

## Supplementary information

### Site mapping and small molecule blind docking reveal a possible target site on the SARS-CoV-2 main protease dimer interface

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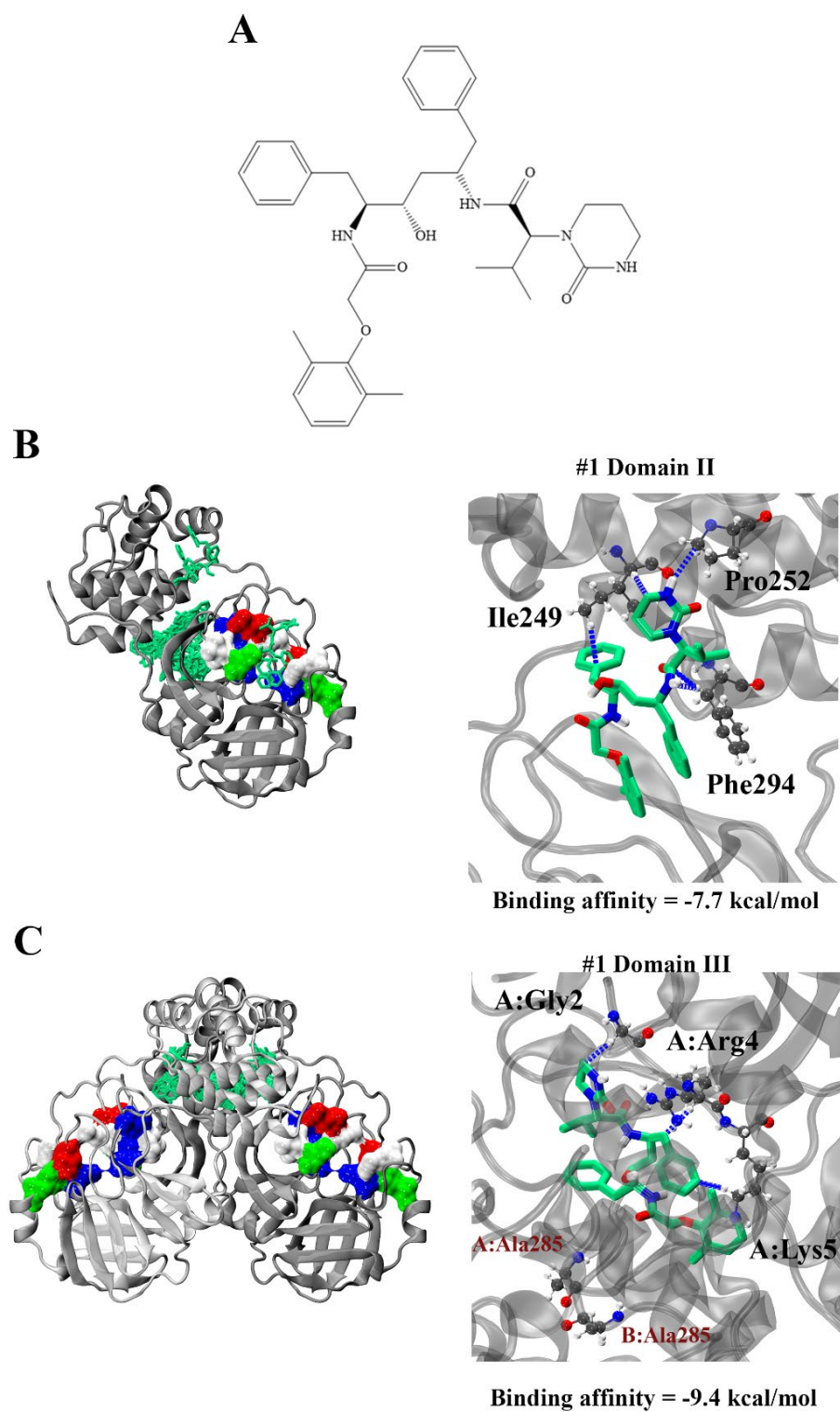
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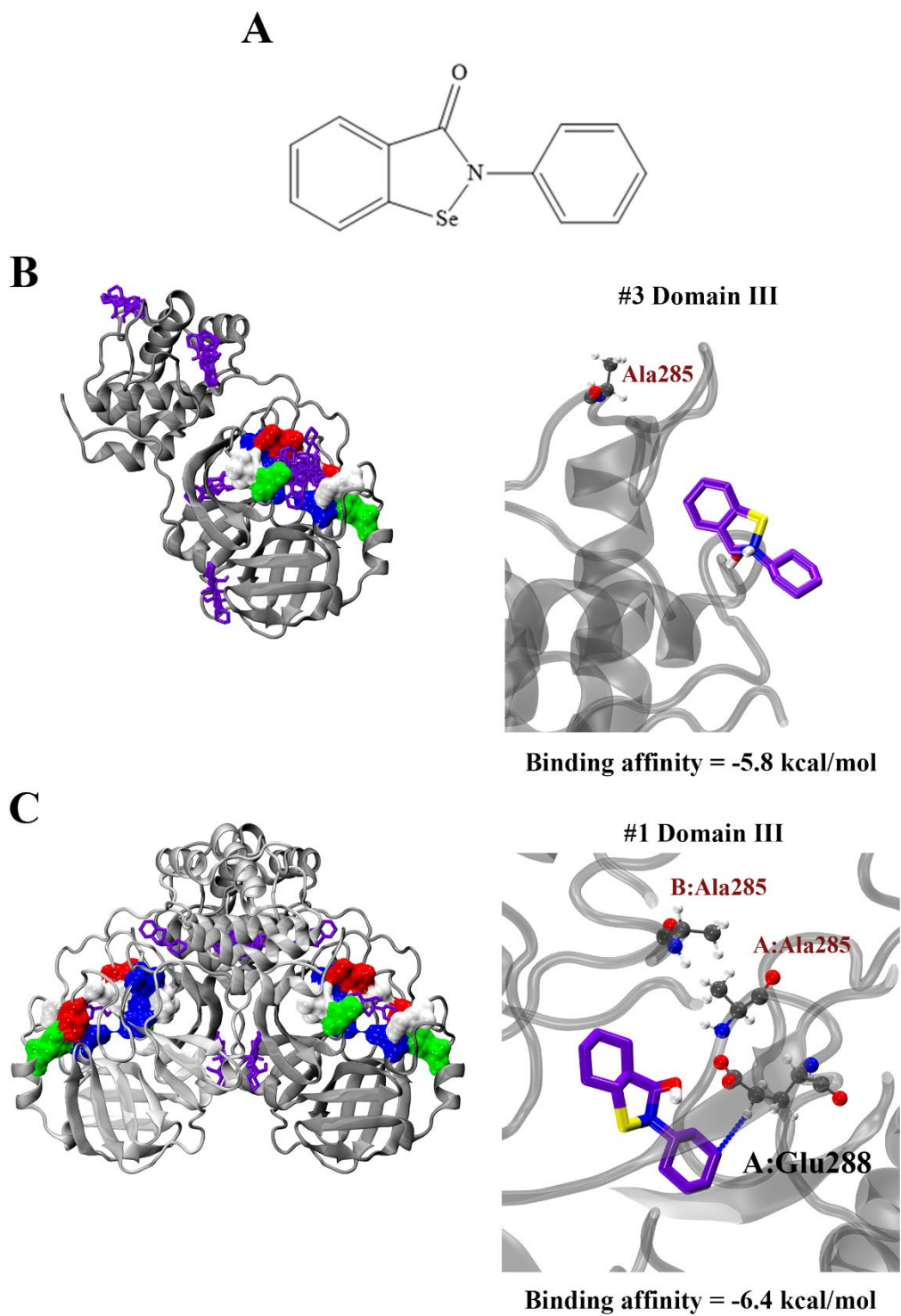
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**Figure S1.**



**Figure S1.** Blind docking of lopinavir (A) to SARS-CoV-2 main protease monomer (B) and dimer (C).

Figure. S2.



**Figure S2.** Blind docking of ebselen (A) to SARS-CoV-2 main protease monomer (B) and dimer (C).

**Table S1:** Average energy contribution of ligands bound to different regions of SARS-CoV-2 M<sup>Pro</sup> in kcal/mol

Ligand	Binding location	Van der Waal	Electrostatic	Polar solvation	SASA energy	Binding energy
$\alpha$ -ketoamide 13b	Protomer A	-44.0	-11.0	37.5	-5.2	<b>-22.7</b>
	Protomer B	-49.6	-15.3	47.0	-5.5	<b>-23.5</b>
	Domain III	-59.9	-23.8	84.9	-6.5	<b>-5.2</b>
SRT1720	Protomer A	-51.4	-77.9	77.9	-5.4	<b>-56.8</b>
	Protomer B	-40.1	-67.1	53.8	-4.4	<b>-57.8</b>
	Domain III	-30.2	-4.9	22.1	-3.4	<b>-16.4</b>
Ritonavir	Protomer A	-38.7	-5.9	31.6	-4.9	<b>-17.9</b>
	Protomer B	-40.8	-9.3	37.9	-5.0	<b>-17.2</b>
	Domain III	-74.4	-14.3	72.1	-7.8	<b>-24.4</b>

**Movie S1.**

100 ns trajectory of the apo form of the SARS-CoV-2 main protease

**Movie S2.**

100 ns trajectory of ritonavir bound to the active site of the SARS-CoV-2 main protease

**Movie S3.**

100 ns trajectory of ritonavir bound to the top binding pose in domain III of the SARS-CoV-2 main protease

**Movie S4.**

100 ns trajectory of  $\alpha$ -ketoamide 13b to the active site of the SARS-CoV-2 main protease

**Movie S5.**

100 ns trajectory of  $\alpha$ -ketoamide 13b to the top binding pose in domain III of the of the SARS-CoV-2 main protease

**Movie S6.**

100 ns trajectory of SRT1720 bound to the active site of the SARS-CoV-2 main protease

**Movie S7.**

100 ns trajectory of SRT1720 bound in domain III (binding pose #3) of the SARS-CoV-2 main protease