Supplemental Document S1

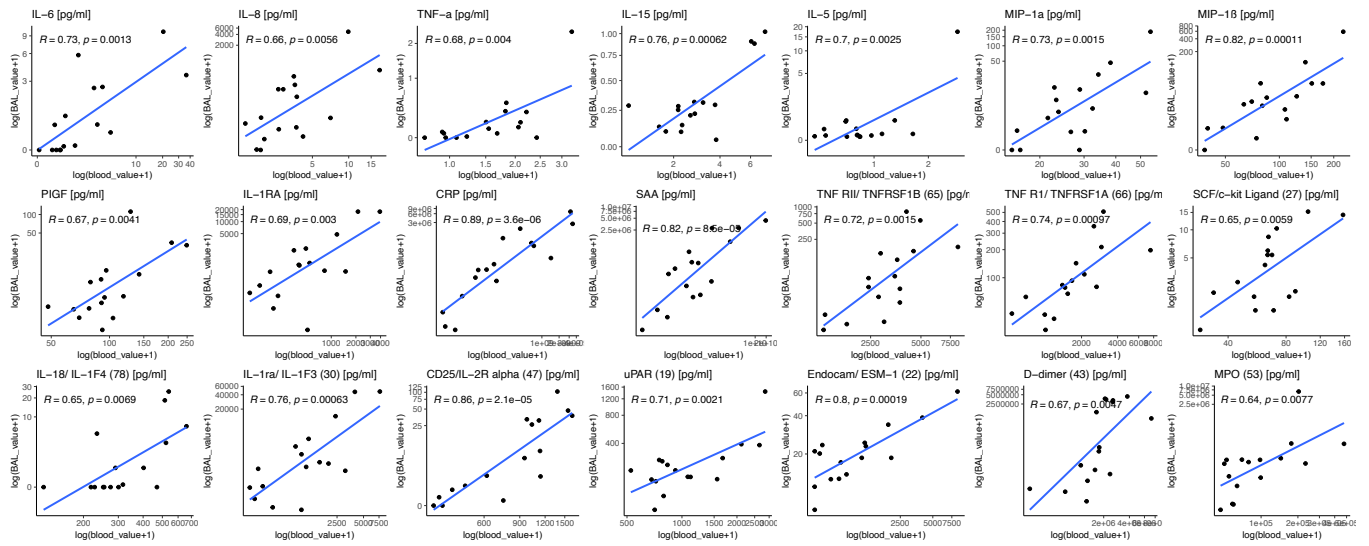**Figures S1-S4**
Tables S1-2, S7

Figure S1. Biomarkers with significant correlation in BAL and plasma from acute phase samples by targeted immunoassays

Correlation analyses of simultaneous BAL and plasma immunoassays from the acute phase were performed in the 16 patients with paired samples. Protein expression levels in 21 biomarkers showed a relationship between BAL and plasma (FDR adjusted p-value for Pearson's correlation after log-transformation <5%).
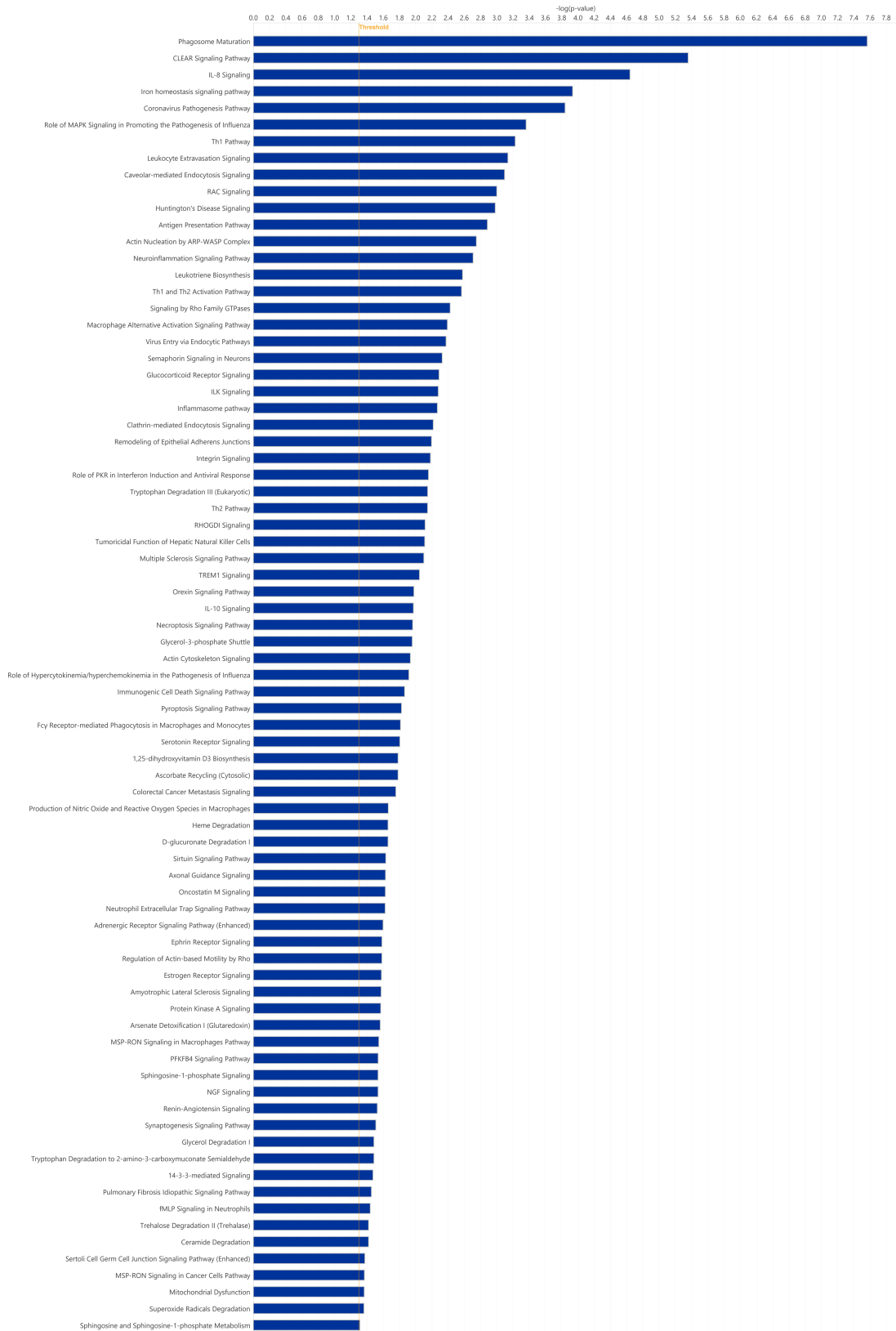
Figure S2. Ingenuity Pathway Analysis Canonical Pathway Analysis (Z-score) of under-expressed proteins by DIA-MS of acute phase Cluster 2 versus Cluster 1
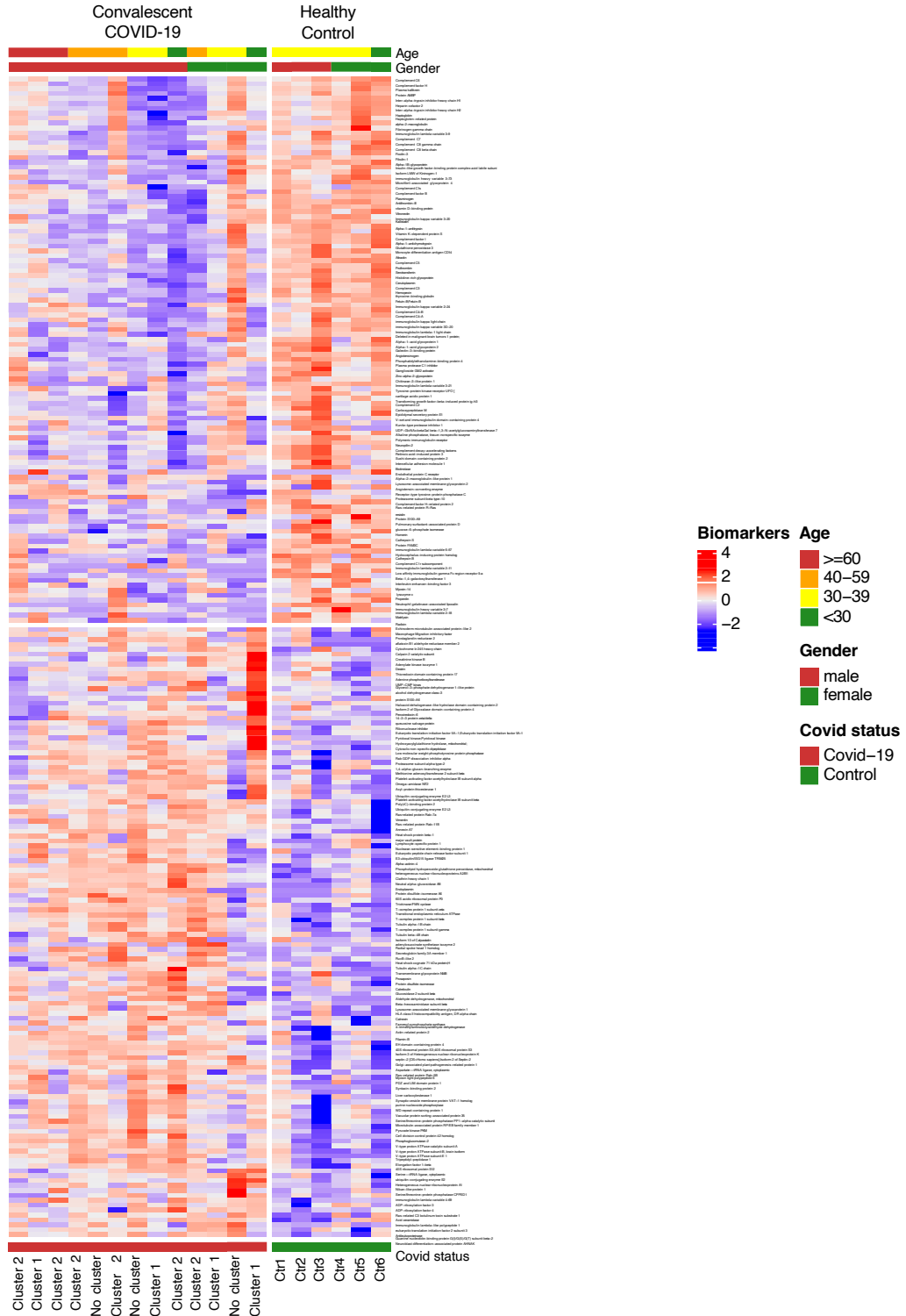
Figure S3. Heatmap with 235 differentially expressed proteins in convalescent phase versus healthy control (FDR 5%, adjusted for age and sex) with protein description labels by DIA-MS

A.

B.

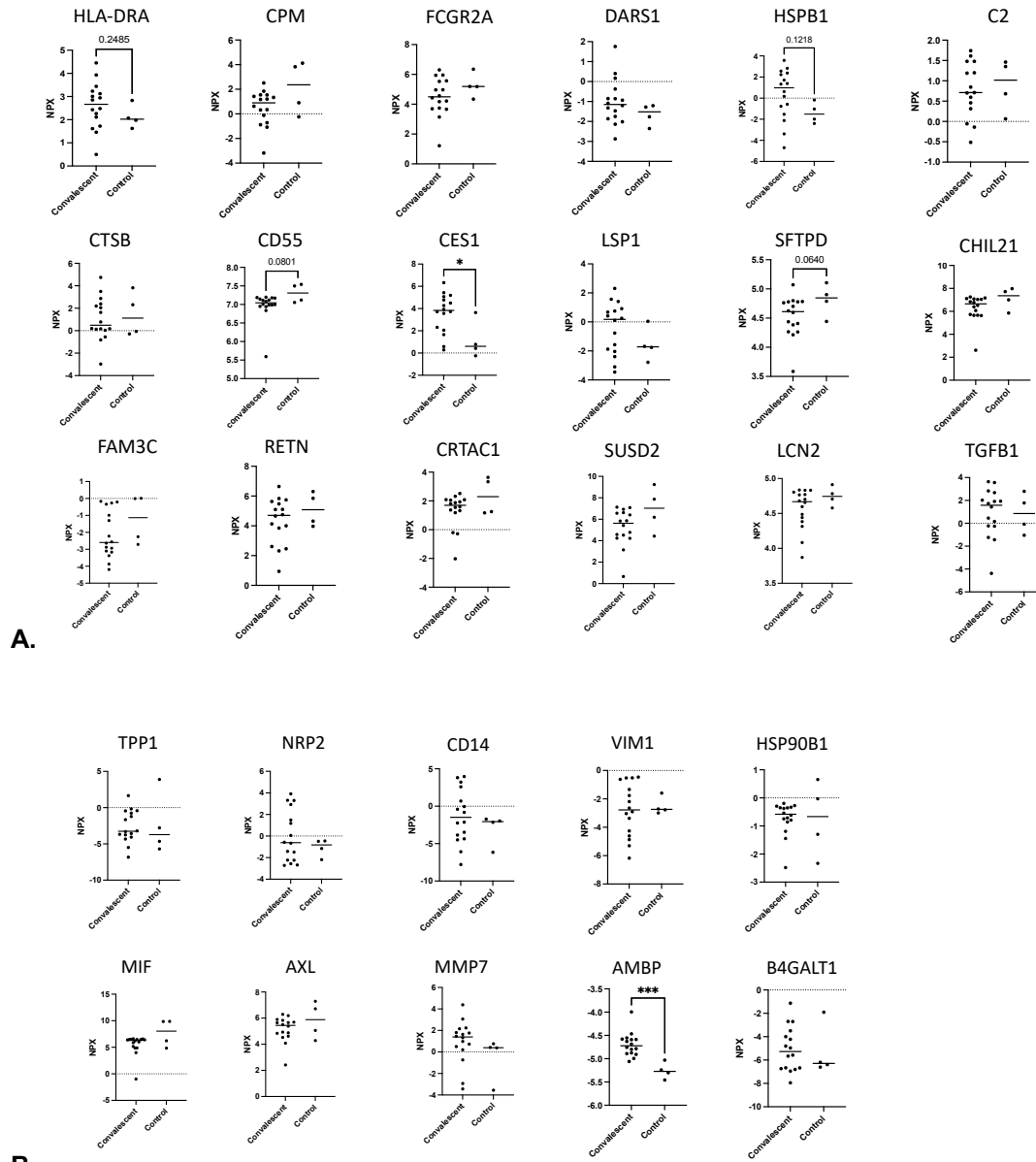**Figure S4. Overlapping biomarkers between PEA and DIA-MS platforms comparing convalescent phase versus control**

(A) Concordant trends of overlapping biomarkers between PEA and DIA-MS platforms comparing convalescent phase versus control. (B) No differential expression or discordant trends of overlapping biomarkers between PEA and DIA-MS platforms comparing convalescent phase versus control.

Age, years	49 (39 – 62)
Female (N, %)	19 (42)
Race/Ethnicity (N, %)	
White	24 (53)
Latino	8 (18)
Black	8 (18)
Asian	5 (11)
Vaccination Status (N, %)	14 (31)
Comorbidities and Risk Factors (N, %)	
Hypertension	17 (38)
Hyperlipidemia	10 (22)
Type 2 Diabetes	5 (11)
Coronary Artery Disease	3 (7)
Immunocompromised	2 (4)
Asthma	3 (7)
COPD	1 (2)
Pulmonary Embolism during acute COVID-19 disease course	1 (2)
Chronic Kidney Disease	1 (2)
Primary Biliary Cirrhosis	1 (2)
Smoking History	3 (7)
Hospitalized for COVID-19 (N, %)	19 (42)
Highest NIAID Ordinal Scale (median, IQR)	2 (2 – 5)
Highest NIAID Disease Severity (N, %)	
Ambulatory (Ordinal Scale 1-2)	26 (58)
Hospitalized without High flow oxygen (Ordinal Scale 3-5)	10 (22)
Hospitalized with High flow oxygen (Ordinal Scale 6-7)	9 (20)
Highest Oxygen requirements (N, %)	
No oxygen	30 (67)
Low flow oxygen	6 (13)
High flow oxygen	9 (20)
Oxygen requirements on First BAL (N, %)	
No oxygen	41 (91)
Low flow oxygen[†]	3 (7)
High flow oxygen[‡]	1 (2)
Received COVID-19 treatment (N, %)	19 (42)
Remdesivir	15 (33)
Steroids	12 (27)
Fostamatinib	3 (7)
Baricitinib	2 (4)
Monoclonal Antibodies	2 (4)
Days between 1st BAL and blood draw (median, IQR)	2 (1 – 6)
WBC (10^9/L)	5.94 (4.55 – 7.75)
Hemoglobin (g/L)	13.5 (12.1 – 14.5)
Platelets (10^9/L)	257 (204 – 321)

Neutrophils (10^9/L)	3.69 (2.48 – 4.91)
Lymphocytes (10^9/L)	1.78 (1.31 – 2.34)
CRP (mg/dL)	2.1 (2.0 – 7.5)
D-dimer (mg/L)	0.42 (0.30 – 0.85)
Fibrinogen (mg/dL)	355 (295 – 403)
INR	1.04 (0.99 – 1.14)
Albumin (g/dL)	4.1 (3.7 – 4.3)
Creatinine (mg/dL)	0.76 (0.66 – 0.90)
Age of Controls [n = 16] (median, IQR)	25 (22 – 34)
Female, Controls (N,%)	8 (50)

Table S1. Demographics of study cohort and controls (n = 45)
[†]Low flow oxygen defined as <10 L/min on nasal cannula.
[‡]High flow oxygen ≥ 10 L/min on nonrebreather mask and/or high flow nasal cannula.

	Days between symptom onset and BAL			Proximal Extension Assay			DIA-Mass Spectrometry			Targeted Immunoassays BAL			Targeted Immunoassays Plasma		
ID	A	R	C	A	R	C	A	R	C	A	R	C	A	R	C
1	39	89		X	X		X	X							
2	8	79		X	X		X	X							
3	28	100	282	X	X	X	X	X	X	X	X	X	X	X	
4	31	115		X	X		X			X	X				
5	7	84	287	X	X	X	X	X	X	X	X		X	X	
6	18	69		X	X		X	X							
7	36	80		X	X		X	X							
8	24	66		X	X		X	X							
9	40	85	278	X	X	X	X	X	X	X	X	X	X	X	
10	11	81		X	X		X	X							
11	35	82	251	X	X	X	X	X	X	X	X		X	X	
12	7	78	266	X	X	X	X	X	X	X	X		X	X	
13	40			X											
14	17	80		X	X										
15	36	77	297	X	X	X				X	X		X	X	
16	21	64	275	X	X	X	X	X	X	X	X	X	X	X	
17	11	79	262	X	X	X	X	X	X	X	X	X	X	X	
18	22			X			X			X			X		
19	15	83		X	X		X	X		X					
20	18	78	259	X	X	X	X	X	X	X	X	X	X	X	X
21	18	128	354	X	X		X	X		X	X	X			
22	12	116	227	X	X	X	X	X	X	X	X	X	X	X	
23	18			X			X			X			X		
24	32	84	278	X	X	X				X	X		X	X	
25	21	86	317	X	X	X	X	X	X	X			X	X	
26	24	78		X	X		X	X		X	X		X	X	
27	38	86								X	X		X	X	

#															
28		116	327		X	X		X	X		X	X		X	X
29		57	300								X	X			
30		43									X	X			
31		96	278		X	X					X	X		X	X
32		90	278								X	X			
33		91	308		X	X		X	X		X			X	
34		87			X			X			X		X	X	
35		74	270		X	X		X	X		X	X			
36		66			X										
37		99			X			X			X			X	
38		93									X			X	
39		85									X				
40		44			X			X			X		X	X	
41		92			X			X							
42		48			X										
43		48			X										
44		48			X										
45		43			X										

Table S2. Proteomics analyses performed for each patient across phases
A= Acute, R= Recovery, C= Convalescent

		Days from symptom onset to BAL		Lung volume (mL)		Lesion volume (mL)		Lung Burden (%)	
	Number	mean (sd)	min, max	mean (sd)	min, max	mean (sd)	min, max	mean (sd)	min, max
Acute	27	23 (10.9)	7, 40	4309 (1197)	20799, 6247	338 (511)	0, 1878	9 (13.6)	0, 45
Recovery	42	82 (18.9)	43, 128	4710 (1233)	2857, 7463	178 (389)	0, 1926	4 (9)	0, 46
Convalescent	19	284 (28.9)	227, 354	4469 (1135)	2393, 6628	42 (81)	0, 290	1 (2)	0, 8

Table S7. Quantitative Analysis of COVID-19-Associated Infiltrates on Chest Computerized Tomography