Supplementary Table 1. In vivo anti-SARS-CoV-2 efficacy of compounds targeting the viral life cycle.

virus life cycle stage	**Compound name**	**Primary indication**	**Clinical Phase for COVID-19**	**in vivo performance**		**References**
				Compared to vehicle	**compared to Remdesivir**	
attachment and entry	camostat mesilate	pancreatilis	Phase 2	about 1 log reduction in an ex vivo model (PCLS)		(*1*)
	umifenovir	influenza	No clinical benefit	no in vivo data		(*2*)
	baricitinib	rheumatoid arthritis	Phase 3	no effect on virus replication		(*3, 4*)
initiation translation of polyproteins	Plitidepsin	multiple myeloma	Phase 2/3	1.5-2 log reduction, 4/8 achieved clearance in a mouse model	non-superior	(*5*)
	Ternatin-4	Preclinical compound		no in vivo data		(*6, 7*)
	zotatifin	Phase 1 for cancer	Phase 1	no in vivo data		(*6, 7*)
	homoharritonine	leukemia		6/6 mice achieved clearance on 5 dpi		This study
proteolytic processing	MI-09	SARS-CoV-2	animal model	about 2 log reduction, clearance not achieved		(*8*)
	MI-30	SARS-CoV-2	animal model	about 2 log reduction, clearance not achieved		(*8*)
	lopinavir	AIDS	No clinical	no effect on virus		(*9*)

	ritonavir	AIDS	benefit No clinical benefit	replication no effect on virus replication		(*9*)
transcription & RNA replication	remdesivir	coronavirus	FDA-approved	10/36 rhesus macaques achieved clearance on 7 dpi		(*10*)
	EIDD-2801/MK-4482	coronavirus	Phase 2a	4/8 mice achieved clearance if treatment started 24 h after exposure in the LoM model		(*11*)
multiple steps	clofazimine	leprosy	Phase 2	1-2 log reduction in hamster model, clearance not achieved	less-effective	(*12*)
	ranitidine bismuth citrate	anti-ulcer		1-1.5 log reduction, clearance not achieved	non-superior	(*13*)

Supplementary Table2. Homoharringtonine (HHT) exhibits broad-spectrum inhibition efficacy against coronaviruses.

coronavirus	Abbreviation	Genus	IC50 (nM)	Reference
Middle East respiratory syndrome coronavirus	MERS	Beta	71.8	Dyall et al. 2014(*14*)
Mouse hepatitis coronavirus	MHV	Beta	12	Cao et al. 2015(*15*)
Bovine coronavirus	BCoV	Beta	<<1uM	Cao et al. 2015(*15*)
Human enteric coronavirus	HECoV	Beta	<<1uM	Cao et al. 2015(*15*)
Porcine epidemic diarrhea virus	PEDV	Alpha	112	Dong et al. 2018(*16*)
Severe acute respiratory syndrome coronavirus 2	SARS-CoV-2	Beta	~100	Wen et al. 2021(*17*)
Severe acute respiratory syndrome coronavirus 2	SARS-CoV-2	Beta	30	Ianevski et al. 2020(*18*)
Severe acute respiratory syndrome coronavirus 2	SARS-CoV-2	Beta	2.1uM**	Choy et al. 2020(*19*)
Porcine epidemic diarrhea virus	PEDV	Alpha	<<100	This study
Porcine deltacoronavirus	PDCoV	Delta	<<100	This study
Swine acute diarrhea syndrome coronavirus	SADS-CoV	Alpha	<100	This study

** [Note - Choy et al.'s study reported a much larger IC50 value for multiple drugs, including HHT and Remdisivir (In Choy et al.'s study, IC50 of Remdisivir against SARS-CoV-2 was 26.9uM, while in many other studies, it was about 1uM(*2, 20*)).]

Supplementary Table 3. Basic information of the first 4 patients enrolled in ChiCTR2100049182.

	age(years)	sex	Cancer type
P1	63	female	Lung cancer
P2	50	male	Colorectal cancer with lung metastasis
P3	74	male	Colorectal cancer with lung metastasis
P4	48	male	Nasopharynx cancer with lung metastasis

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