention)
B pertussis Lung Counts (Log of cfu)
6.00
5.00
4.00
3.00
2.00
1.00
0.00
0
2
4
6
8
10
12
14
16
Days Post-challenge

Figure 3

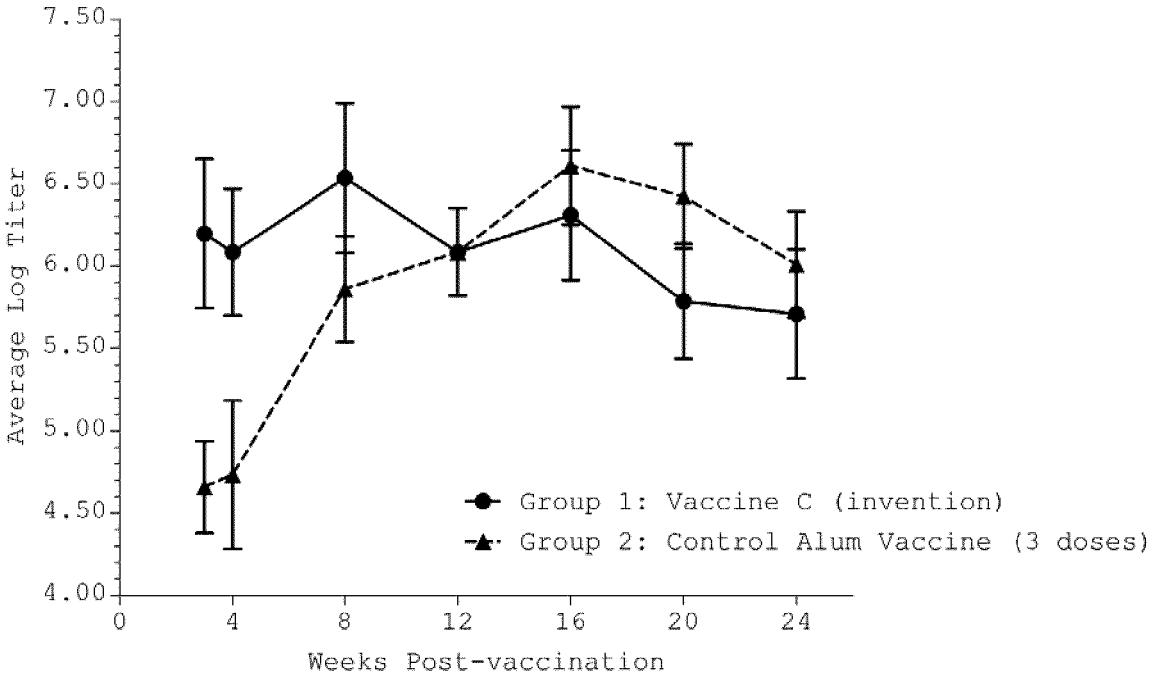

7.50
7.00
6.50
6.00
5.50
5.00
4.50
4.00
Average Log Titer
0
4
8
12
16
20
24
Weeks Post-vaccination
Group 1: Vaccine C (invention)
Group 2: Control Alum Vaccine (3 doses)

Figure 4

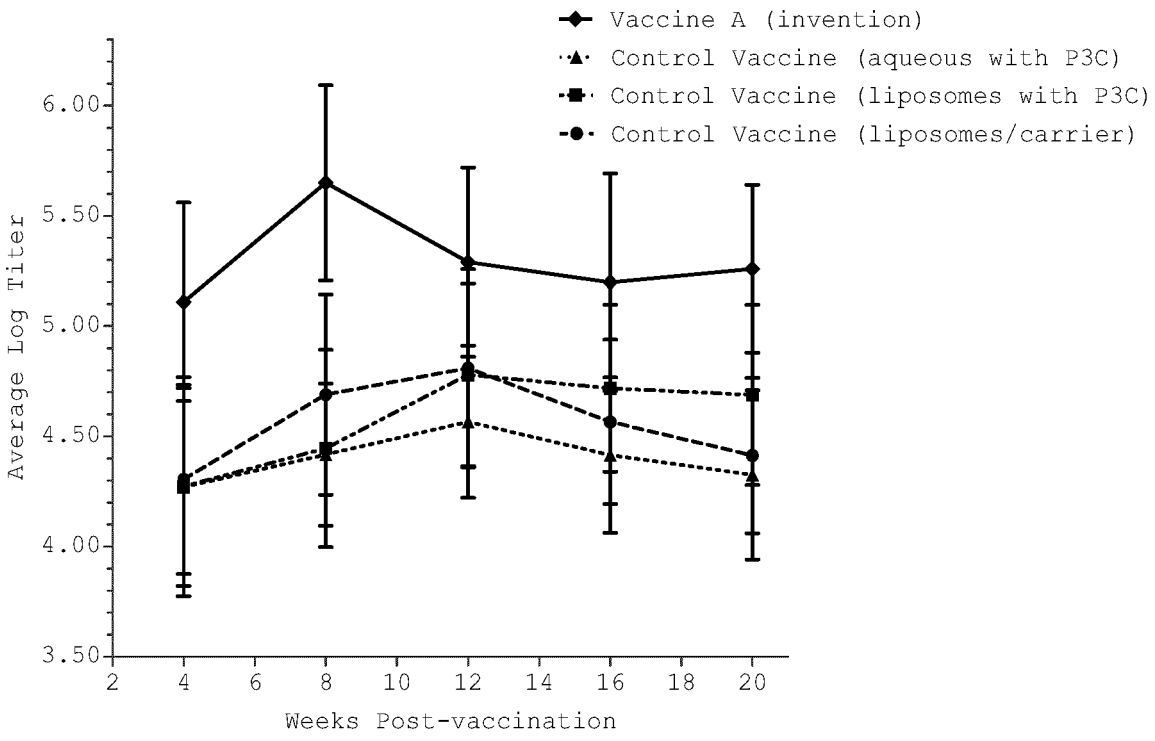

Vaccine A (invention)
Control Vaccine (aqueous with P3C)
Control Vaccine (liposomes with P3C)
Control Vaccine (liposomes/carrier)
Average Log Titer
6.00
5.50
5.00
4.50
4.00
3.50
2
4
6
8
10
12
14
16
18
20
Weeks Post-vaccination

Figure 5

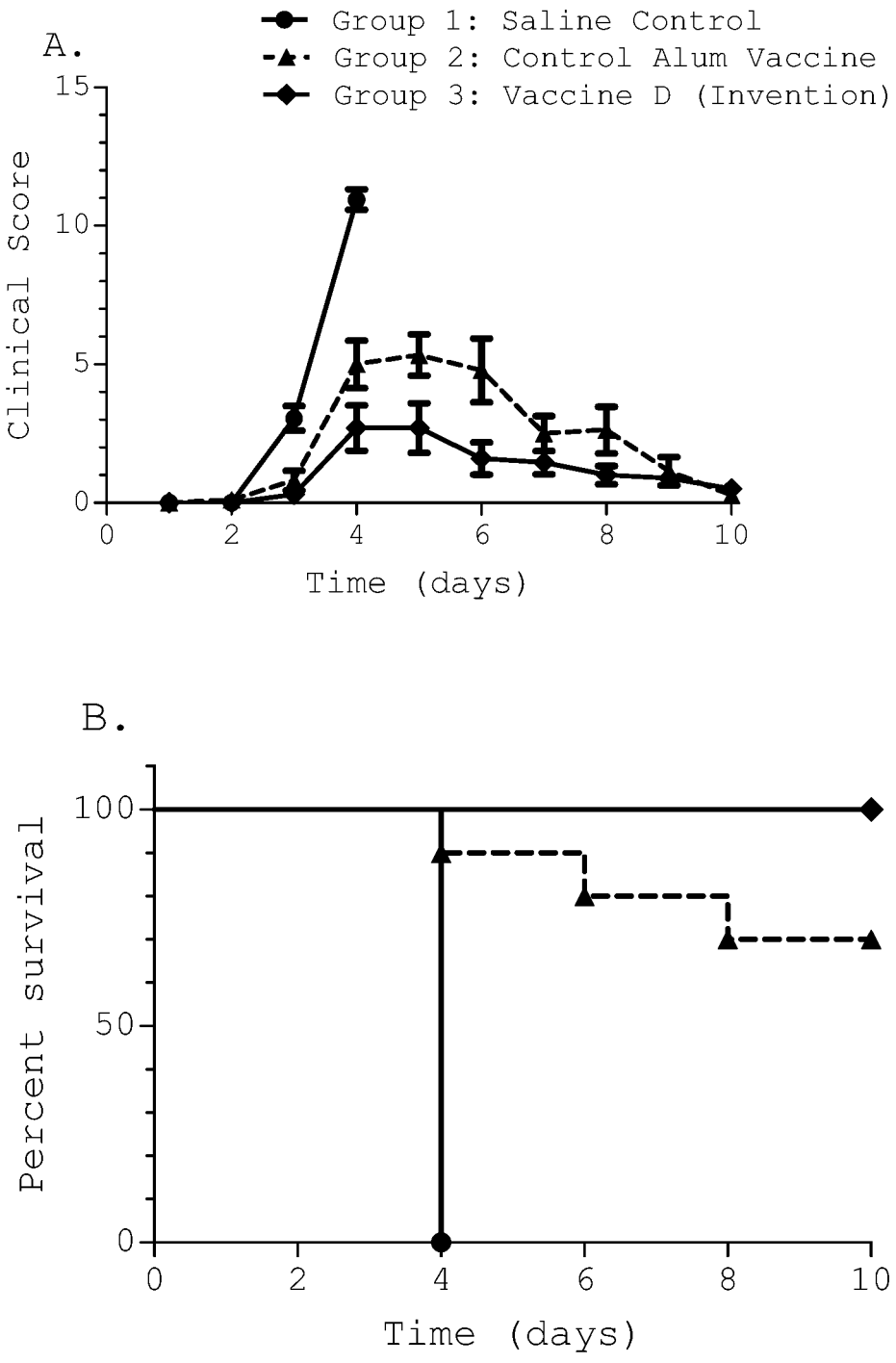

A.
Group 1: Saline Control
Group 2: Control Alum Vaccine
Group 3: Vaccine D (Invention)
Clinical Score
15
10
5
0
0
2
4
6
8
10
Time (days)
B.
Percent survival
100
50
0
0
2
4
6
8
10
Time (days)

Figure 6

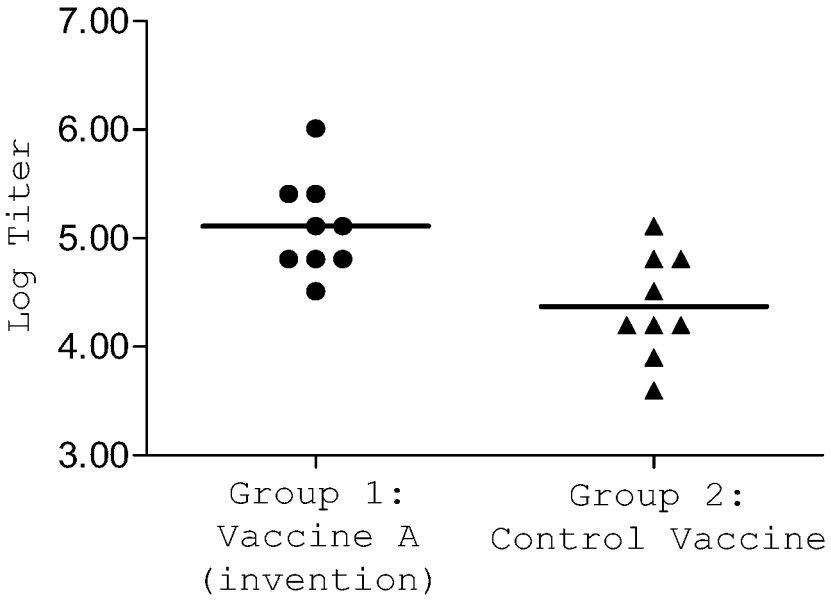
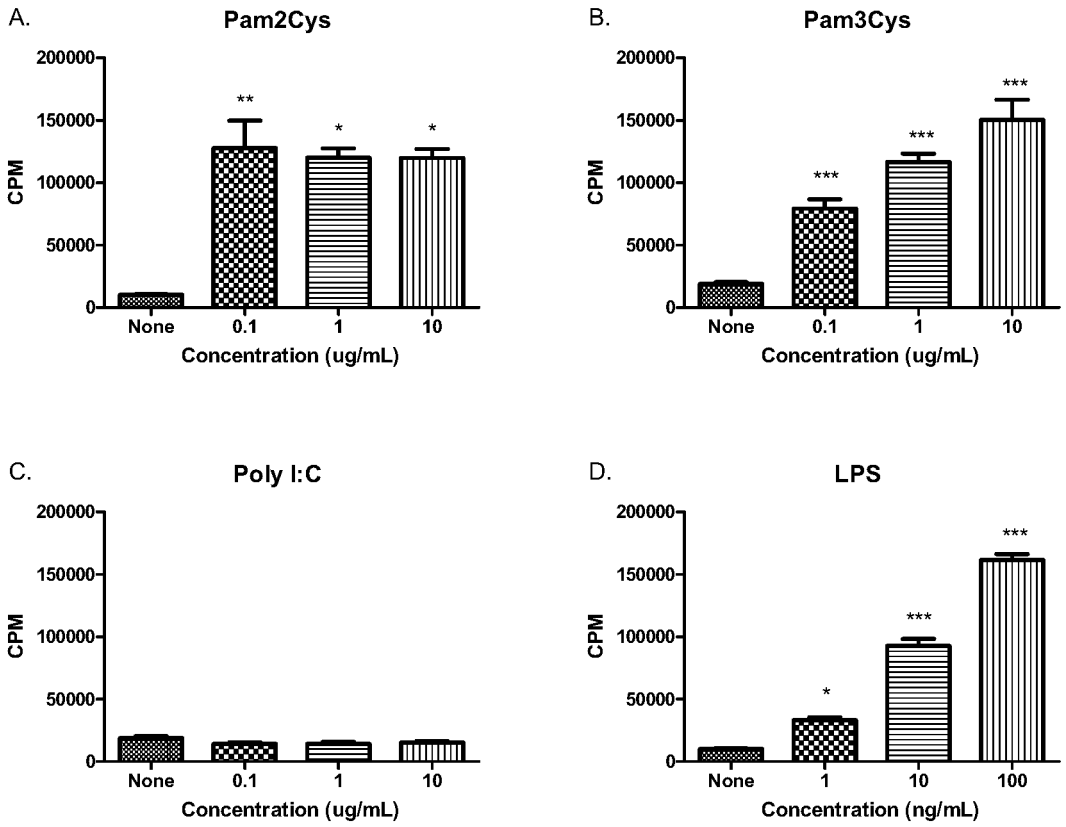

7.00
6.00
5.00
4.00
3.00
Log Titer
Group 1:
Vaccine A
(invention)
Group 2:
Control Vaccine

Figure 7


A.
Pam2Cys
CPM
200000
150000
100000
50000
0
**
*
*
None
0.1
1
10
Concentration (ug/mL)
B.
Pam3Cys
CPM
200000
150000
100000
50000
0
***
***
***
None
0.1
1
10
Concentration (ug/mL)
C.
Poly I:C
CPM
200000
150000
100000
50000
0
None
0.1
1
10
Concentration (ug/mL)
D.
LPS
CPM
200000
150000
100000
50000
0
*
***
***
None
1
10
100
Concentration (ng/mL)