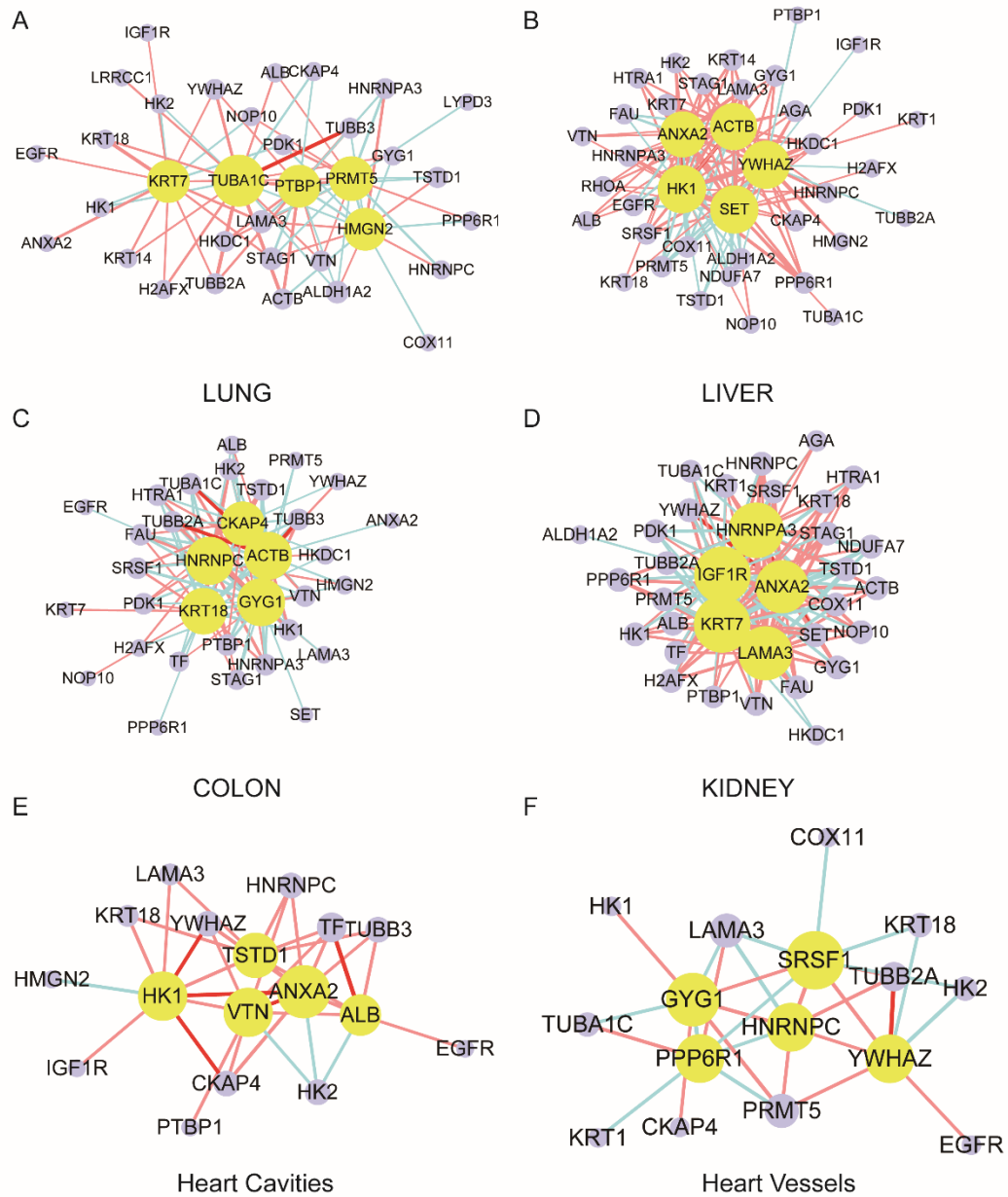
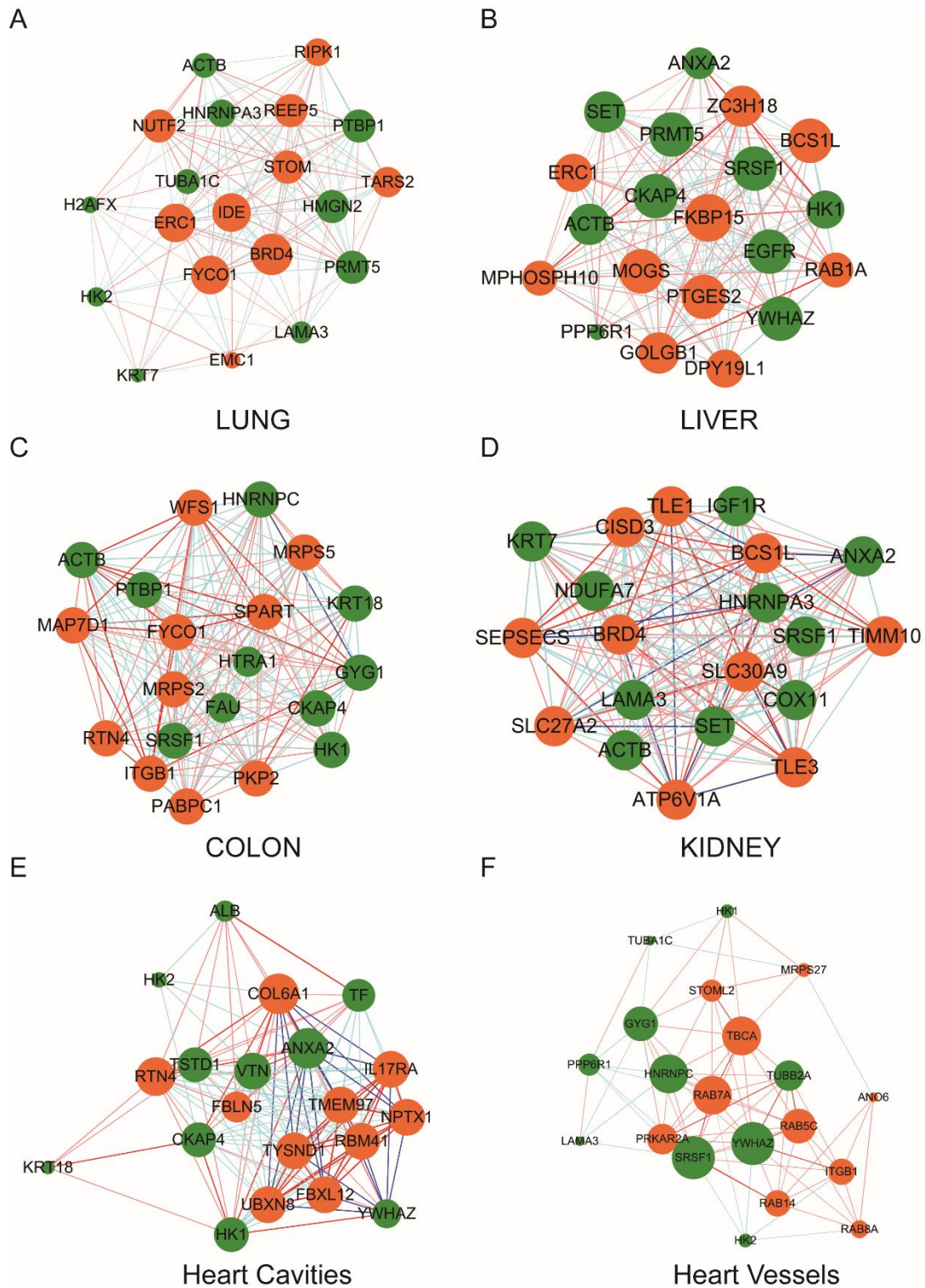


Supplementary Figure S1 Networks of proteins affected by SARS-CoV-2 in 5 organs (The red edge in the network indicates a significant or strong positive correlation between the two proteins, pink is a non-significant or weak positive correlation. Dark blue is a significant or strong negative correlation, light blue is a non-significant or weak negative correlation. The thickness of the edge is determined by the correlation coefficient.



Supplementary Figure S2 Cores of networks consisting of hub proteins affected by SARS-CoV-2 in 5 organs. The yellow ones are the top 5 proteins (The coloring principle of edges is the same as described in Supplementary Figure S1).



Supplementary Figure S3 Core correlation networks consisting of hub proteins affected by SARS-CoV-2 and hub proteins interacted with SARS-CoV-2 in 5 organs. The green ones are proteins affected by SARS-CoV-2 and the orange ones are proteins interacted with SARS-CoV-2 (The coloring principle of edges is the same as described in Supplementary Figure S1).

Supplementary Table S1: The top 5 hubs of 188 proteins and the nodes that can be regulated by drugs in different tissues

Compound Name	Human Genes	Tissue Types	Viral Bait	Drug Status	Activity Type	Source
NA	MRPS5	Colon	nsp8	NA	NA	NA
NA	RDX	Colon	nsp13	NA	NA	NA
NA	RBM41	Heart_Cavities	nsp12	NA	NA	NA
NA	TYSND1	Heart_Cavities	nsp12	NA	NA	NA
NA	ANO6	Heart_Vessels	M	NA	NA	NA
NA	FAM162A	Heart_Vessels	nsp7	NA	NA	NA
NA	MRPS27	Heart_Vessels	nsp8	NA	NA	NA
NA	RAB14	Heart_Vessels	nsp7	NA	NA	NA
NA	ATP5MG	Kidney	nsp6	NA	NA	NA
NA	RAB18	Kidney	nsp7	NA	NA	NA
NA	RALA	Kidney	nsp7	NA	NA	NA
NA	SLC30A9	Kidney	M	NA	NA	NA
NA	GOLGB1	Liver	nsp13	NA	NA	NA
NA	MOGS	Liver	nsp7	NA	NA	NA
NA	RAB1A	Liver	nsp7	NA	NA	NA
NA	ZC3H18	Liver	E	NA	NA	NA
NA	ERC1	Lung	nsp13	NA	NA	NA
NA	IDE	Lung	nsp4	NA	NA	NA
NA	REEP5	Lung	M	NA	NA	NA
NA	PABPC1	Colon/Heart_Cavities	N	NA	NA	NA
NA	RTN4	Colon/Heart_Cavities	M	NA	NA	NA
NA	FYCO1	Colon/Lung	nsp13	NA	NA	NA
NA	CYB5R3	Heart_Cavities/Heart_Vessels	nsp7	NA	NA	NA
Bafilomycin A1	ATP6V1A	Heart_Cavities/Heart_Vessels/Kidney/Lung	M	Pre-clinical	ATPase inhibitor	Literature-derived drugs and reagents
dBET6	BRD4	Heart_Vessels/Kidney/Liver/Lung	E	Pre-clinical	Degrades BRD proteins	Expert-identified drugs and reagents
JQ1	BRD4	Heart_Vessels/Kidney/Liver/Lung	E	Pre-clinical	BRD inhibitor	Literature-derived drugs and reagents
ABBV-744	BRD4	Heart_Vessels/Kidney/Liver/Lung	E	Clinical Trial	BRD inhibitor	Expert-identified drugs and reagents
RVX-208	BRD4	Heart_Vessels/Kidney/Liver/Lung	E	Clinical Trial	BRD2/4 inhibitor	Literature-derived drugs and reagents
CPI-0610	BRD4	Heart_Vessels/Kidney/Liver/Lung	E	Clinical Trial	BRD inhibitor	Expert-identified drugs and reagents
MZ1	BRD4	Heart_Vessels/Kidney/Liver/Lung	E	Pre-clinical	Degrades BRD proteins	Expert-identified drugs and reagents
Ponatinib	RIPK1	HeartCavities/Heart_Vessels/Liver/Lung	nsp12	Approved (Cancer)	RIPK1 inhibitor	Literature-derived drugs and reagents
Indomethacin	PTGES2	Colon/Heart_Cavities/Heart_Vessels/Kidney/Liver/Lung	nsp7	Approved (Inflammation, Pain)	Prostaglandin E2 synthase inhibitor	Literature-derived drugs and reagents

Supplementary Table S2: Top 10 hubs of 332 proteins in different tissues						
Compound Name	Human Genes	Tissue Types	Viral Bait	Drug Status	Activity Type	Source
NA	MAP7D1	Colon	orf10	NA	NA	NA
NA	MRPS2	Colon	nsp8	NA	NA	NA
NA	MRPS5	Colon	nsp8	NA	NA	NA
NA	PABPC1	Colon	N	NA	NA	NA
NA	PKP2	Colon	nsp1	NA	NA	NA
NA	SPART	Colon	nsp9	NA	NA	NA
NA	WFS1	Colon	orf9c	NA	NA	NA
NA	COL6A1	Heart_Cavities	orf8	NA	NA	NA
NA	FBLN5	Heart_Cavities	nsp9	NA	NA	NA
NA	FBXL12	Heart_Cavities	orf8	NA	NA	NA
NA	IL17RA	Heart_Cavities	orf8	NA	NA	NA
NA	NPTX1	Heart_Cavities	orf8	NA	NA	NA
NA	RBM41	Heart_Cavities	nsp12	NA	NA	NA
Haloperidol	TMEM97	Heart_Cavities	orf9c	Approved (CNS diseases)	Sigma 1/2 modulator	Literature-derived drugs and reagents
PB28	TMEM97	Heart_Cavities	orf9c	Pre-clinical	Sigma 1/2 modulator	Literature-derived drugs and reagents
NA	TYSND1	Heart_Cavities	nsp12	NA	NA	NA
NA	UBXN8	Heart_Cavities	orf9c	NA	NA	NA
NA	ANO6	Heart_Vessels	M	NA	NA	NA
NA	MRPS27	Heart_Vessels	nsp8	NA	NA	NA
NA	PRKAR2A	Heart_Vessels	nsp13	NA	NA	NA
NA	RAB14	Heart_Vessels	nsp7	NA	NA	NA
NA	RAB5C	Heart_Vessels	nsp7	NA	NA	NA
NA	RAB7A	Heart_Vessels	nsp7	NA	NA	NA
NA	RAB8A	Heart_Vessels	nsp7	NA	NA	NA
NA	STOML2	Heart_Vessels	orf3b	NA	NA	NA
NA	TBCA	Heart_Vessels	nsp11	NA	NA	NA
Bafilomycin A1	ATP6V1A	Kidney	M	Pre-clinical	ATPase inhibitor	Literature-derived drugs and reagents
NA	CISD3	Kidney	orf8	NA	NA	NA
NA	SEPSECS	Kidney	nsp8	NA	NA	NA
NA	SLC27A2	Kidney	nsp2	NA	NA	NA
NA	SLC30A9	Kidney	M	NA	NA	NA
NA	TIMM10	Kidney	nsp4	NA	NA	NA
NA	TLE1	Kidney	nsp13	NA	NA	NA
NA	TLE3	Kidney	nsp13	NA	NA	NA
NA	DPY19L1	Liver	orf9c	NA	NA	NA
Rapamycin (Sirolimus)	FKBP15	Liver	nsp2	Approved (Organ rejection)	mTOR inhibitor	Expert-identified drugs and reagents
NA	GOLGB1	Liver	nsp13	NA	NA	NA
NA	MOGS	Liver	nsp7	NA	NA	NA
NA	MPHOSPH10	Liver	nsp8	NA	NA	NA
Indomethacin	PTGES2	Liver	nsp7	Approved (Inflammation, Pain)	Prostaglandin E2 synthase inhibitor	Literature-derived drugs and reagents
NA	RAB1A	Liver	nsp7	NA	NA	NA
NA	ZC3H18	Liver	E	NA	NA	NA
NA	EMC1	Lung	orf8	NA	NA	NA
NA	IDE	Lung	nsp4	NA	NA	NA
NA	NUTF2	Lung	nsp15	NA	NA	NA
NA	REEP5	Lung	M	NA	NA	NA
Ponatinib	RIPK1	Lung	nsp12	Approved (Cancer)	RIPK1 inhibitor	Literature-derived drugs and reagents
NA	STOM	Lung	M	NA	NA	NA
NA	TARS2	Lung	M	NA	NA	NA
NA	RTN4	Colon/Heart_Cavities	M	NA	NA	NA
NA	ITGB1	Colon/Heart_Vessels	orf8	NA	NA	NA
NA	FYCO1	Colon/Lung	nsp13	NA	NA	NA
NA	BCS1L	Kidney/Liver	orf9c	NA	NA	NA
CPI-0610	BRD4	Kidney/Lung	E	Clinical Trial	BRD inhibitor	Expert-identified drugs and reagents
ABBV-744	BRD4	Kidney/Lung	E	Clinical Trial	BRD inhibitor	Expert-identified drugs and reagents
dBET6	BRD4	Kidney/Lung	E	Pre-clinical	Degrades BRD proteins	Expert-identified drugs and reagents
JQ1	BRD4	Kidney/Lung	E	Pre-clinical	BRD inhibitor	Literature-derived drugs and reagents
MZ1	BRD4	Kidney/Lung	E	Pre-clinical	Degrades BRD proteins	Expert-identified drugs and reagents
RVX-208	BRD4	Kidney/Lung	E	Clinical Trial	BRD2/4 inhibitor	Literature-derived drugs and reagents
NA	ERC1	Liver/Lung	nsp13	NA	NA	NA

Supplementary Table S3: The sample size and protein number of the six tissues

Tissues	Sample size	Number of proteins
Lung	102	10816
Liver	160	9997
Colon	100	7212
Kidney	84	9755
Heart Cavities	18	10536
Heart Vessels	18	10536