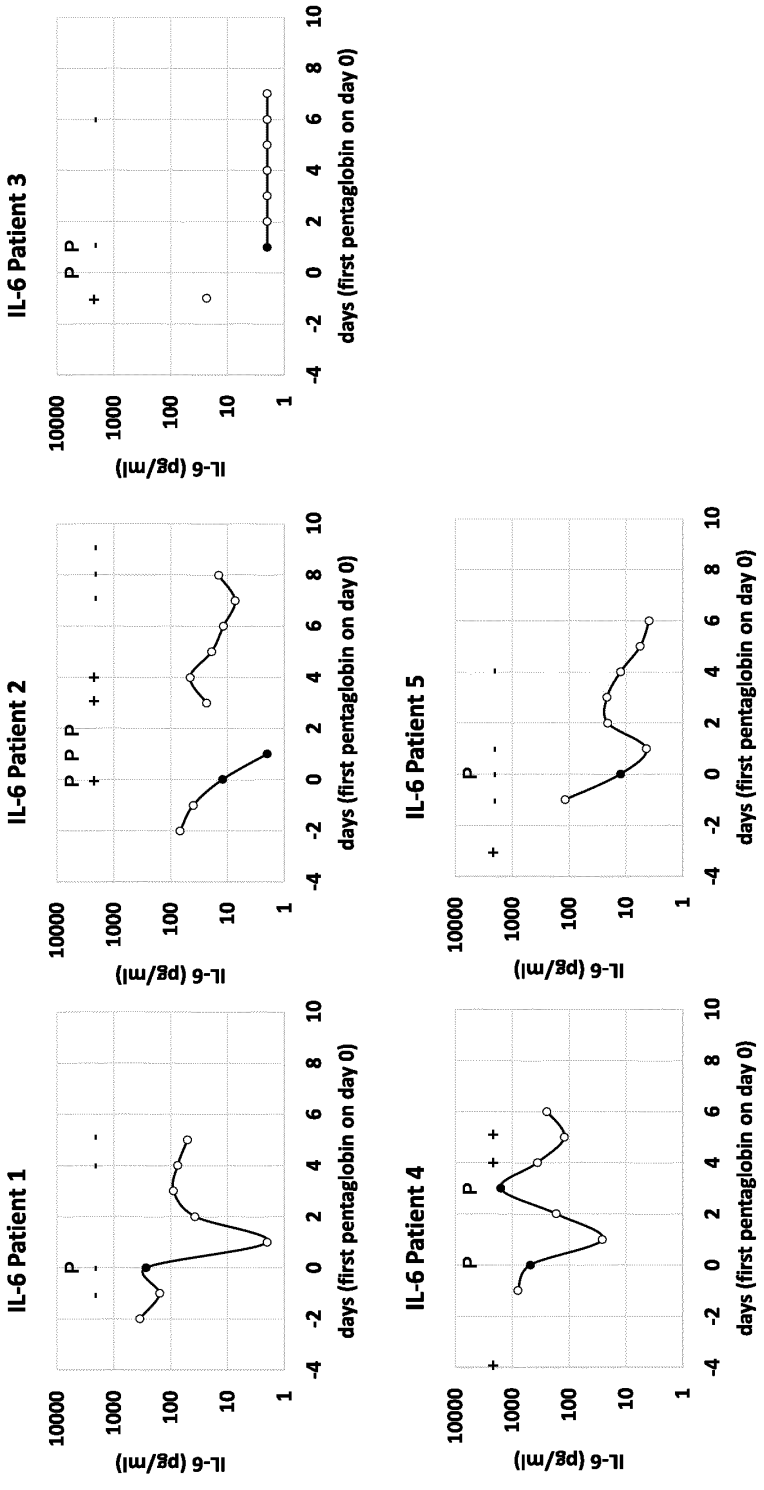

IL-6 Patient 1
IL-6 Patient 2
IL-6 Patient 3
IL-6 Patient 4
IL-6 Patient 5
IL-6 (pg/ml)
10000
1000
100
10
1
-4 -2 0 2 4 6 8 10
days (first pentaglobin on day 0)
P
+
-

Figure 1A

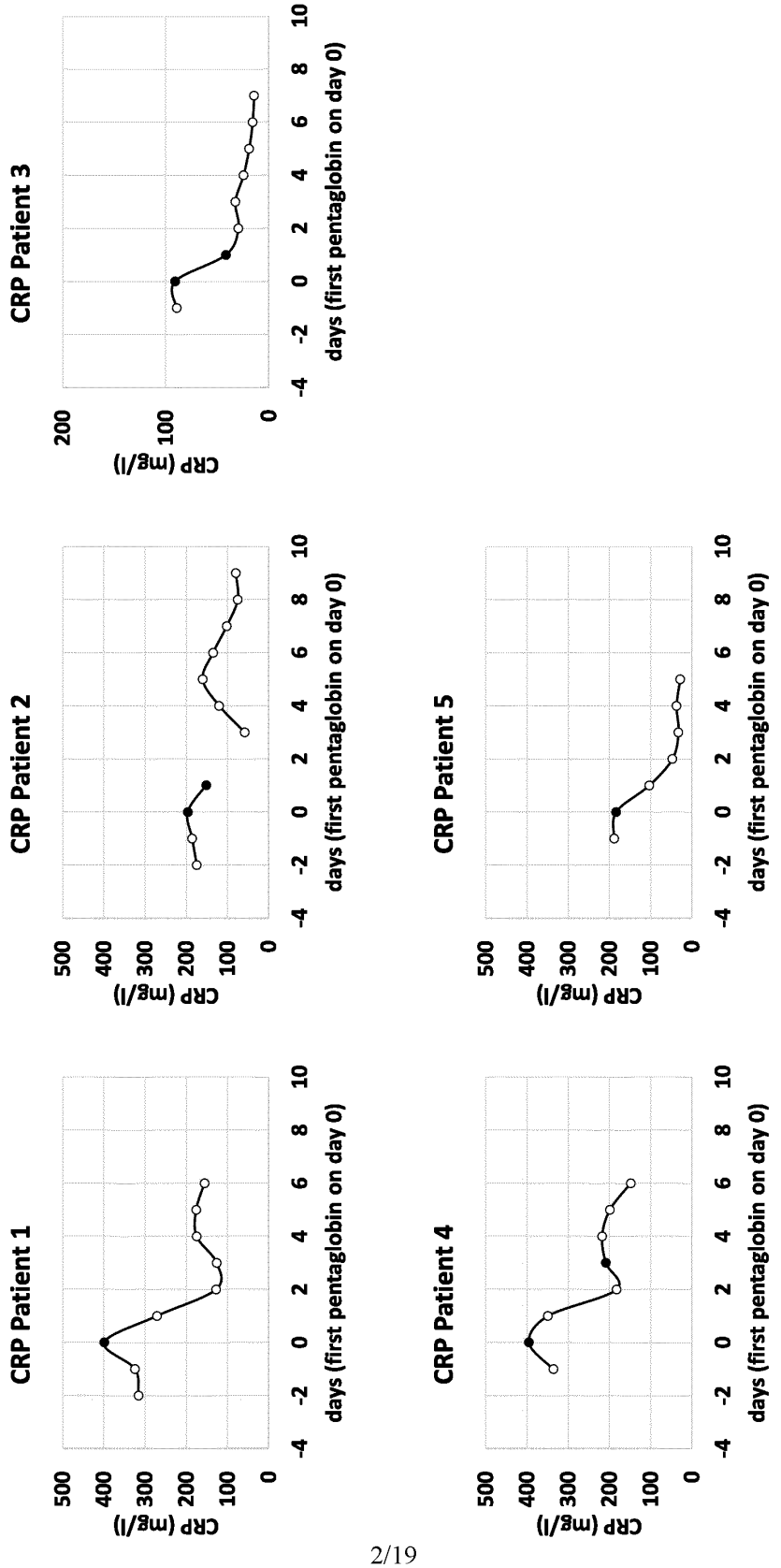

CRP Patient 1
CRP Patient 2
CRP Patient 3
CRP Patient 4
CRP Patient 5
CRP (mg/l)
days (first pentaglobin on day 0)
0
100
200
300
400
500
-4
-2
0
2
4
6
8
10

Figure 1B

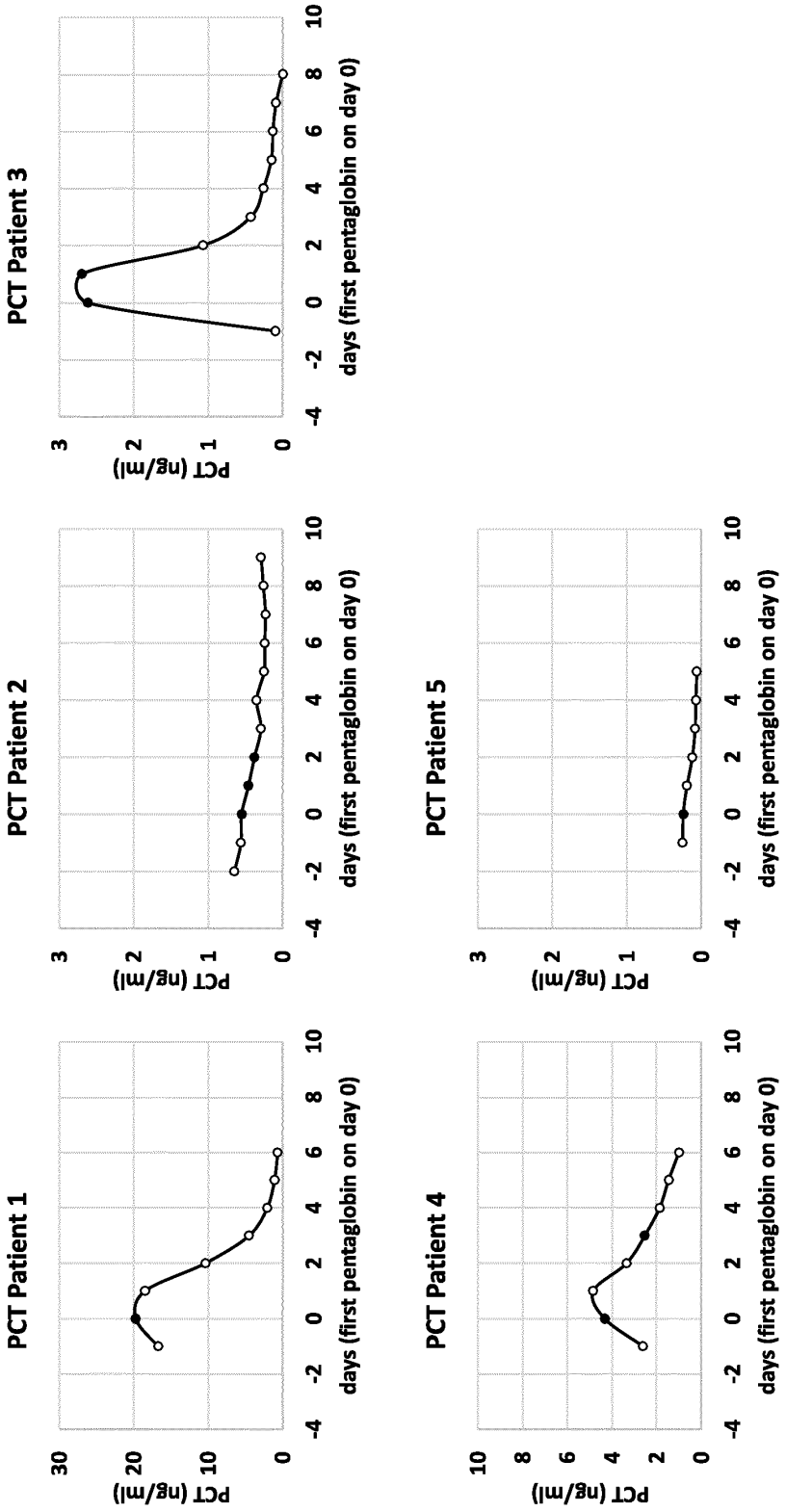

PCT Patient 1
PCT (ng/ml)
days (first pentaglobin on day 0)
PCT Patient 2
PCT (ng/ml)
days (first pentaglobin on day 0)
PCT Patient 3
PCT (ng/ml)
days (first pentaglobin on day 0)
PCT Patient 4
PCT (ng/ml)
days (first pentaglobin on day 0)
PCT Patient 5
PCT (ng/ml)
days (first pentaglobin on day 0)

Figure 1C

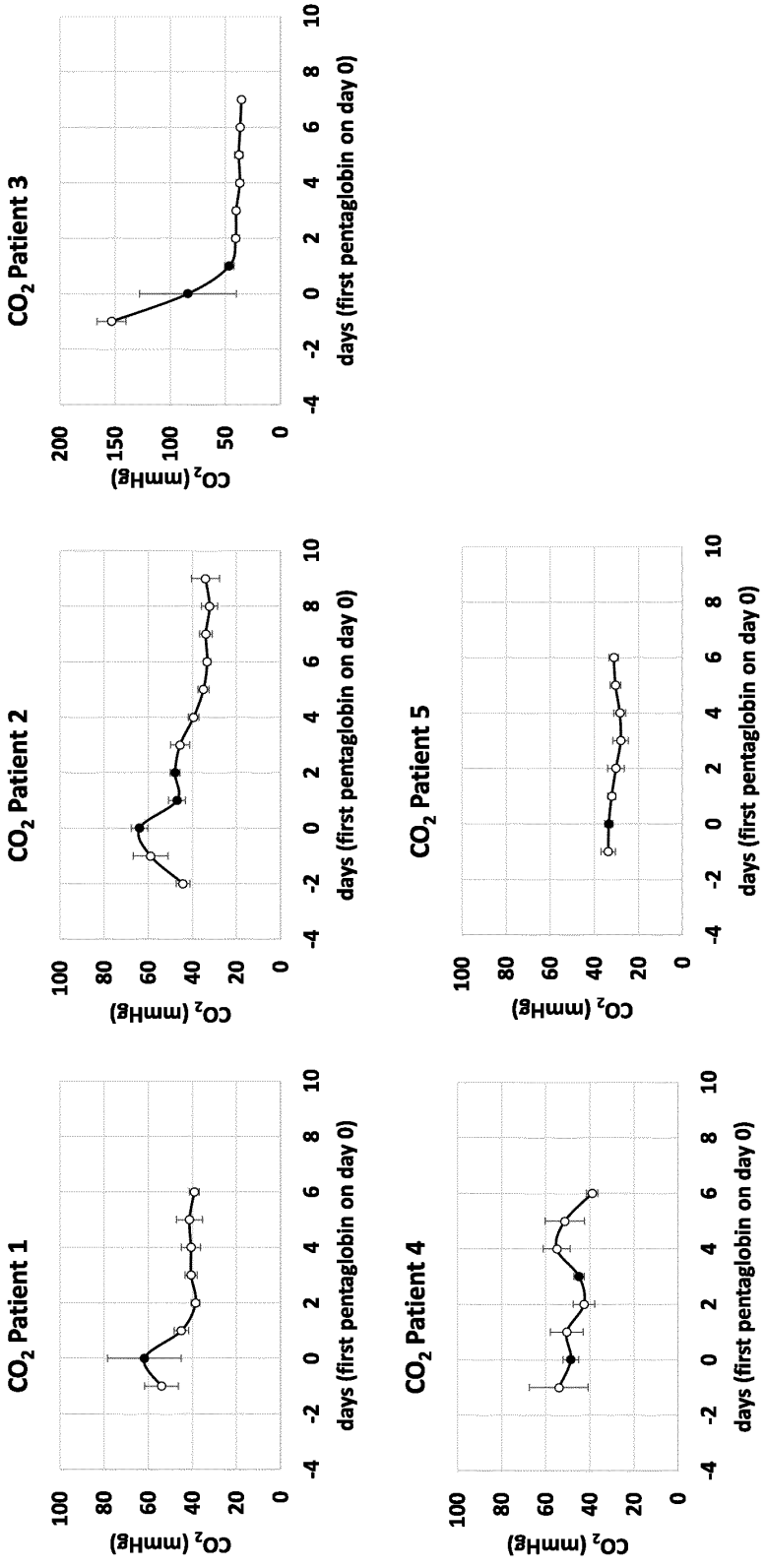

CO_2 Patient 1
CO_2 Patient 2
CO_2 Patient 3
CO_2 Patient 4
CO_2 Patient 5
CO_2 (mmHg)
days (first pentaglobin on day 0)

Figure 1D

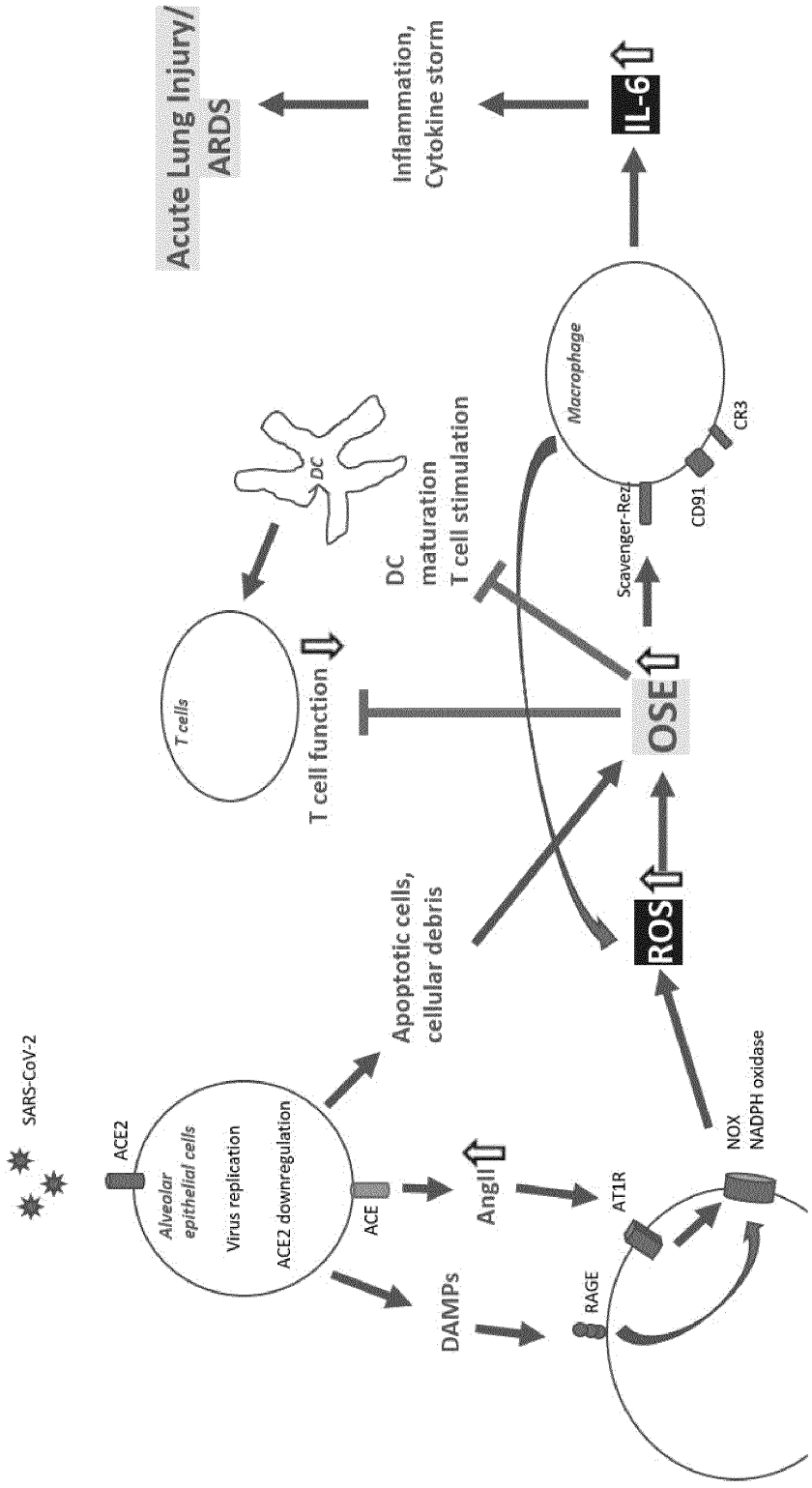

SARS-CoV-2
ACE2
Alveolar epithelial cells
Virus replication
ACE2 downregulation
ACE
AngII
AT1R
DAMPs
RAGE
NOX
NADPH oxidase
ROS
Apoptotic cells, cellular debris
OSE
T cells
T cell function
DC
DC maturation
T cell stimulation
Macrophage
Scavenger-Rez
CD91
CR3
IL-6
Inflammation, Cytokine storm
Acute Lung Injury/ ARDS

Figure 2A

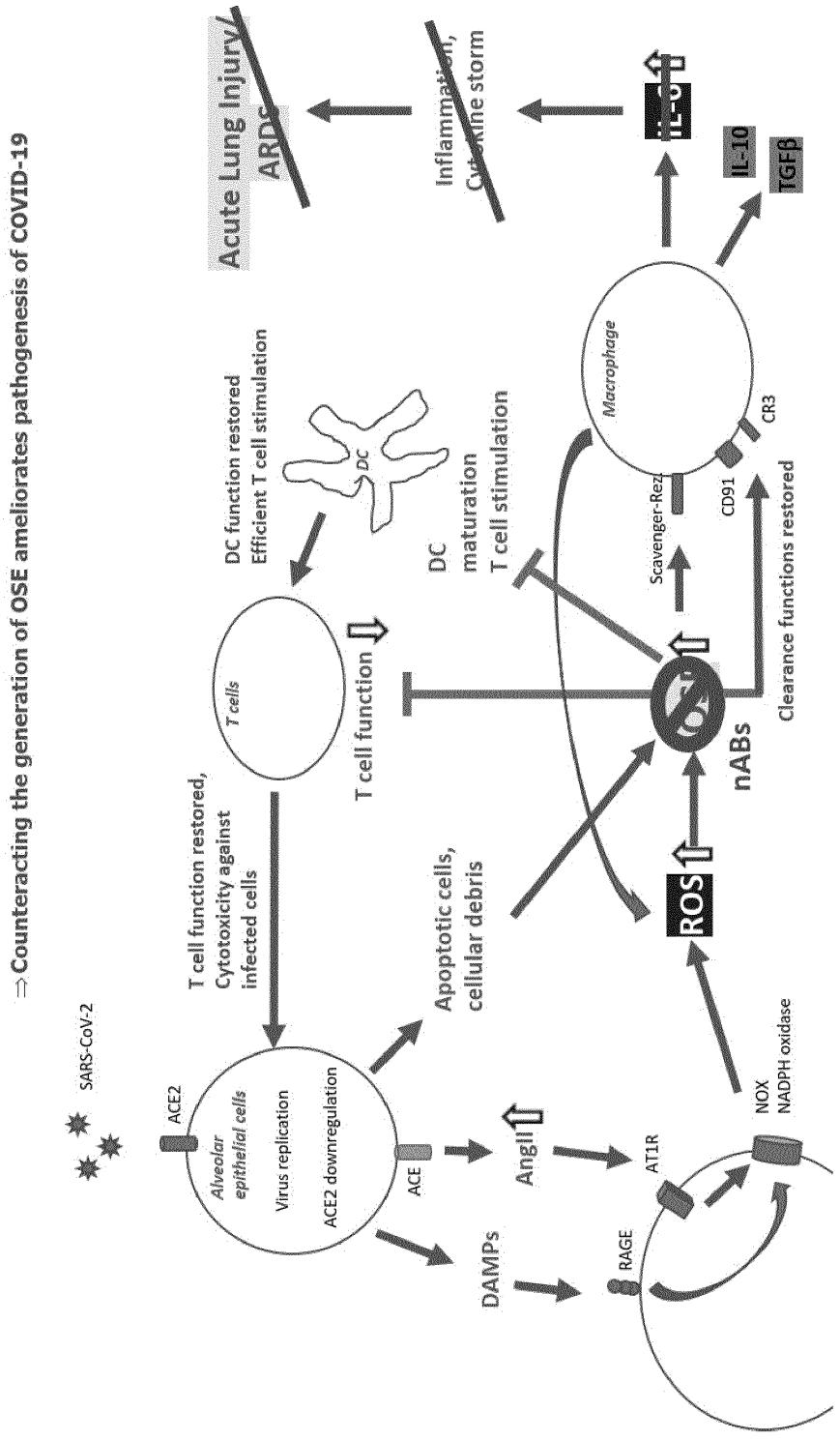

⇒Counteracting the generation of OSE ameliorates pathogenesis of COVID-19
SARS-CoV-2
ACE2
Alveolar epithelial cells
Virus replication
ACE2 downregulation
ACE
AngII
AT1R
DAMPs
RAGE
NOX
NADPH oxidase
ROS
Apoptotic cells, cellular debris
T cells
T cell function restored, Cytotoxicity against infected cells
T cell function
DC function restored Efficient T cell stimulation
DC
DC maturation T cell stimulation
nABs
Macrophage
Scavenger-Rez
CD91
CR3
Clearance functions restored
IL-10
TGFβ
Inflammation, Cytokine storm
Acute Lung Injury/ ARDS

Figure 2B

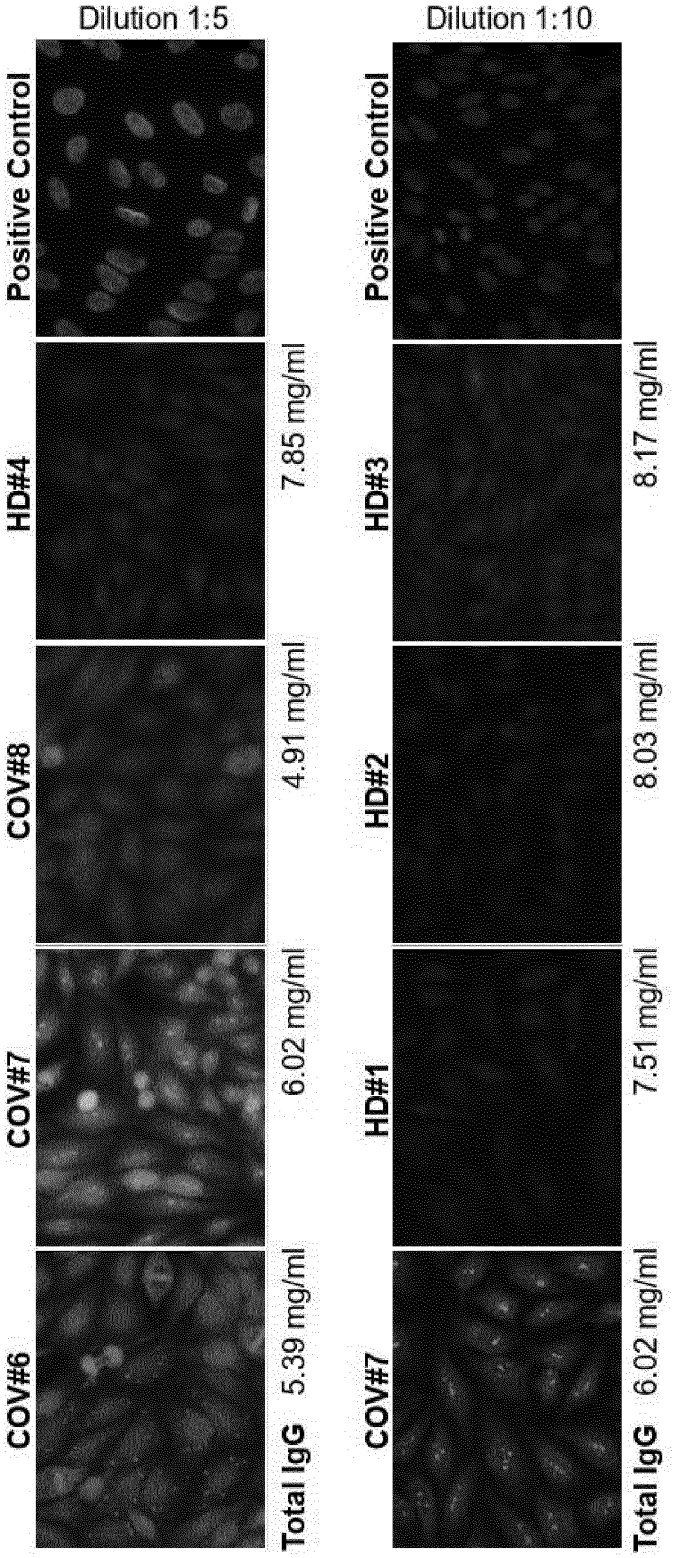

Dilution 1:5
Positive Control
HD#4
COV#8
COV#7
COV#6
7.85 mg/ml
4.91 mg/ml
6.02 mg/ml
5.39 mg/ml
Total IgG
Dilution 1:10
Positive Control
HD#3
HD#2
HD#1
COV#7
8.17 mg/ml
8.03 mg/ml
7.51 mg/ml
6.02 mg/ml
Total IgG

Figure 3

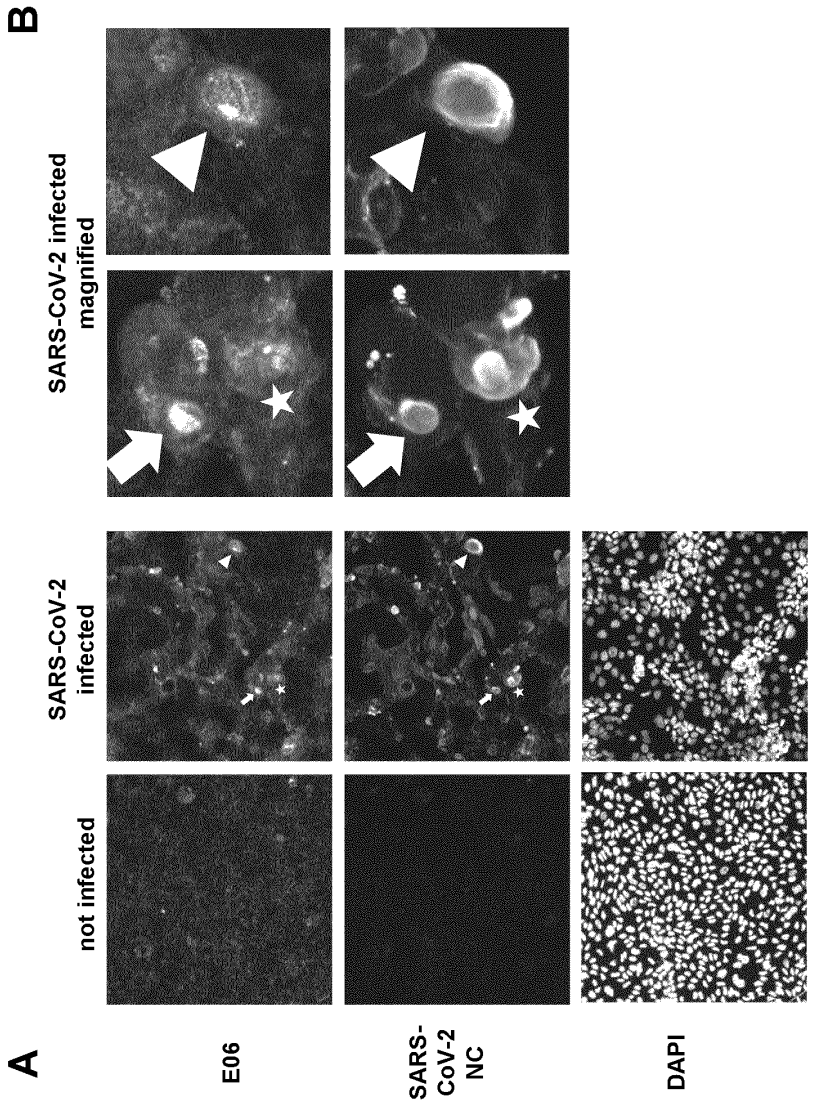

A
not infected
SARS-CoV-2 infected
SARS-CoV-2 infected magnified
E06
SARS-CoV-2 NC
DAPI
B
E06
E06 Staining Intensity
900
800
700
600
SARS-CoV-2
not infected
Nuclei
Nuclei Staining Intensity
1500
1000
500
SARS-CoV-2
not infected
SARS-CoV-2 NC
SARS-CoV-2 NC staining intensity
800
700
600
500
400
SARS-CoV-2
not infected

Figure 4

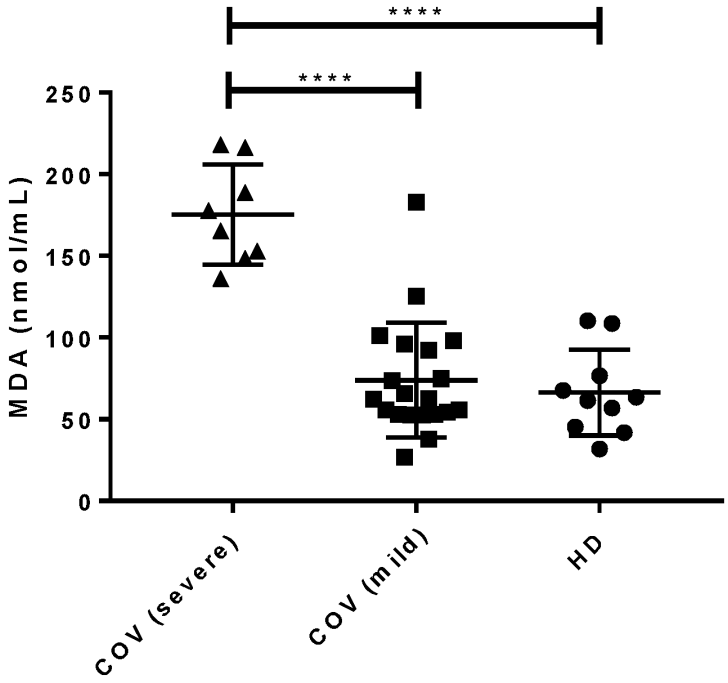


Figure 5

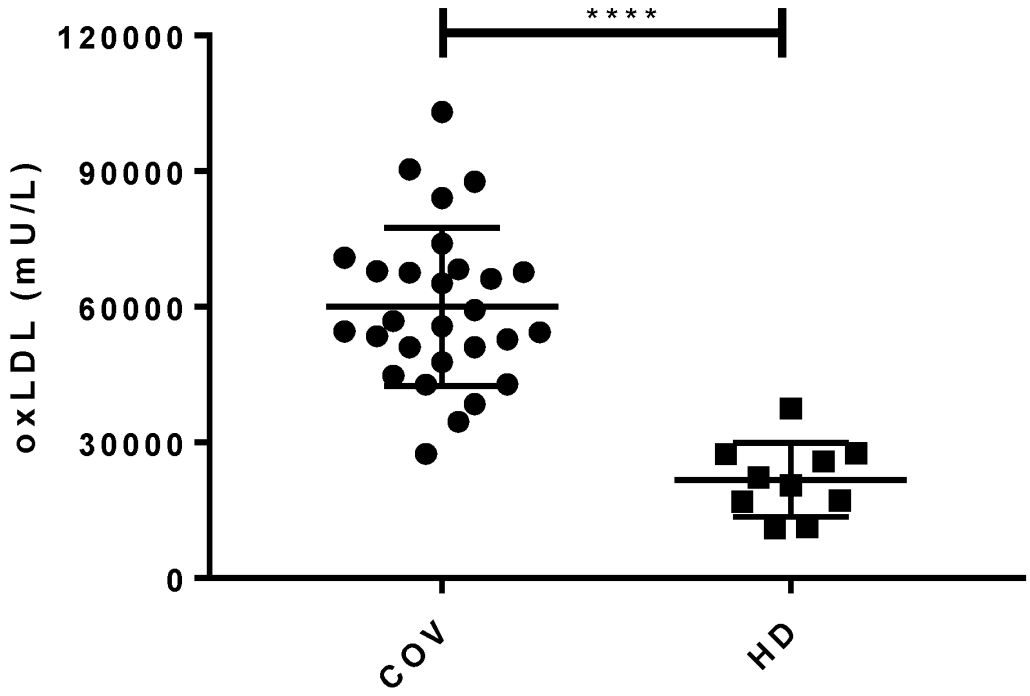


Figure 6

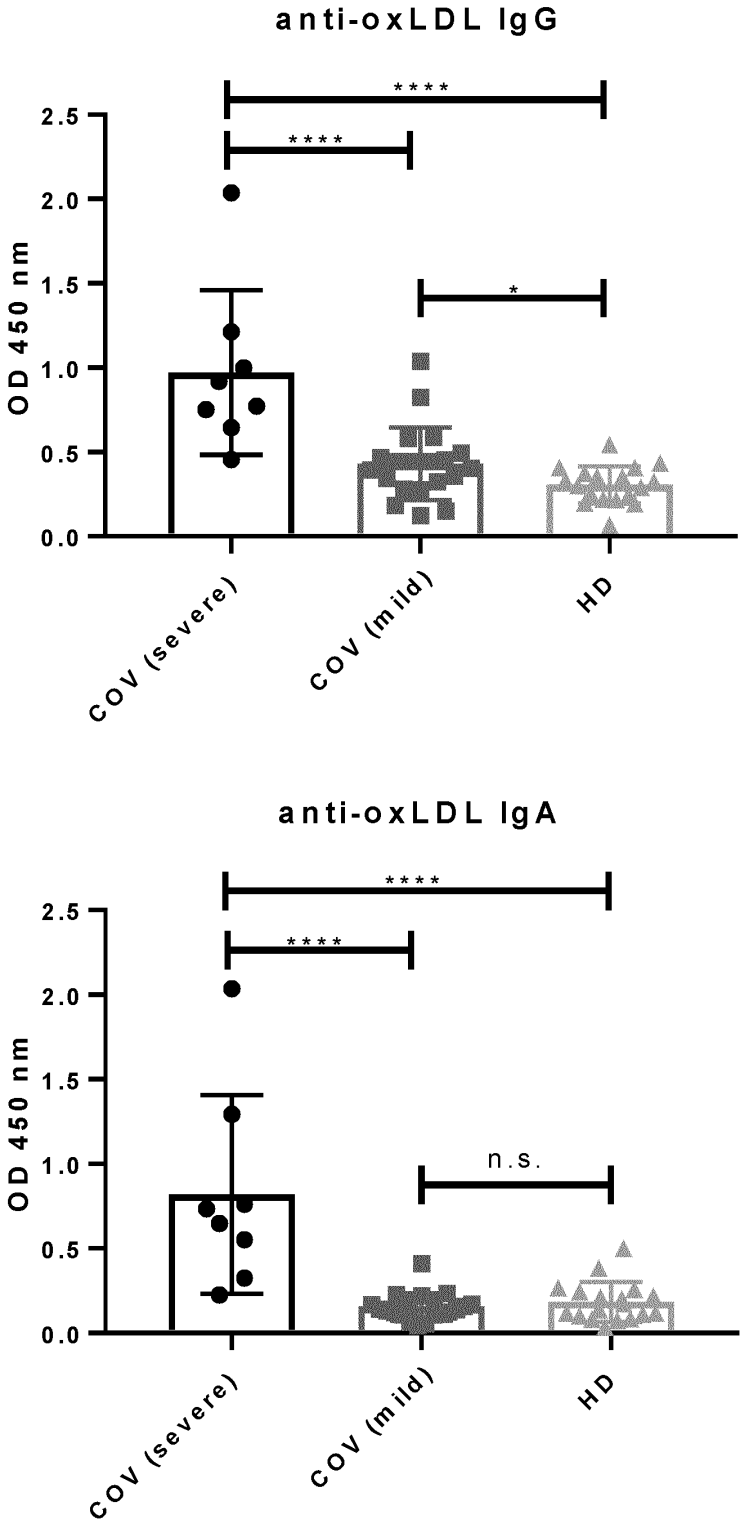

anti-oxLDL IgG
OD 450 nm
2.5
2.0
1.5
1.0
0.5
0.0
****
****
*
COV (severe)
COV (mild)
HD
anti-oxLDL IgA
OD 450 nm
2.5
2.0
1.5
1.0
0.5
0.0
****
****
n.s.
COV (severe)
COV (mild)
HD

Figure 7

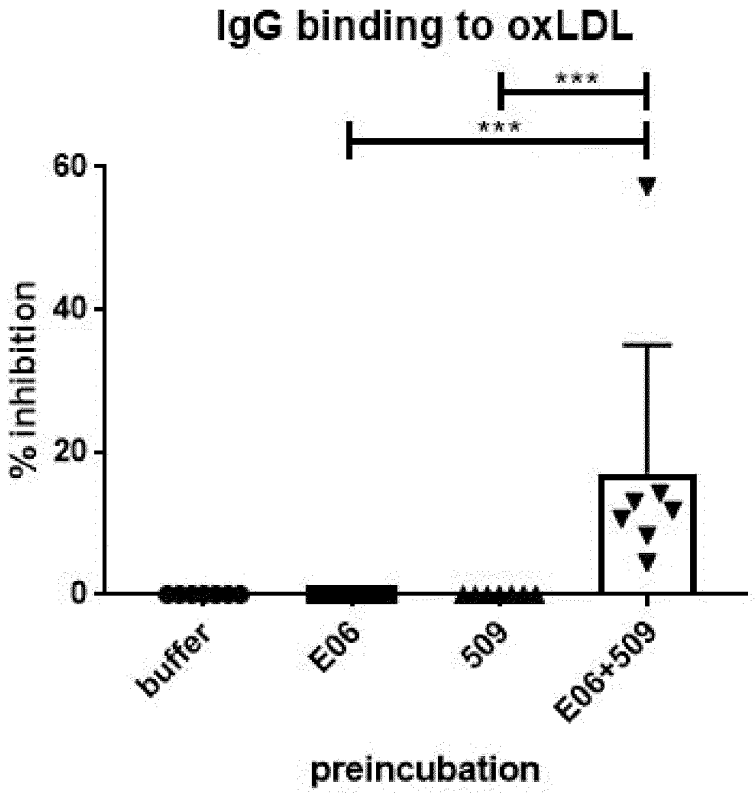

IgG binding to oxLDL
***
***
60
40
20
0
% inhibition
buffer
E06
509
E06+509
preincubation

Figure 8

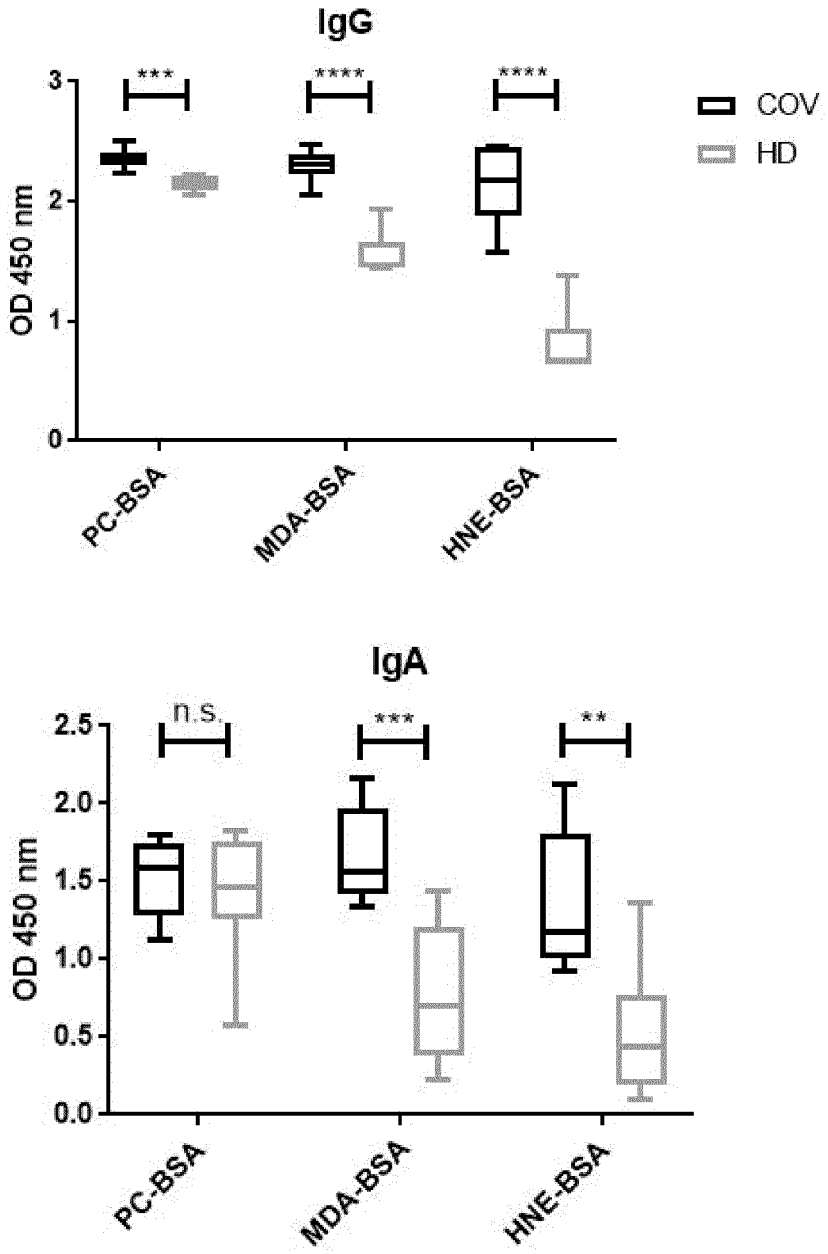

IgG
OD 450 nm
3
2
1
0
***
****
****
COV
HD
PC-BSA
MDA-BSA
HNE-BSA
IgA
OD 450 nm
2.5
2.0
1.5
1.0
0.5
0.0
n.s.
***
**
PC-BSA
MDA-BSA
HNE-BSA

Figure 9

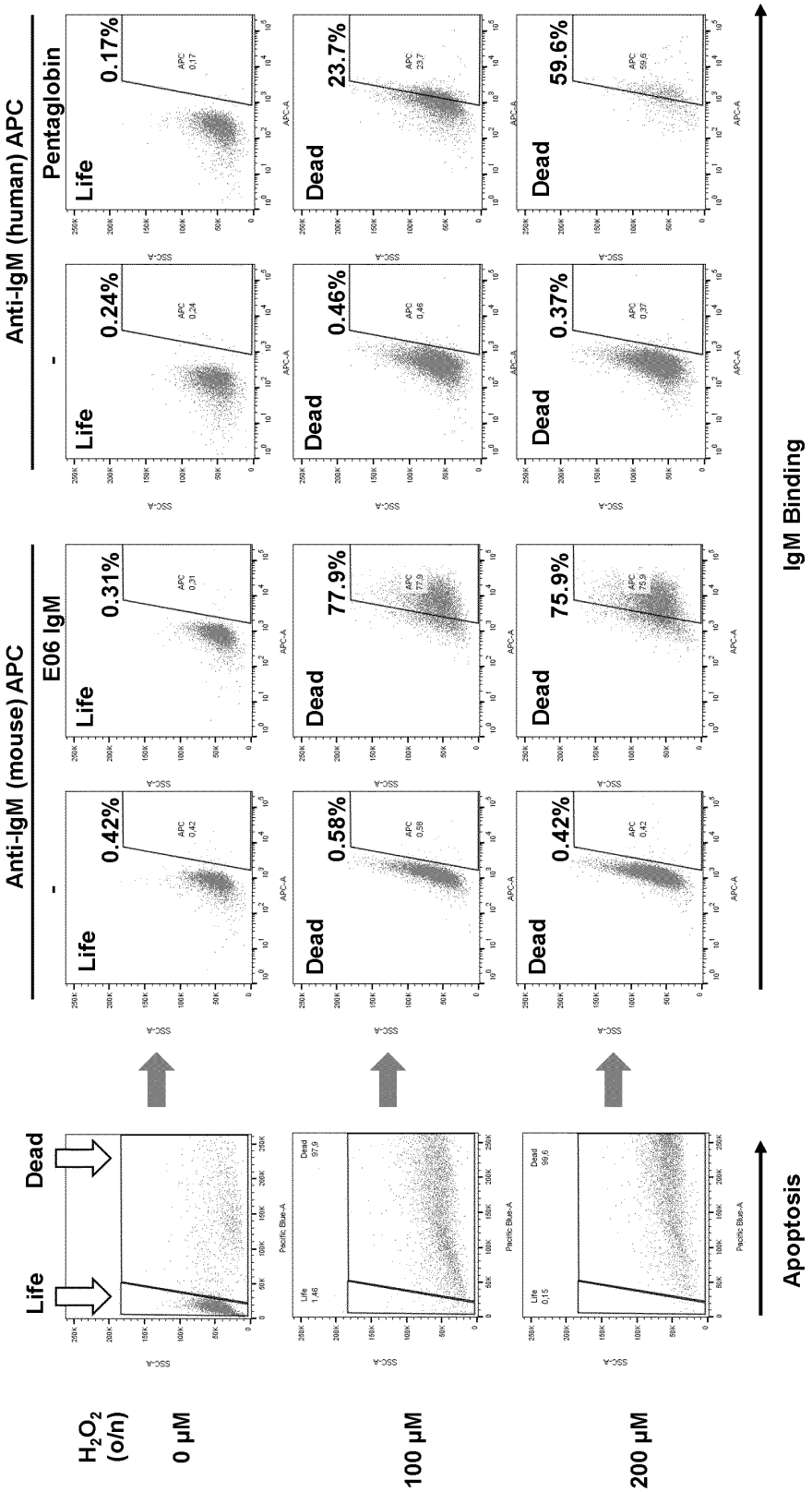

Anti-IgM (human) APC
Anti-IgM (mouse) APC
E06 IgM
Pentaglobin
-
Life
Dead
0.42%
0.31%
0.24%
0.17%
0.58%
77.9%
0.46%
23.7%
0.42%
75.9%
0.37%
59.6%
H2O2 (o/n)
0 µM
100 µM
200 µM
Apoptosis
IgM Binding

Figure 10

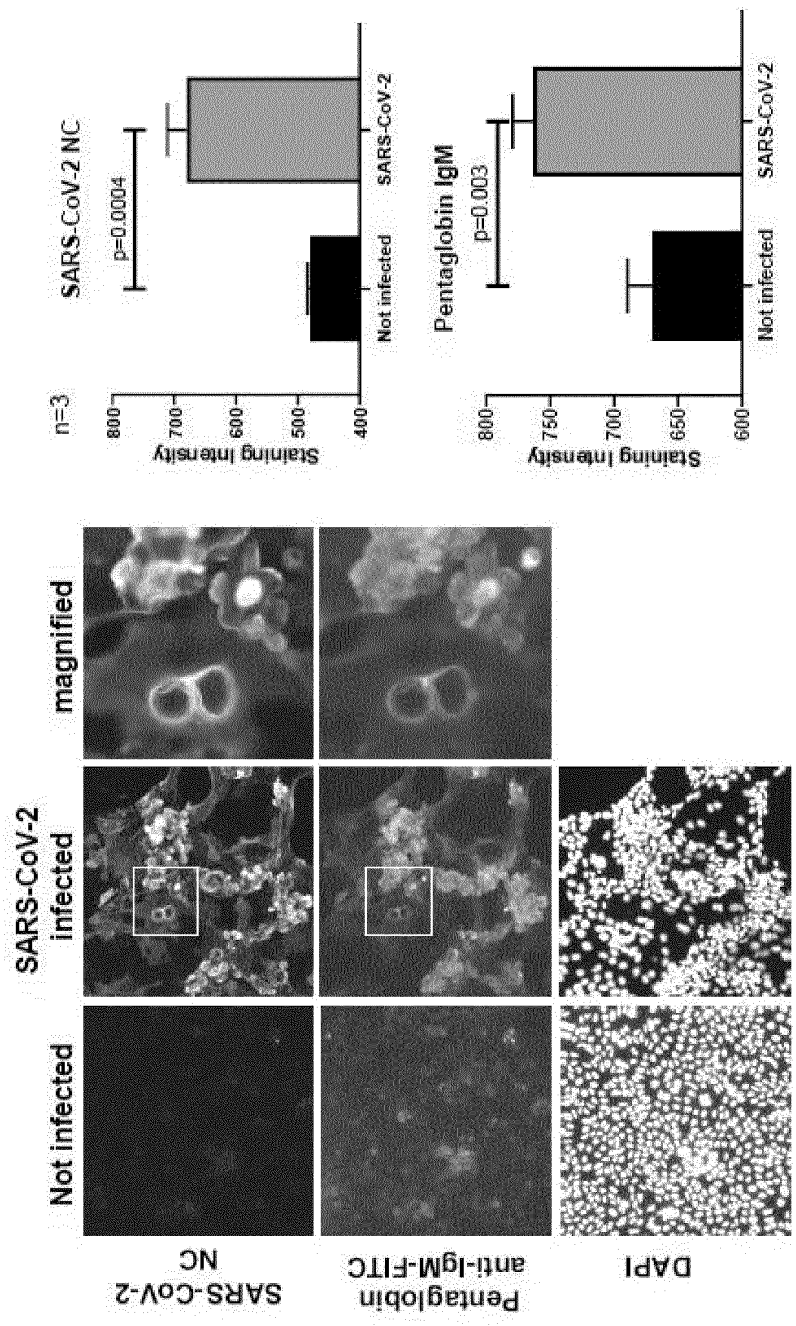

Not infected
SARS-CoV-2 infected
magnified
SARS-CoV-2 NC
Pentaglobin anti-IgM-FITC
DAPI
n=3
SARS-CoV-2 NC
p=0.0004
Staining Intensity
800
700
600
500
400
Not infected
SARS-CoV-2
Pentaglobin IgM
p=0.003
Staining Intensity
800
750
700
650
600
Not infected
SARS-CoV-2

Figure 11

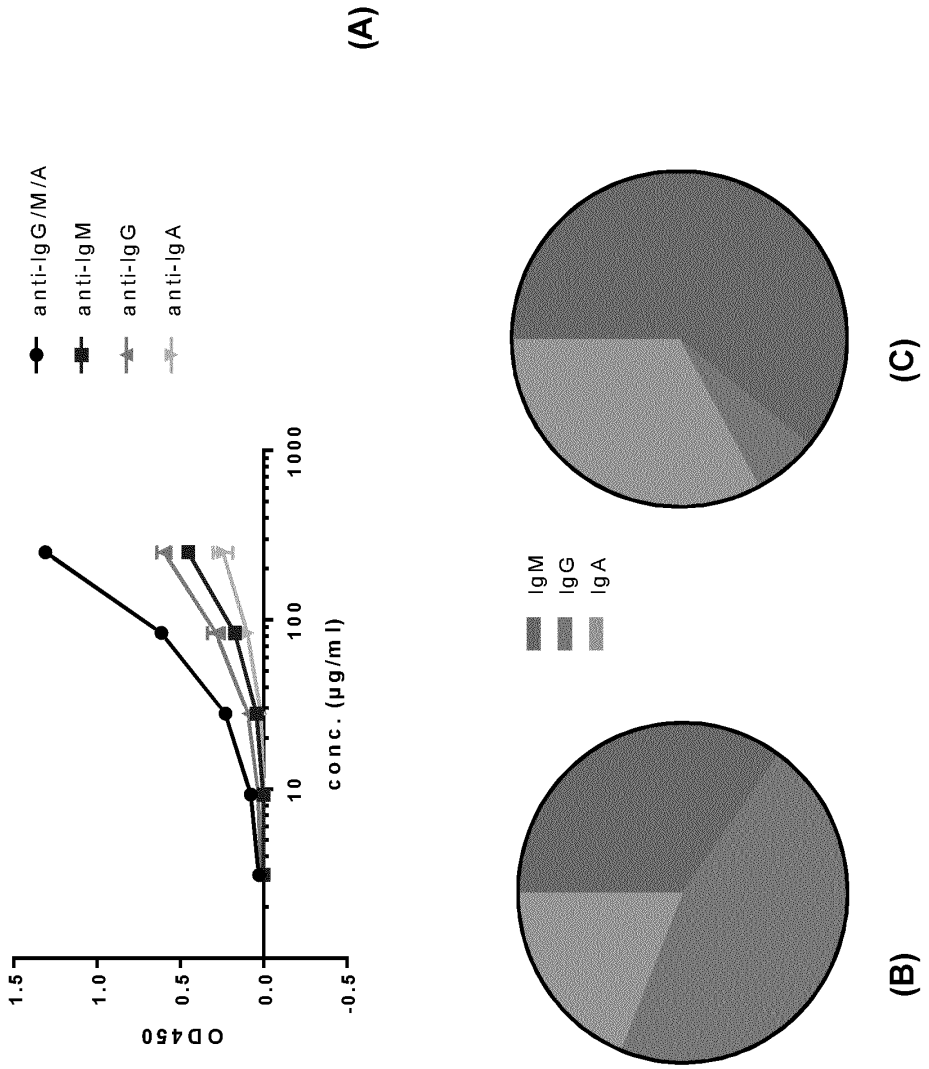

(A)
anti-IgG/M/A
anti-IgM
anti-IgG
anti-IgA
OD450
1.5
1.0
0.5
0.0
-0.5
10
100
1000
conc. (µg/ml)
IgM
IgG
IgA
(B)
(C)

Figure 12

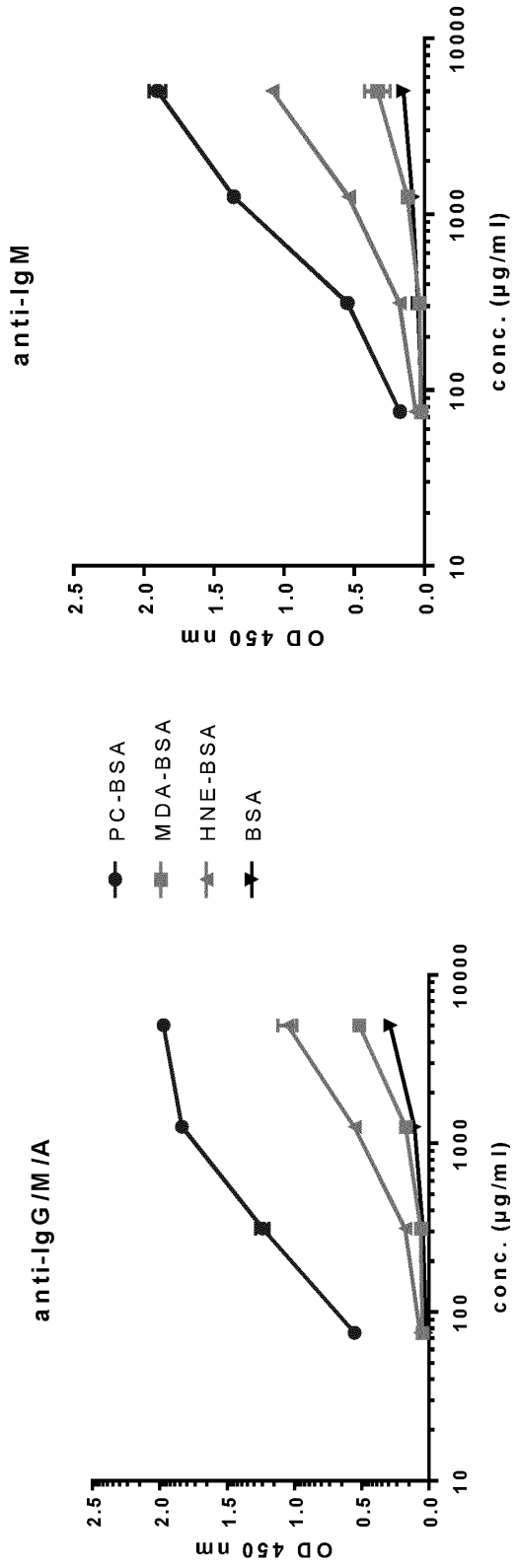

anti-IgM
OD 450 nm
2.5
2.0
1.5
1.0
0.5
0.0
10
100
1000
10000
conc. (µg/ml)
PC-BSA
MDA-BSA
HNE-BSA
BSA
anti-IgG/M/A
OD 450 nm
2.5
2.0
1.5
1.0
0.5
0.0
10
100
1000
10000
conc. (µg/ml)

Figure 13

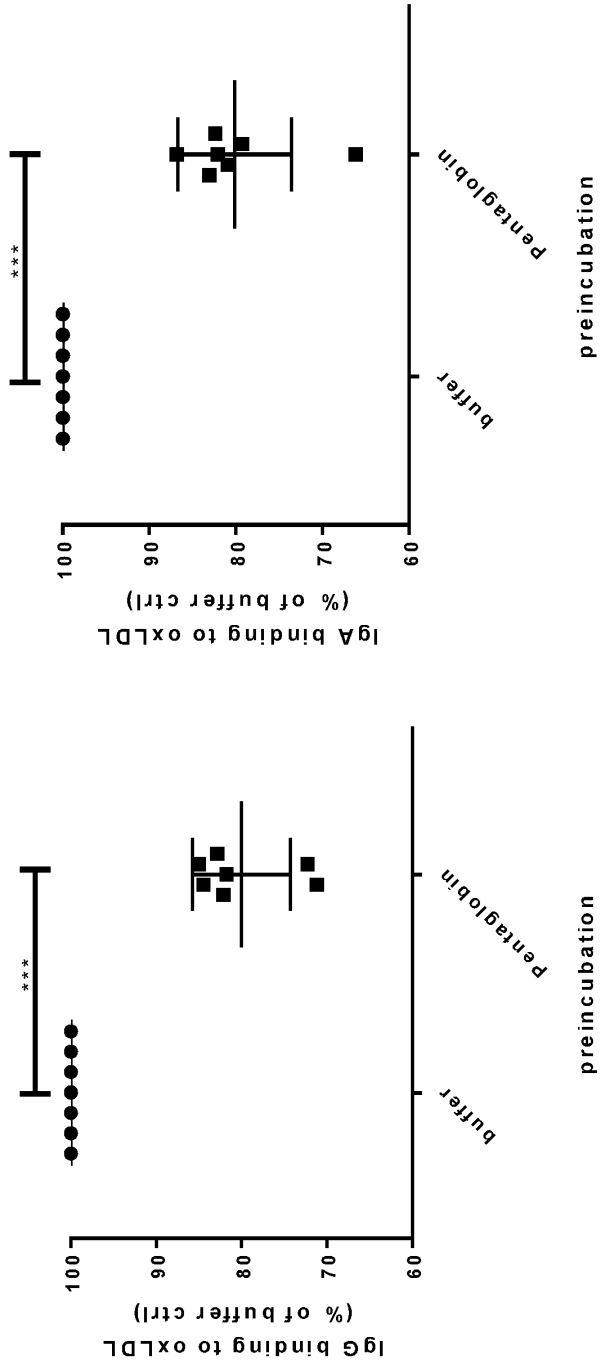


Figure 14 (part 1)

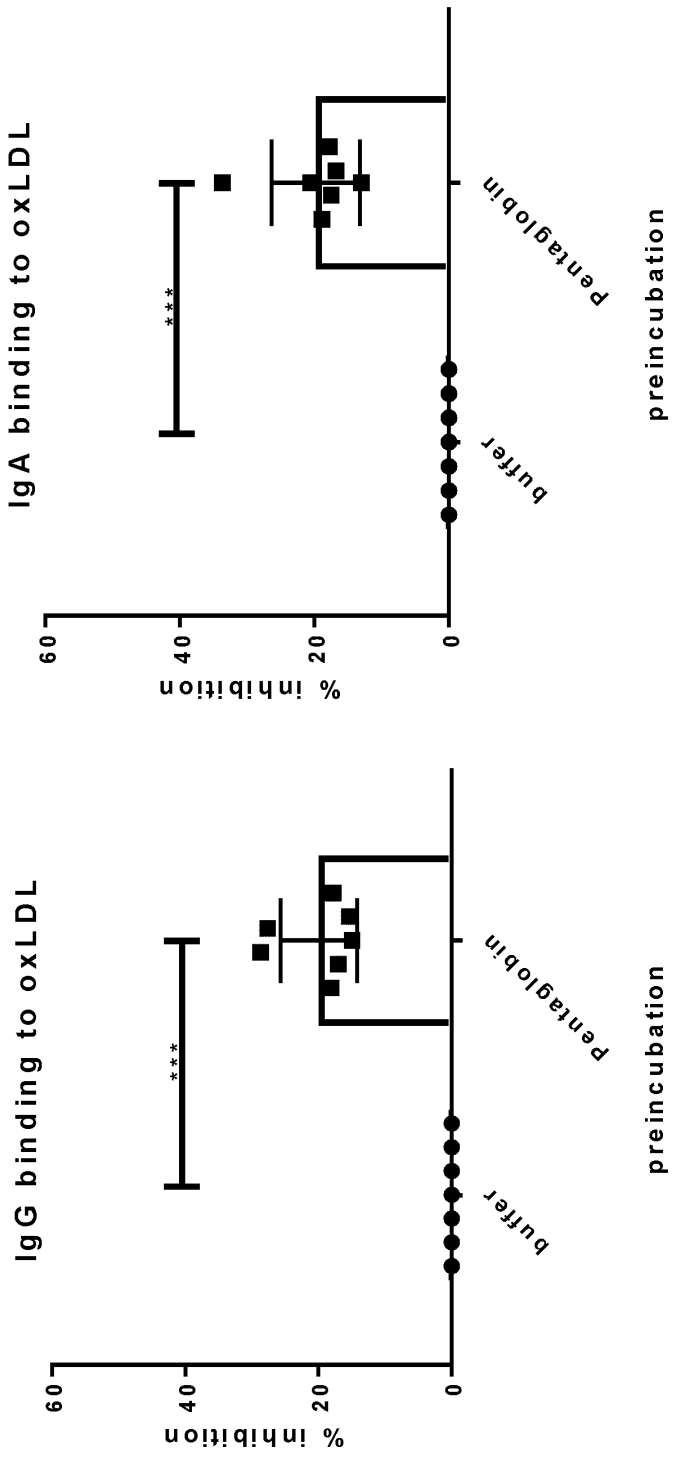


Figure 14 (part 2)