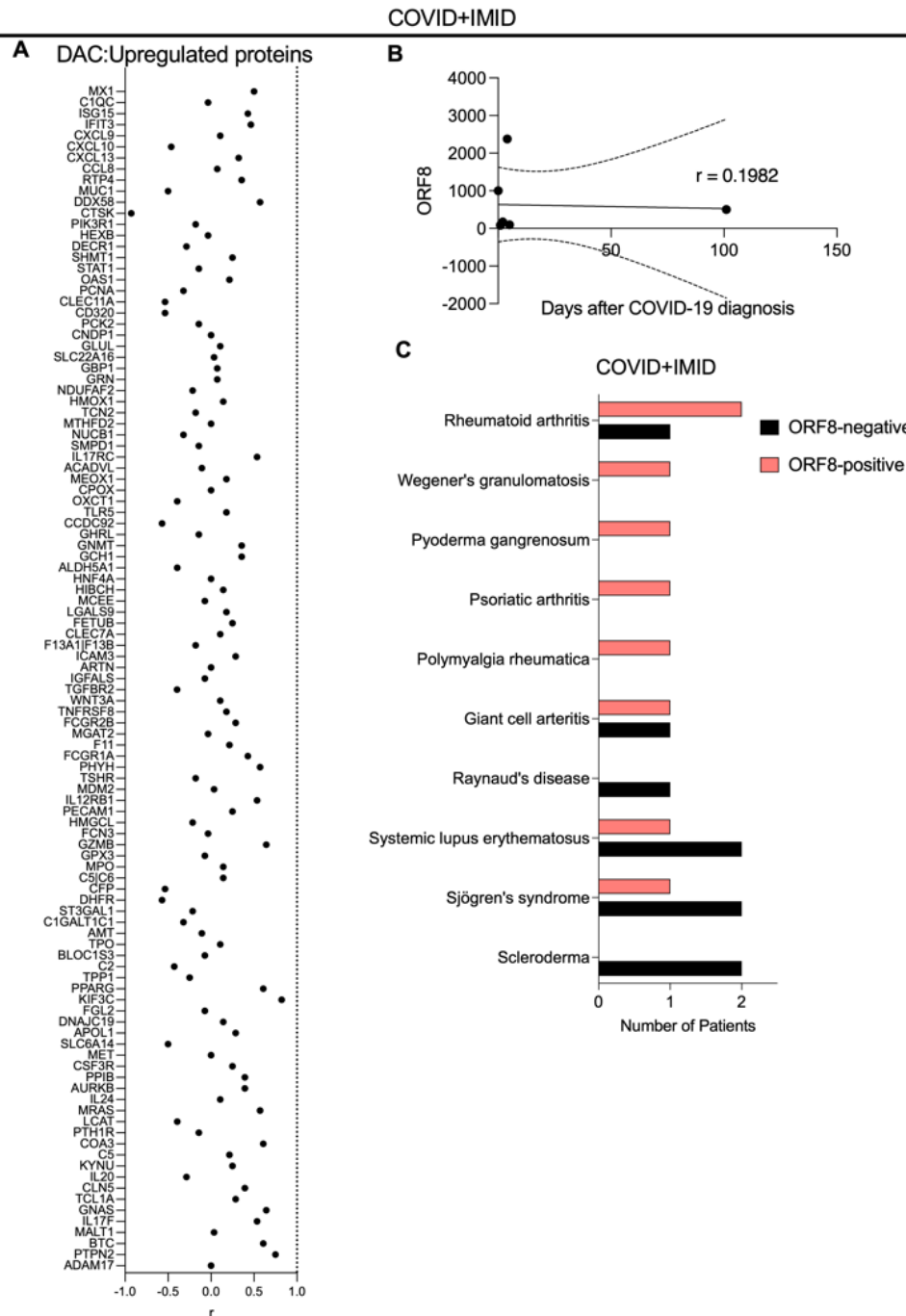
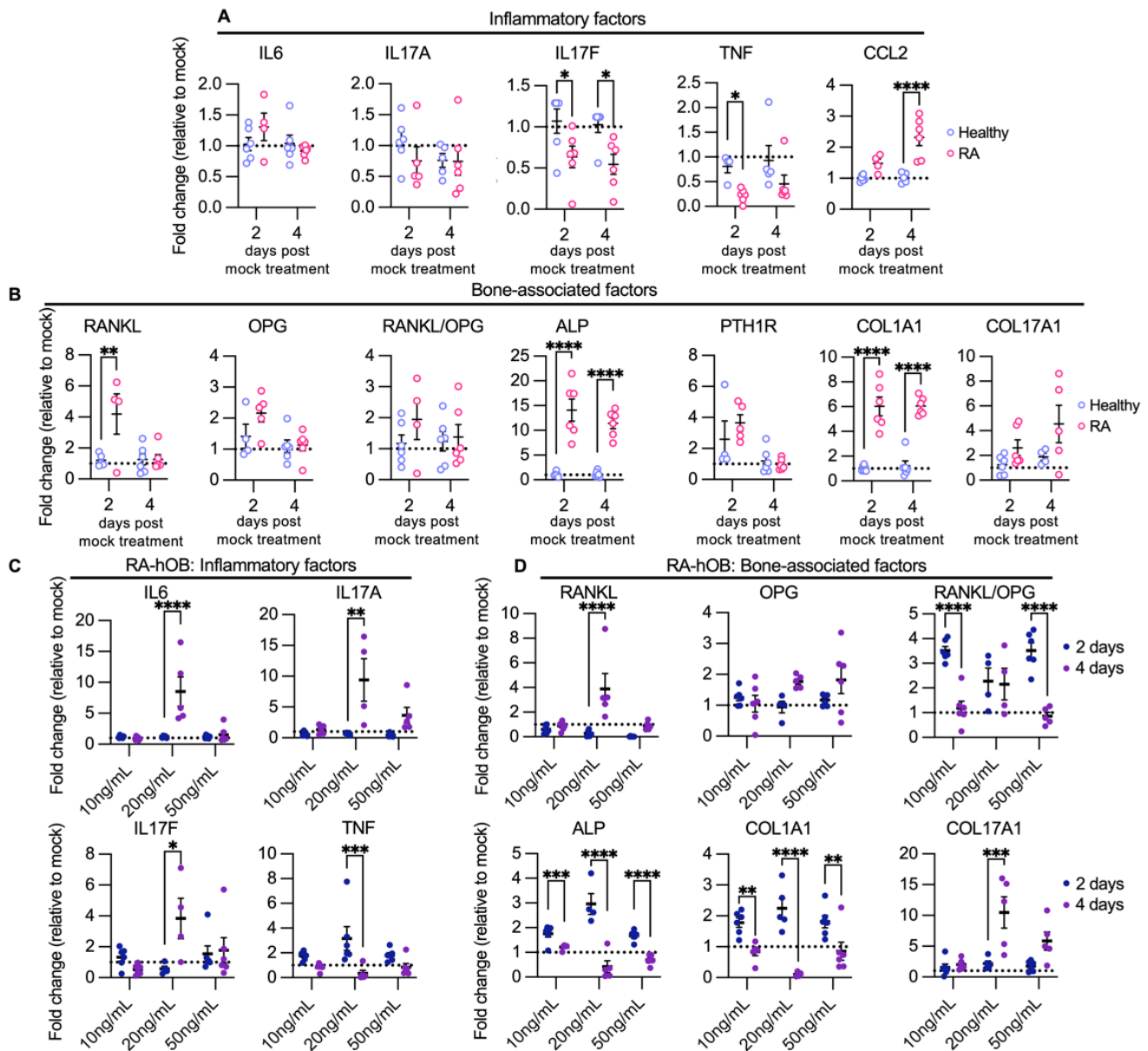


## Supplemental Figures and Tables



**Supplemental figure 1. Correlation between protein levels, time of collection, ORF8 levels and IMID conditions. (A and B)** Spearman's correlation analysis between days after COVID-19 diagnosis (DAC) with significantly upregulated proteins (A) and ORF8 (B) in the COVID+IMID group. (C) IMID conditions and ORF8 positivity in COVID+IMID group.



**Supplemental figure 2. SARS-CoV-2 ORF8 dose-dependent effect in RA osteoblasts. (A and B)**

Transcriptional profile of inflammatory factors (**A**) and bone-associated factors (**B**) in H-hOBs and RA-hOBs treated with media (mock-treated controls)  $n = 4-6$  per group. (**C and D**) Transcriptional profile of inflammatory factors (**C**) and bone-associated factors (**D**) in H-hOBs and RA-hOBs stimulated with 20 ng/mL of purified SARS-CoV-2 ORF8, relative to mock-treated controls  $n = 4-6$  per group. Data are represented as means  $\pm$  SEM. Statistical analysis was performed using two-way ANOVA, and Bonferroni's multiple comparisons test. Data were generated from three independent experiments. Significant differences among groups are displayed with asterisks (\* $P < 0.05$ , \*\* $P < 0.01$ , \*\*\* $P < 0.001$  and \*\*\*\* $P < 0.0001$ ).

**Supplemental Table 1. Summary of types of IMID conditions and ORF8 positivity from COVID-19 with IMID cohort**

IMID Conditions	COVID + IMID Patients												
	#1	#2	#3	#4	#5	#6	#7	#8	#9	#10	#11	#12	#13
Giant cell arteritis		✓						✓					
Polymyalgia rheumatica							✓						
Psoriatic arthritis	✓												
Pyoderma gangrenosum			✓										
Raynaud's disease												✓	
Rheumatoid arthritis	✓					✓							✓
Scleroderma									✓		✓		
Sjögren's syndrome	✓									✓		✓	
Systemic lupus erythematosus				✓								✓	✓
Wegener's granulomatosis					✓								
ORF8 positivity	+	+	+	+	+	+	+	-	-	-	-	-	-
ORF8 level (ng/mL) <sup>A</sup>	2376.33	1000.66	504.79	173.21	95.40	90.15	84.85	33.11	31.13	23.17	14.83	8.10	7.24

<sup>A</sup>Samples with >50 ng/mL ORF8 detected were considered ORF8 positive.

**Supplemental Table 2. qPCR list of primers used in this study**

<b>Gene</b>	<b>Sequence (5' - 3')</b>	<b>Species</b>
<i>GAPDH-F</i>	ACCAGGTGGTCTCCTCTGAC	human
<i>GAPDH-R</i>	TGTAGCCAAATTCGTTGTATACC	human
<i>IL6-F</i>	CGAGCCCACCGGGAACGAAA	human
<i>IL6-R</i>	GGACCGAAGGCGTTGTGGAG	human
<i>IL17A-F</i>	AATCTCCACCGCAATGAGGA	human
<i>IL17A-R</i>	ACGTTCCCATCAGCGTTGA	human
<i>IL17F-F</i>	AACCAGCGCGTTTCCATGTCAC	human
<i>IL17F-R</i>	GAGCATTGATGCAGCCCAAGTTC	human
<i>TNF-F</i>	CGCCGTCTCCTACCAGACCAAGGTCAAC	human
<i>TNF-R</i>	ATGATCCCAAAGTAGACCTGCCAGACTCG	human
<i>CCL2-F</i>	AGTCTCTGCCGCCCTTCT	human
<i>CCL2-R</i>	GTGACTGGGGCATTGATTG	human
<i>RANKL-F</i>	TGGATCACAGCACATCAGAGCAG	human
<i>RANKL-R</i>	TGGGGCTCAATCTATATCTCGAAC	human
<i>OPG-F</i>	GTGTGCGAATGCAAGGAAGG	human
<i>OPG-R</i>	CCACTCCAAATCCAGGAGGG	human
<i>ALP-F</i>	ACAAGCACTCCCCTTCATCTGGA	human
<i>ALP-R</i>	TCACGTTGTTCTGTTTCAGCTCGT	human
<i>PTH1R-F</i>	TCACCGTAGCTGTGCTCATCCT	human
<i>PTH1R-R</i>	GAGTAGAGCACAGCGTCCTTGA	human
<i>COL1A1-F</i>	CTCCTGACGCACGGCC	human
<i>COL1A1-R</i>	CCGTTCTGTACGCAGGTGATT	human
<i>COL17A1-F</i>	GCTCTTGGCATTCTAGTGGTC	human
<i>COL17A1-R</i>	GATGTACTGCTGAATCTCCTGGC	human
<i>GAPDH-F</i>	AGGTCATCCCAGAGCTGAACG	mouse
<i>GAPDH-R</i>	CACCCTGTTGTGTAGCCGTAT	mouse
<i>OC-STAMP-F</i>	ATGAGGACCATCAGGGCAGCCACG	mouse
<i>OC-STAMP-R</i>	GGAGAAGCTGGGTCACTAGTTCGT	mouse
<i>DC-STAMP-F</i>	ACTAGAGGAGAAGTCTGGGAGTC	mouse
<i>DC-STAMP-R</i>	CACCCACATGTAGAGATAGGTCAG	mouse
<i>NFATC1-F</i>	CCCGTCACATTCTGGTCCAT	mouse
<i>NFATC1-F</i>	CAAGTAACCGTGTAGCTGCACAA	mouse
<i>RANK-F</i>	TTTGTGGAATTGGGTCAATGAT	mouse
<i>RANK-R</i>	ACCTCGCTGACCAGTGTGAA	mouse
<i>CTSK-F</i>	AGGCAGCTAAATGCAGAGGGTACA	mouse
<i>CTSK-R</i>	AGCTTGCATCGATGGACACAGAGA	mouse
<i>CALCR-F</i>	CGCATCCGCTTGAATGTG	mouse
<i>CALCR -R</i>	TCTGTCTTTCCCAGGAAATGA	mouse
<i>IL17A-F</i>	GCCCTCAGACTACCTCAACC	mouse
<i>IL17A-R</i>	GTCCTAGTAGGGAGGTGTGAAGTTG	mouse
<i>IL17F-F</i>	AATCCAGAACCGCTCCAGT	mouse
<i>IL17F-R</i>	TTGATGCAGCCTGAGTGTCT	mouse
<i>TNF-F</i>	TCTGTCTACTGAACCTCGGGGTG	mouse
<i>TNF-R</i>	ACTTGGTGGTTTGTACGACG	mouse
<i>CCL2-F</i>	TCTCCAGCCTACTCATTGGG	mouse
<i>CCL2-R</i>	AGGTCCTGTCTGCTTCTG	mouse