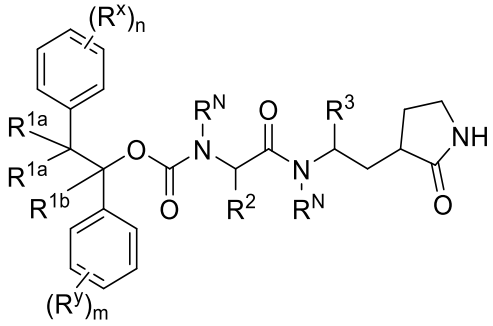


(I),

wherein

each R^N is independently H or C_{1-6}alkyl;

each R^{1a} is independently halo;

R^{1b} is hydrogen, halo, C_{1-6}alkyl, or C_{1-6}haloalkyl;

n is 0, 1, or 2;

each R^x is independently halo or C_{1-6}alkyl;

m is 0, 1, or 2;

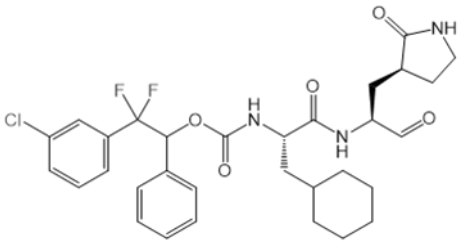
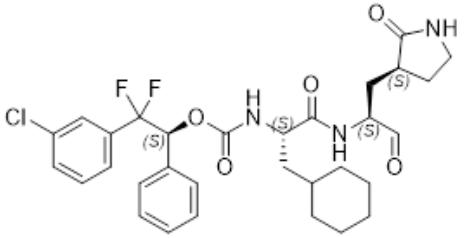
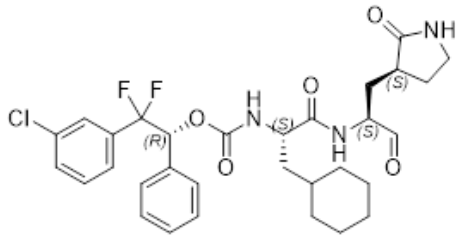
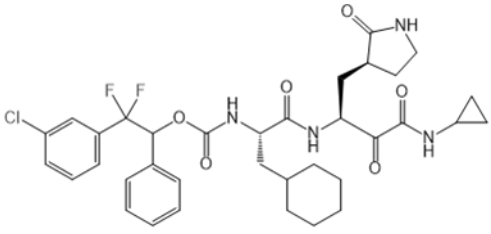
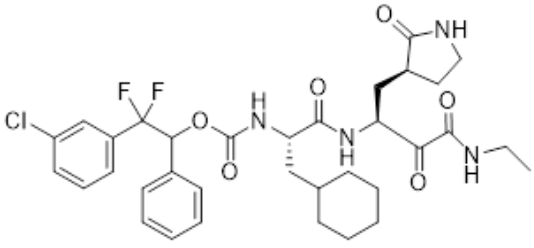
each R^y is independently halo or C_{1-6}alkyl;

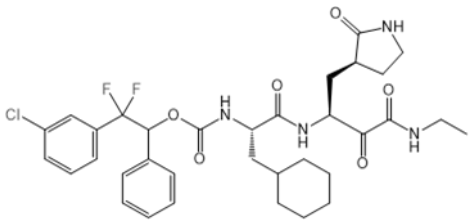
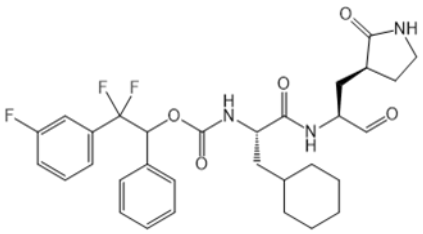
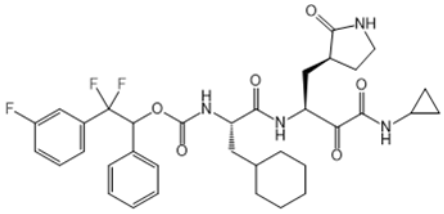
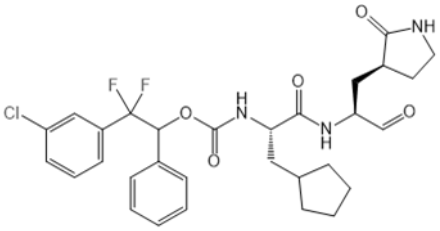
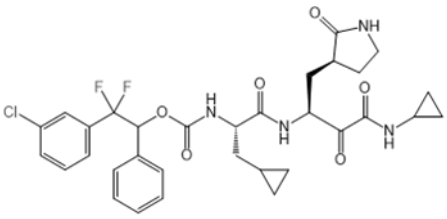
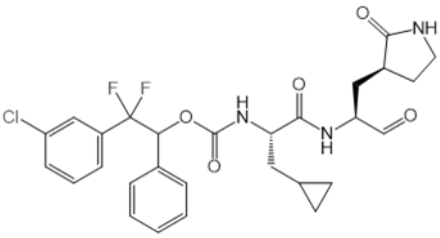
R^2 is C_{1-6}alkylene-C_{3-8}carbocyclyl; and

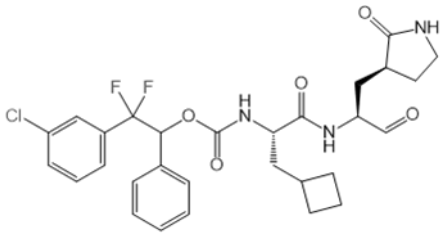
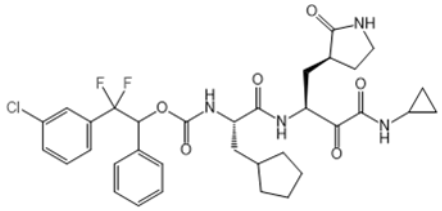
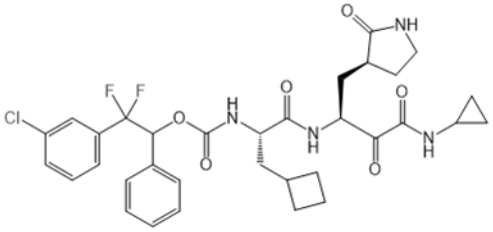
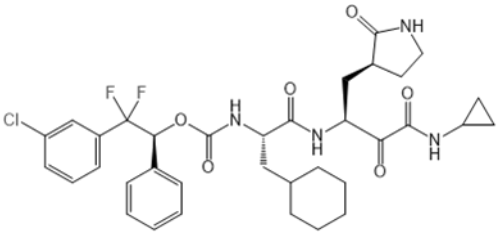
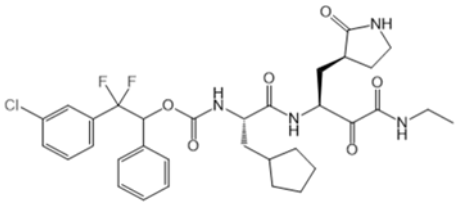
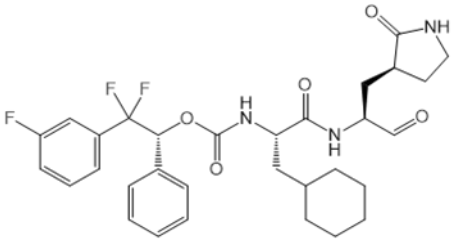
R^3 is CHO or -$[C(O)]_2$-NR^N-B, wherein B is C_{1-6}alkyl, C_{3-8}carbocyclyl, or 4-12-membered heterocyclyl having 1-3 ring heteroatoms selected from N, O, and S, and the carbocyclyl or heterocyclyl is optionally mono-substituted with C_{1-6}alkyl.

[0005b] In another aspect of the present disclosure, there is provided a compound as recited in Table A, or a pharmaceutically acceptable salt thereof:

TABLE A

Compound no.	Structure
A20	
A20-1	
A20-2	
A21	
A29	

Compound no.	Structure
A50	
A67	
A74	
A93	
A94	
A95	

Compound no.	Structure
A102	
A103	
A108	
A116	
A117	
A119	

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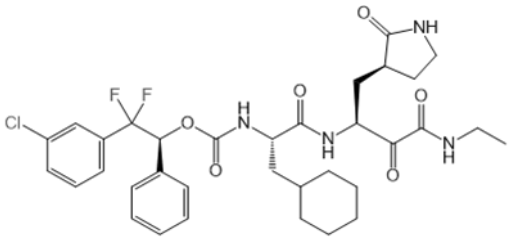
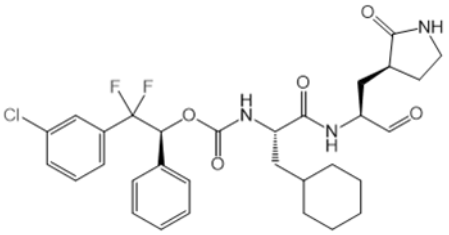
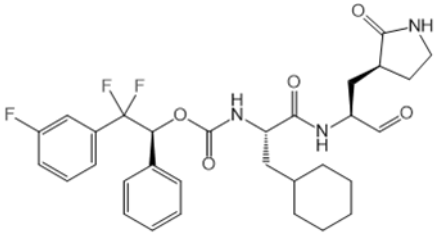
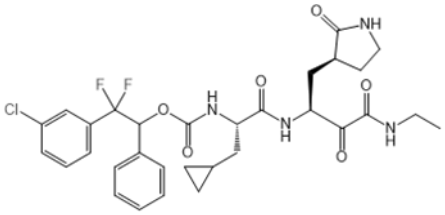
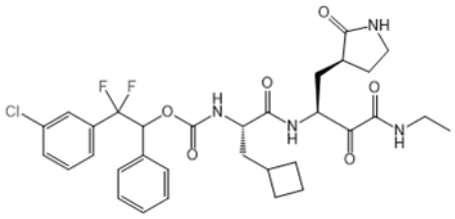
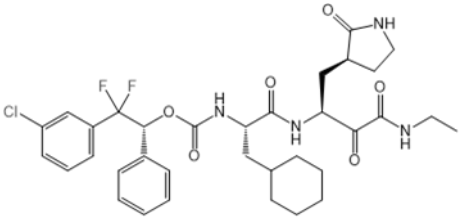
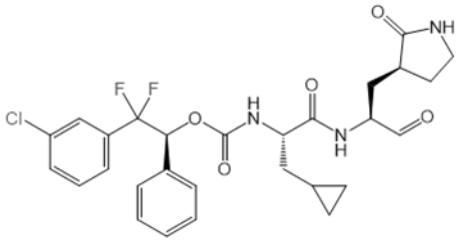
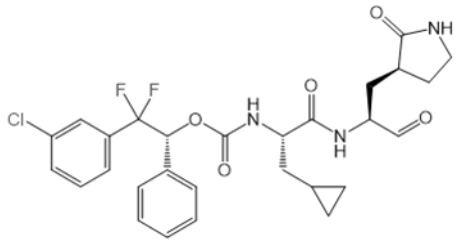
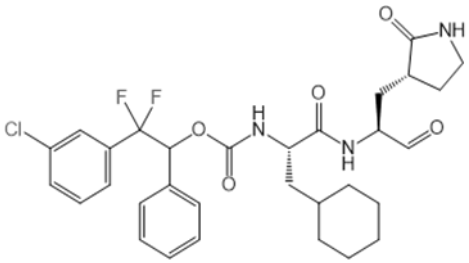
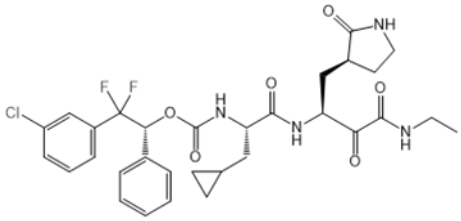
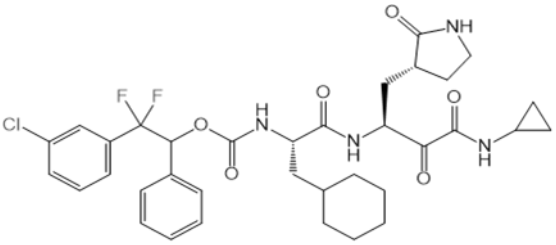
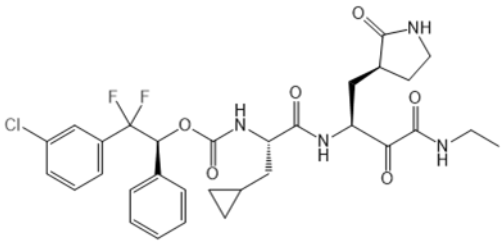
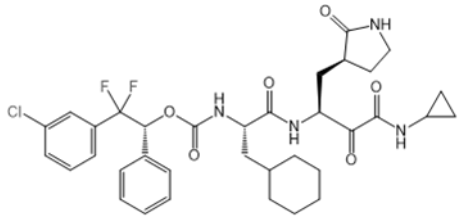
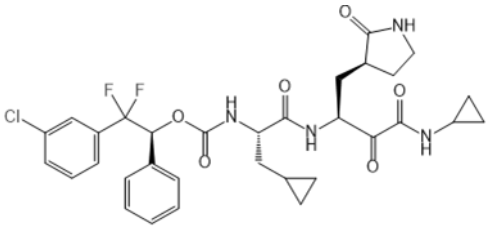
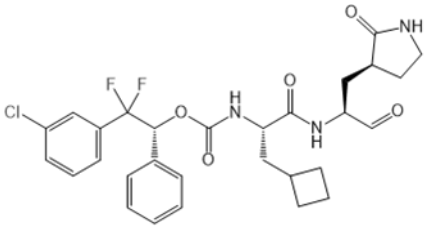
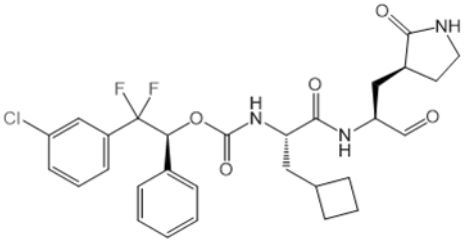
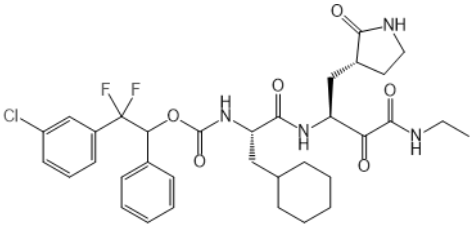
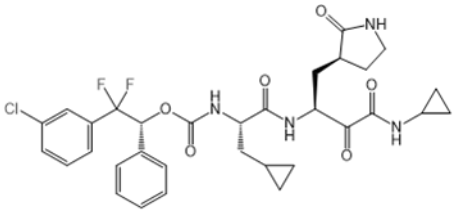
A120	
A125	
A126	
A131	
A132	
A134	

Compound no.	Structure
A156	
A157	
A161	
A167	
A169	
A174	

Compound no.	Structure
A175	
A176	
A205	
A206	
A207	
A210	

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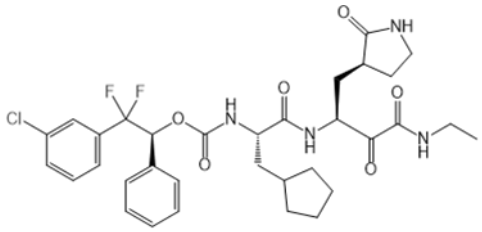
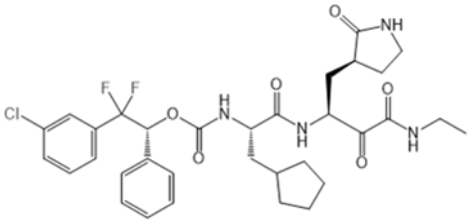
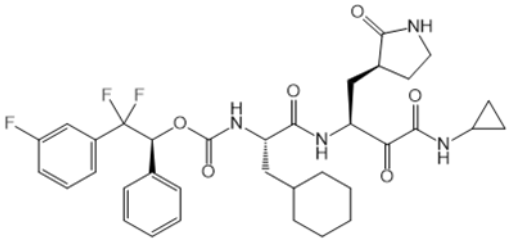
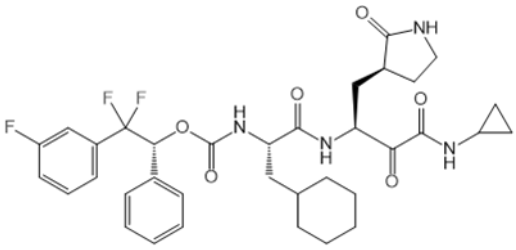
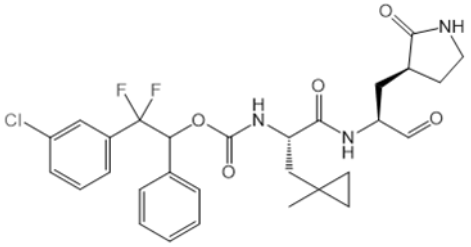
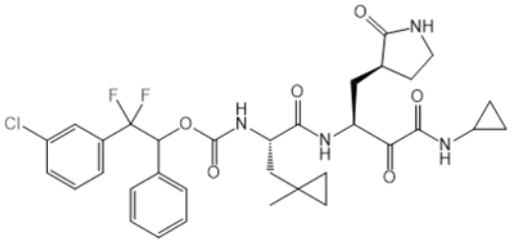
A220	
A221	
A236	
A237	
A244	
A245	

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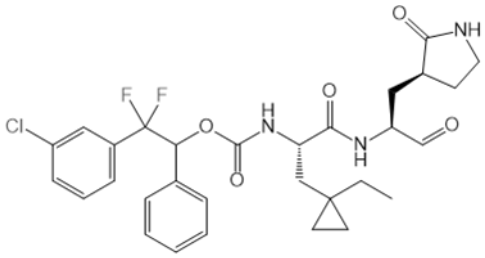
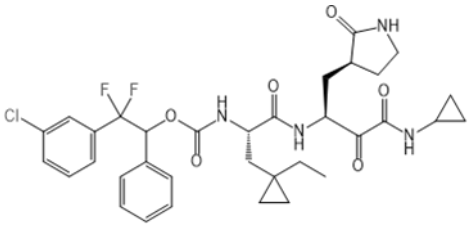
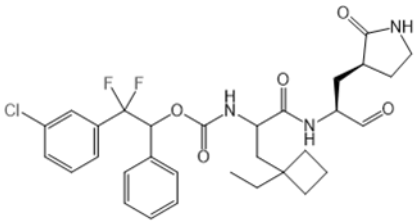
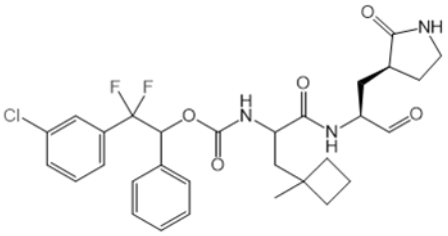
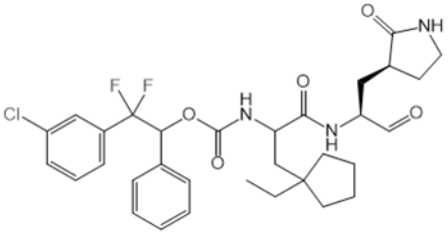
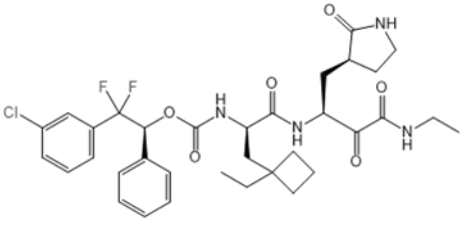
A258	
A281	
A295	
A300	
A316	
A320	

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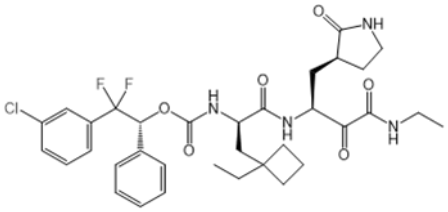
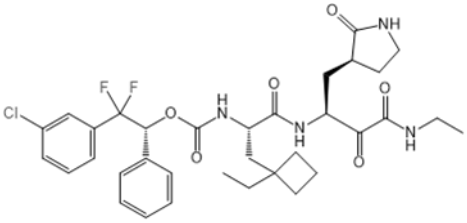
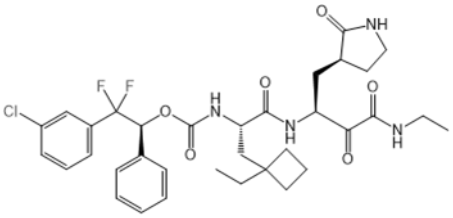
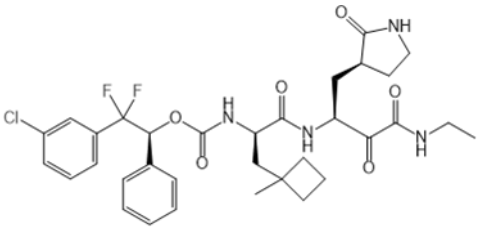
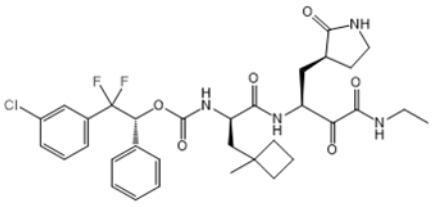
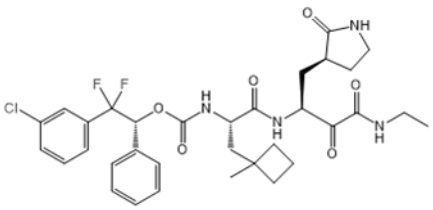
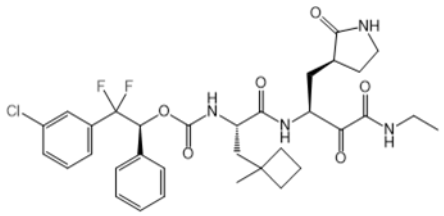
A321	
A322	
A323	
A324	
A325	
A326	

Compound no.	Structure
A327	

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[0005c] In a further aspect of the present disclosure, there is provided a pharmaceutical formulation comprising the compound or salt as disclosed herein and a pharmaceutically acceptable excipient.

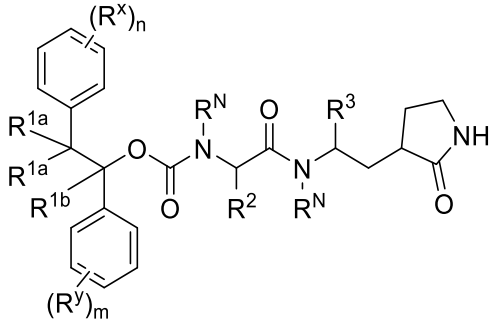
[0005d] In another aspect of the present disclosure, there is provided a compound or salt as disclosed herein, for use in treating or preventing a viral infection in a host, optionally wherein the viral infection is coronavirus infection, calicivirus infection, or picornavirus infection, preferably wherein the calicivirus infection is a norovirus infection.

[0005e] In a further aspect of the present disclosure, there is provided a use of a compound or salt as disclosed herein in the manufacture of a medicament for treating or preventing a viral infection in a host, optionally wherein the viral infection is coronavirus infection, calicivirus infection, or picornavirus infection, preferably wherein the calicivirus infection is a norovirus infection.

[0006] The present disclosure generally relates to methods of treating norovirus and coronavirus infections, to methods of inhibiting the replication of noroviruses and coronaviruses, to methods of reducing the amount of noroviruses and coronaviruses, and to compounds and compositions that can be employed for such methods.

What is claimed is:

1. A compound, or pharmaceutically acceptable salt thereof, having a structure of Formula (I):



(I),

wherein

each R^N is independently H or C_{1-6}alkyl;

each R^{1a} is independently halo;

R^{1b} is hydrogen, halo, C_{1-6}alkyl, or C_{1-6}haloalkyl;

n is 0, 1, or 2;

each R^x is independently halo or C_{1-6}alkyl;

m is 0, 1, or 2;

each R^y is independently halo or C_{1-6}alkyl;

R^2 is C_{1-6}alkylene-C_{3-8}carbocyclyl; and

R^3 is CHO or -$[C(O)]_2$-NR^N-B, wherein B is C_{1-6}alkyl, C_{3-8}carbocyclyl, or 4-12-membered heterocyclyl having 1-3 ring heteroatoms selected from N, O, and S, and the carbocyclyl or heterocyclyl is optionally mono-substituted with C_{1-6}alkyl.

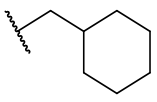
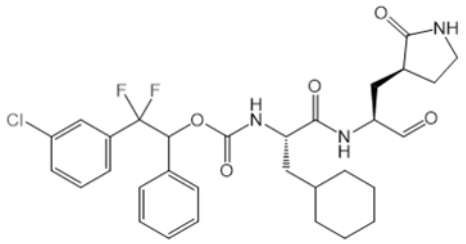
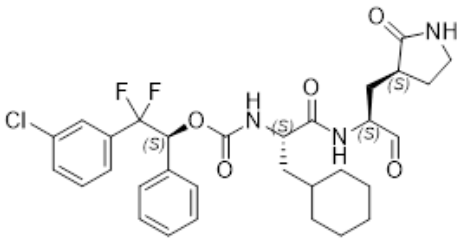
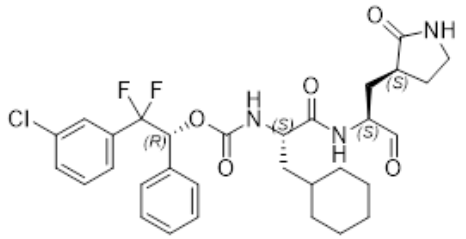
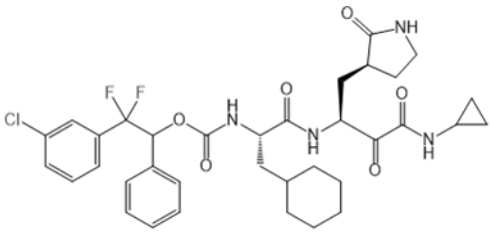
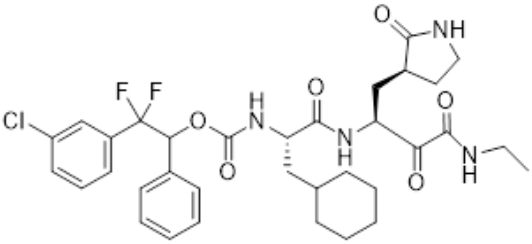
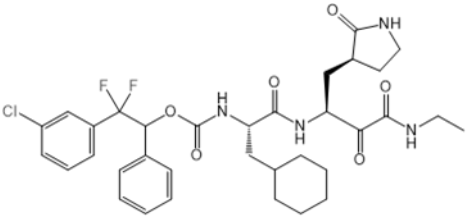
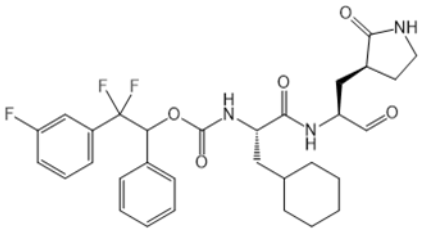
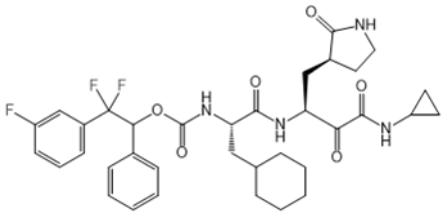
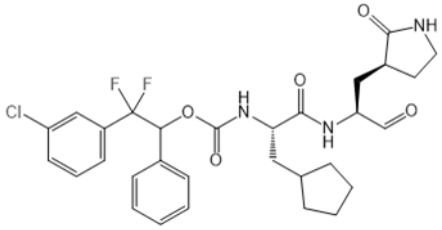
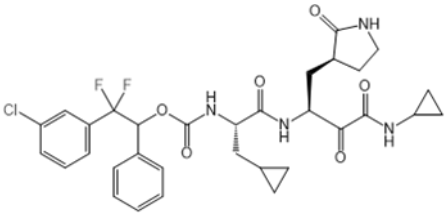
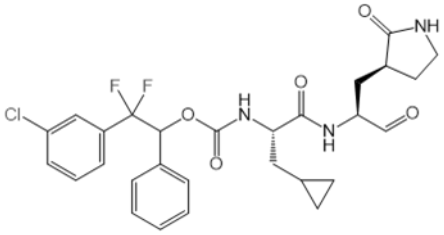
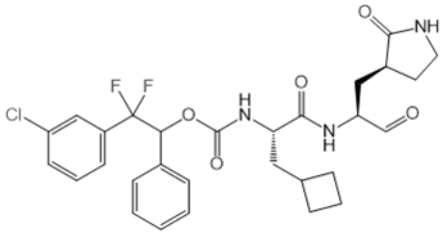
2. The compound or salt of claim 1, wherein each R^N is H.
3. The compound or salt of claim 1 or 2, wherein each R^{1a} is chloro or fluoro.
4. The compound or salt of any one of claims 1 to 3, wherein each R^{1a} is fluoro.
5. The compound or salt of any one of claims 1 to 4, wherein n is 1.
6. The compound or salt of claim 5, wherein R^x is in a meta position.
7. The compound or salt of claim 5 or 6, wherein R^x is halo, optionally wherein R^x is chloro.
8. The compound or salt of any one of claims 1 to 7, wherein m is 0.
9. The compound or salt according to any one of claims 1 to 8, wherein R^2 is .
10. The compound or salt according to any one of claims 1 to 9, wherein R^3 is CHO.
11. The compound or salt according to claim 1, wherein ring A is C_{6-10}aryl, optionally wherein ring A is phenyl.
12. A compound as recited in Table A, or a pharmaceutically acceptable salt thereof:

TABLE A

Compound no.	Structure
A20	
A20-1	
A20-2	
A21	
A29	
A50	

Compound no.	Structure
A67	
A74	
A93	
A94	
A95	
A102	

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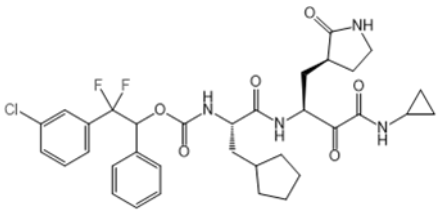
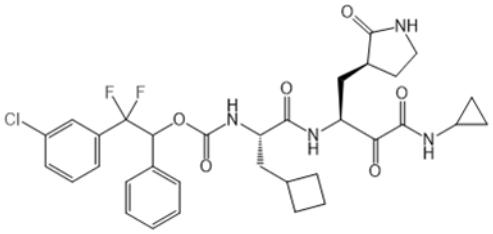
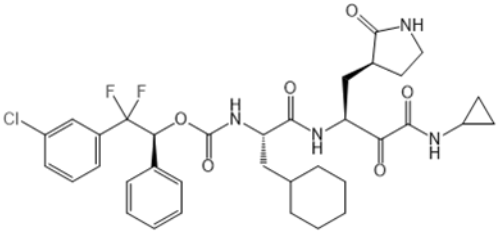
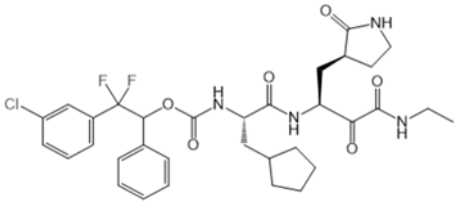
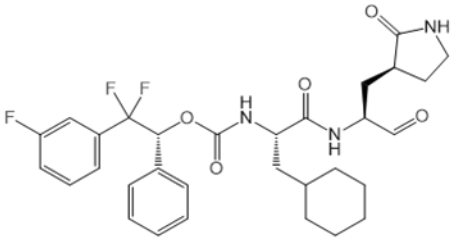
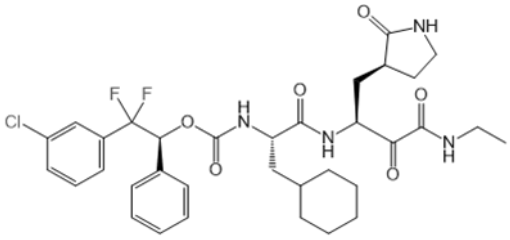
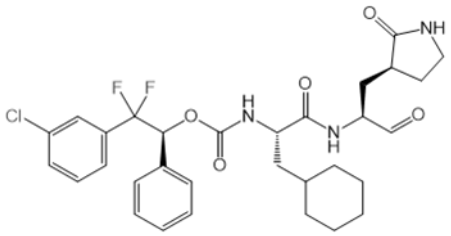
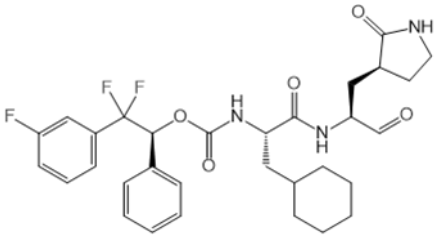
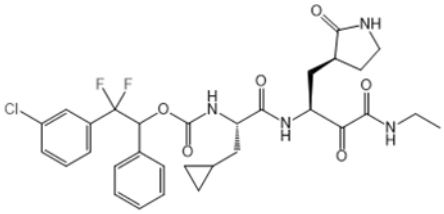
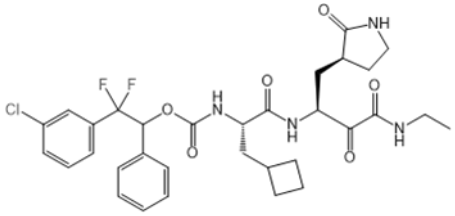
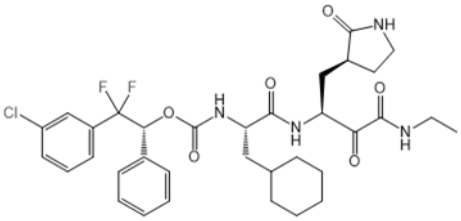
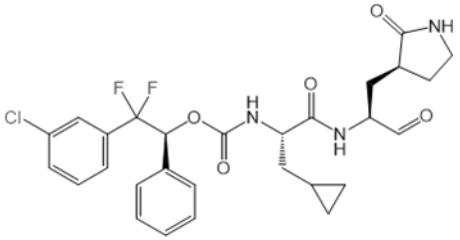
A103	
A108	
A116	
A117	
A119	
A120	

Compound no.	Structure
A125	
A126	
A131	
A132	
A134	
A156	

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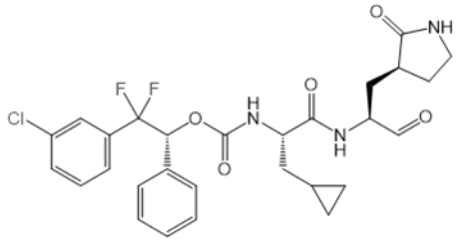
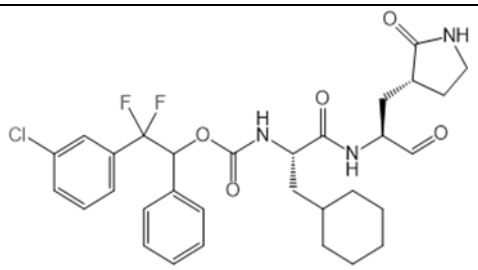
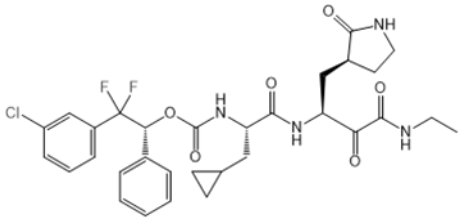
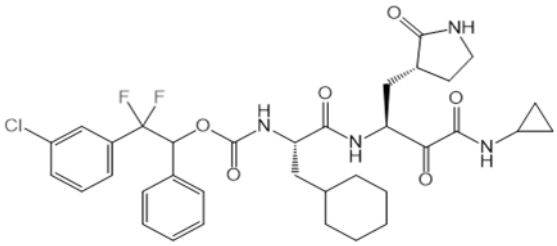
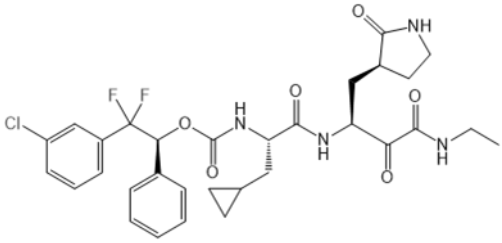
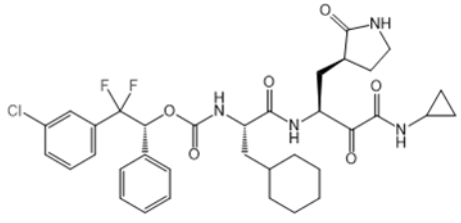
A157	
A161	
A167	
A169	
A174	
A175	

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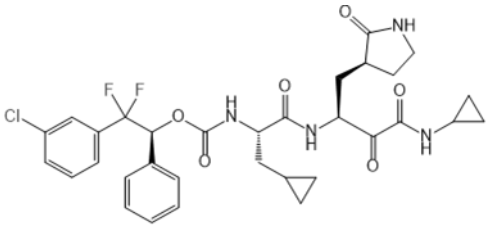
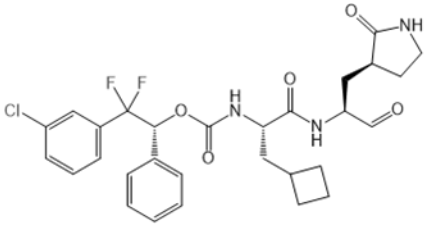
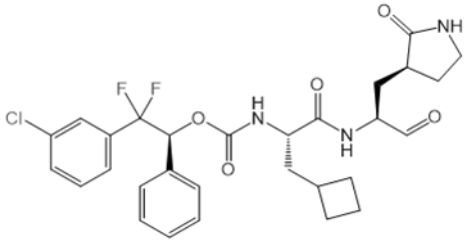
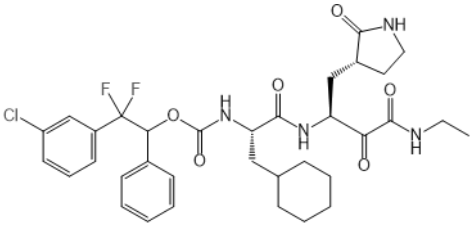
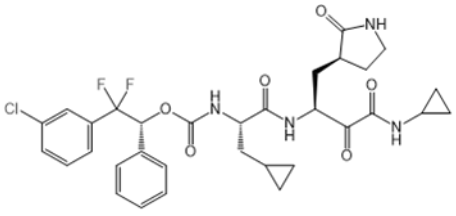
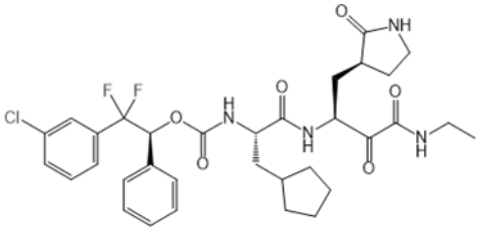
A176	
A205	
A206	
A207	
A210	
A220	

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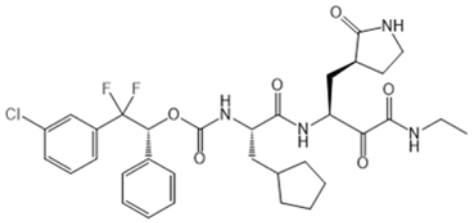
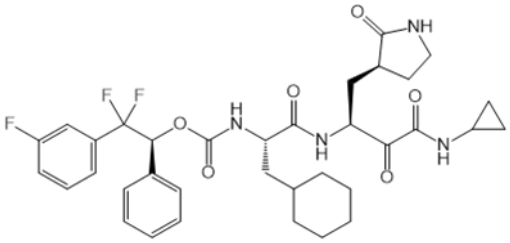
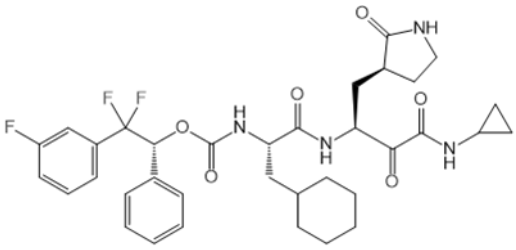
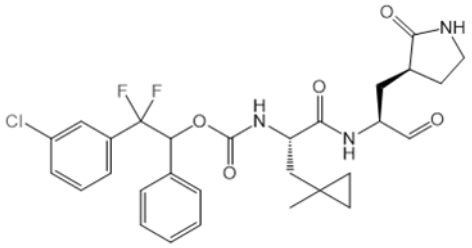
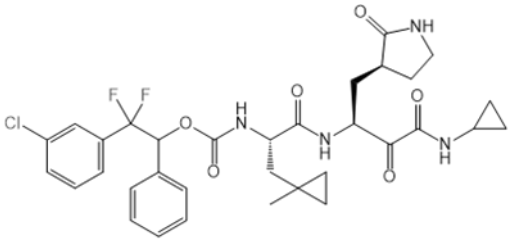
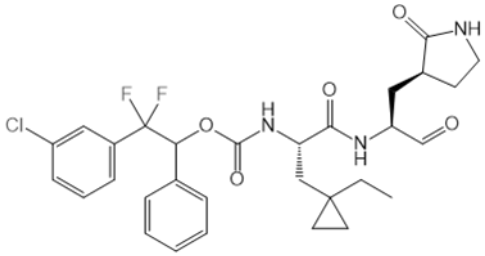
A221	
A236	
A237	
A244	
A245	
A258	

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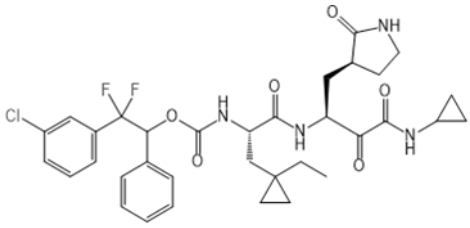
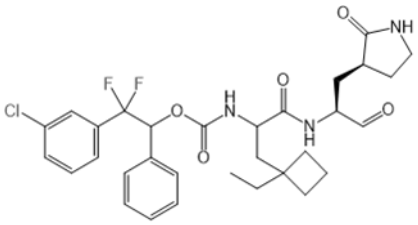
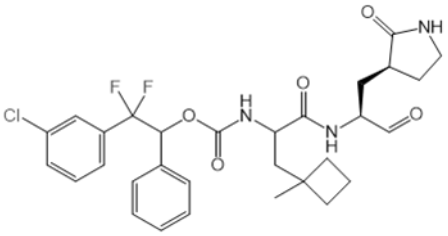
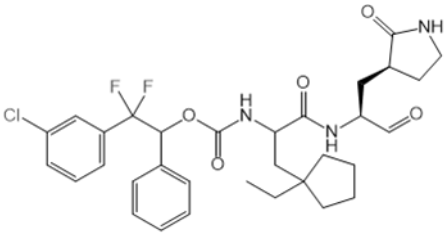
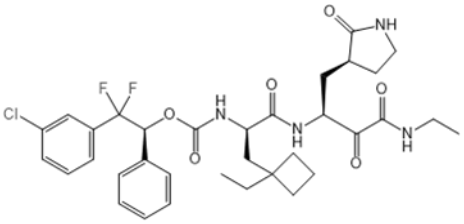
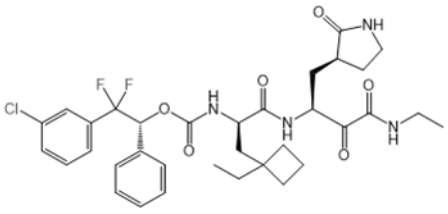
A281	
A295	
A300	
A316	
A320	
A321	

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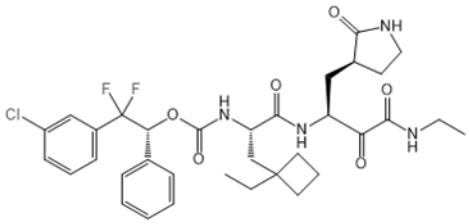
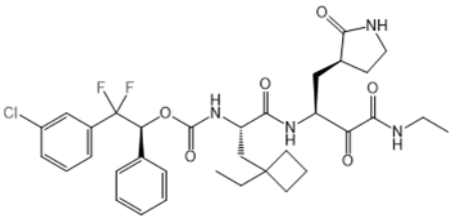
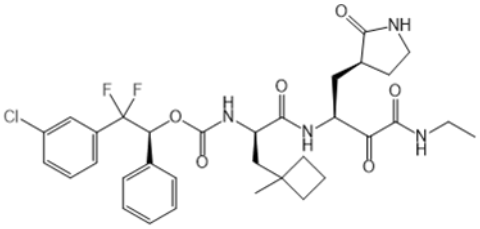
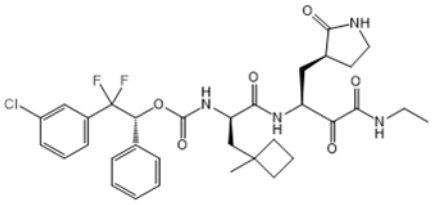
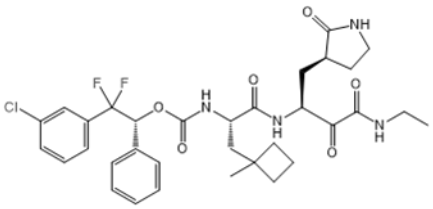
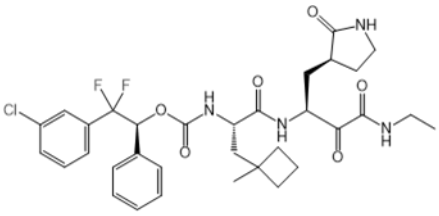
A322	
A323	
A324	
A325	
A326	
A327	

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13. The compound or salt of claim 12, selected from A20, A20-1, A20-2, A119, A126, A167, A206, A210, A258, A295, A300, A316, A321, and A325.

14. A pharmaceutical formulation comprising the compound or salt according to any one of claims 1 to 13 and a pharmaceutically acceptable excipient.

15. A compound or salt of any one of claims 1 to 13, for use in treating or preventing a viral infection in a host, optionally wherein the viral infection is coronavirus infection, calicivirus infection, or picornavirus infection, preferably wherein the calicivirus infection is a norovirus infection.

16. Use of a compound or salt of any one of claims 1 to 13 in the manufacture of a medicament for treating or preventing a viral infection in a host, optionally wherein the viral infection is coronavirus infection, calicivirus infection, or picornavirus infection, preferably wherein the calicivirus infection is a norovirus infection.