

Computational identification of inhibitors using QSAR approach against Nipah virus

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[#] Equal contributions

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Supplementary Information

Supplementary Figures

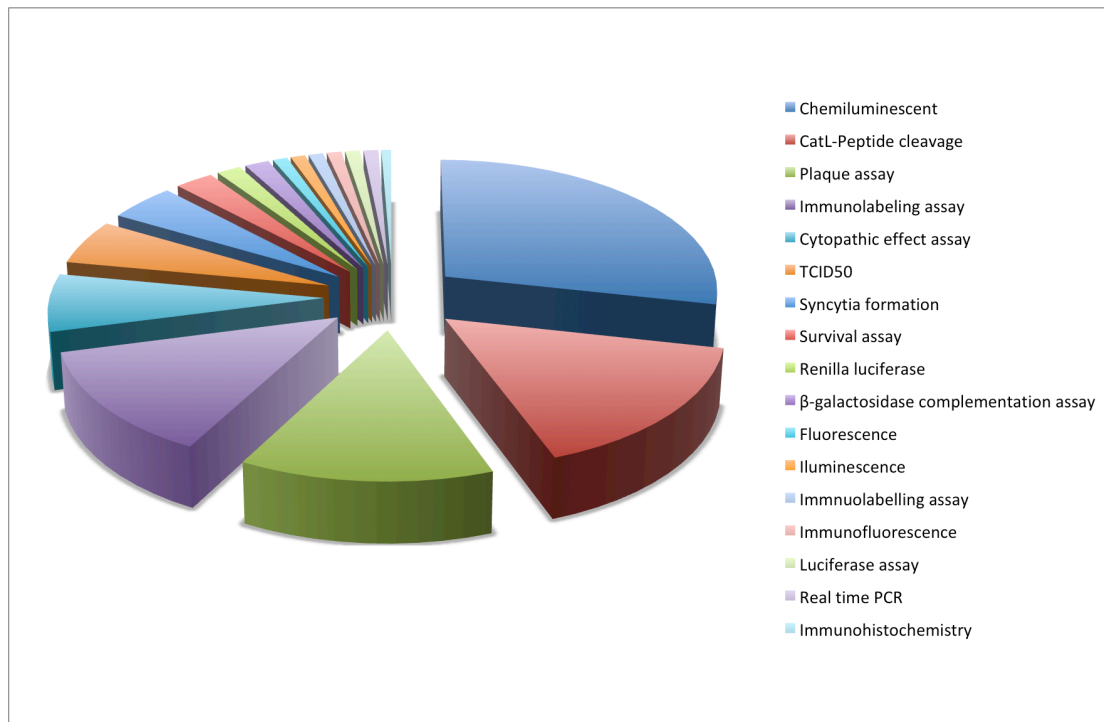
Supplementary Figure S1. Frequency distribution of assays used to check the inhibition of anti-Nipah compounds

Supplementary Tables

Supplementary Table S1. Details of the most relevant descriptors extracted from RemoveUseless and CfsSubsetEval feature selection algorithms and used for prediction model development

Supplementary Table S2. Actual and predicted efficiency of 95 anti-nipah compounds employing support vector machine along with their structures

Supplementary Table S3. Details of prediction done using 74 decoy set through prediction model employing support vector machine along with their structures



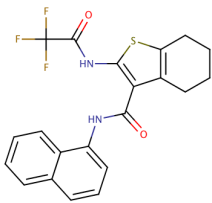
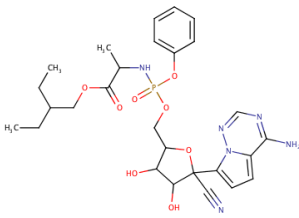
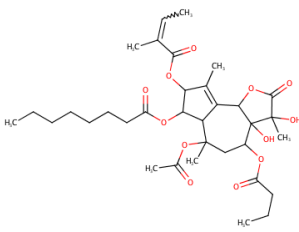
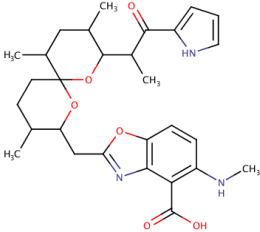
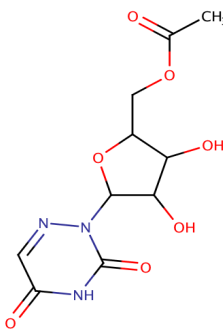
Supplementary Figure S1. Frequency distribution of assays used to check the inhibition of anti-Nipah compounds

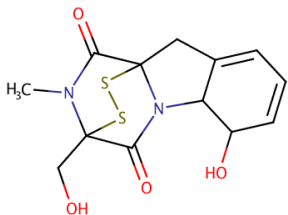
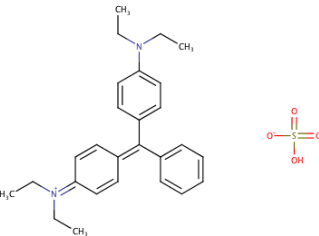
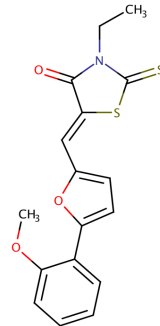
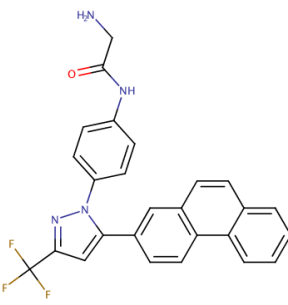
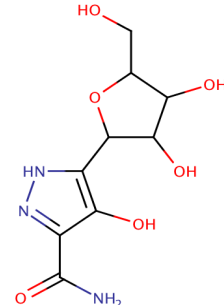
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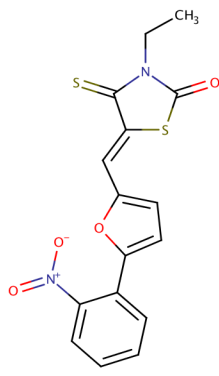
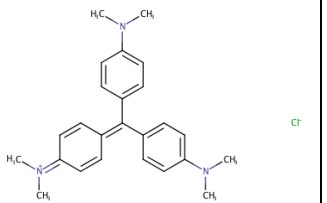
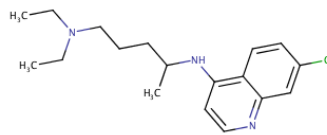
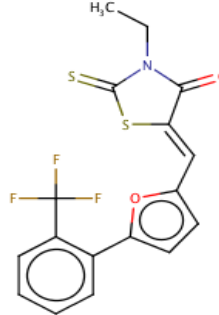
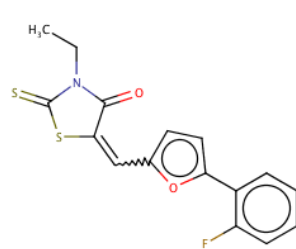
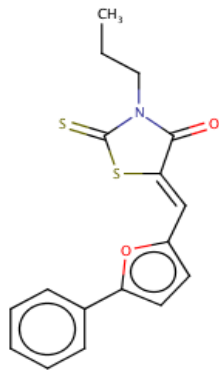
Features	Description	Type
AATSC5e	Average centered Broto-Moreau autocorrelation - lag 5 / weighted by Sanderson electronegativities	2D
MATS5e	Moran autocorrelation - lag 5 / weighted by Sanderson electronegativities	2D
JGI9	Mean topological charge index of order 9	2D
JGI10	Mean topological charge index of order 10	2D
FP169	Fingerprint of length 1024 and search depth of 8	CDK fingerprint
FP204	Fingerprint of length 1024 and search depth of 8	CDK fingerprint
FP339	Fingerprint of length 1024 and search depth of 8	CDK fingerprint
FP396	Fingerprint of length 1024 and search depth of 8	CDK fingerprint
FP490	Fingerprint of length 1024 and search depth of 8	CDK fingerprint
FP551	Fingerprint of length 1024 and search depth of 8	CDK fingerprint
FP582	Fingerprint of length 1024 and search depth of 8	CDK fingerprint
FP606	Fingerprint of length 1024 and search depth of 8	CDK fingerprint
ExtFP79	Extends the Fingerprinter with additional bits describing ring features	CDK extended fingerprint
ExtFP442	Extends the Fingerprinter with additional bits describing ring features	CDK extended fingerprint
ExtFP584	Extends the Fingerprinter with additional bits describing ring features	CDK extended fingerprint
ExtFP700	Extends the Fingerprinter with additional bits describing ring features	CDK extended fingerprint
ExtFP1010	Extends the Fingerprinter with additional bits describing ring features	CDK extended fingerprint
ExtFP1019	Extends the Fingerprinter with additional bits describing ring features	CDK extended fingerprint
GraphFP158	Specialized version of the Fingerprinter which does not take bond orders into account	CDK graph only fingerprint
GraphFP504	Specialized version of the Fingerprinter which does not take bond orders into account	CDK graph only fingerprint
GraphFP622	Specialized version of the Fingerprinter which does not take bond orders into account	CDK graph only fingerprint
GraphFP762	Specialized version of the Fingerprinter which does not take bond orders into account	CDK graph only fingerprint
GraphFP860	Specialized version of the Fingerprinter which does not take bond orders into account	CDK graph only fingerprint
GraphFP906	Specialized version of the Fingerprinter which does not take bond orders into account	CDK graph only fingerprint
GraphFP1007	Specialized version of the Fingerprinter which does not take bond orders into account	CDK graph only fingerprint
MACCSFP26	MACCS keys	MACCS fingerprint
MACCSFP150	MACCS keys	MACCS

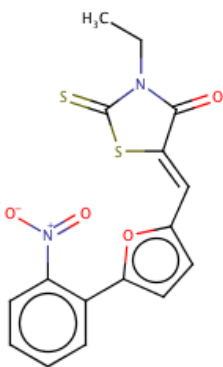
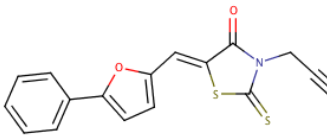
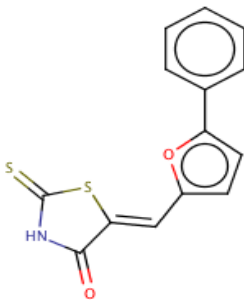
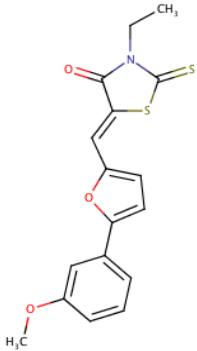
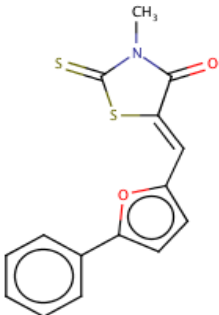
		fingerprint
SubFP147	Presence of SMARTS Patterns for Functional Group Classification by Christian Laggner	Substructure fingerprint
KRFP349	Presence of chemical substructures	Klekota-Roth fingerprint
KRFP360	Presence of chemical substructures	Klekota-Roth fingerprint
KRFP364	Presence of chemical substructures	Klekota-Roth fingerprint
KRFP397	Presence of chemical substructures	Klekota-Roth fingerprint
KRFP607	Presence of chemical substructures	Klekota-Roth fingerprint
KRFP1538	Presence of chemical substructures	Klekota-Roth fingerprint
KRFP2135	Presence of chemical substructures	Klekota-Roth fingerprint
KRFP3940	Presence of chemical substructures	Klekota-Roth fingerprint
KRFPC349	Count of chemical substructures	Klekota-Roth fingerprint count
KRFPC2135	Count of chemical substructures	Klekota-Roth fingerprint count
KRFPC2694	Count of chemical substructures	Klekota-Roth fingerprint count
KRFPC3139	Count of chemical substructures	Klekota-Roth fingerprint count
KRFPC3520	Count of chemical substructures	Klekota-Roth fingerprint count
KRFPC4292	Count of chemical substructures	Klekota-Roth fingerprint count

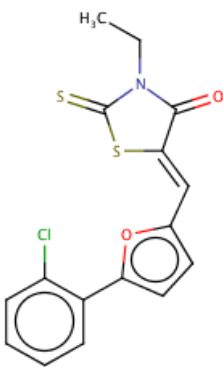
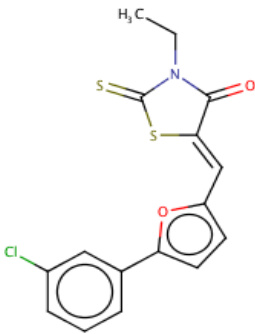
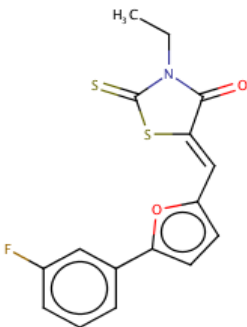
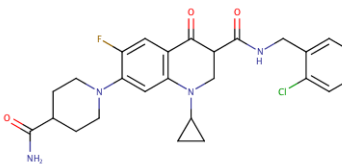
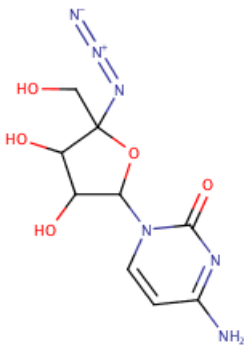
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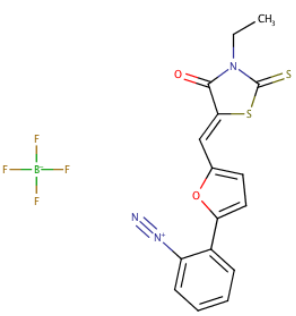
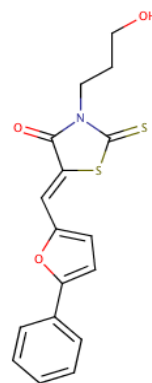
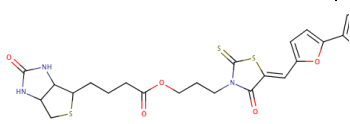
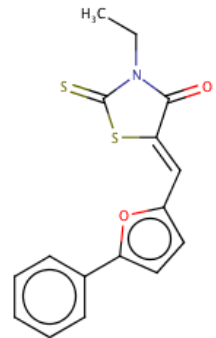
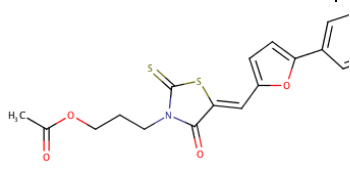
S.No	Anti_NiV_IDs	SMILES	Image	Actual_pl C50	Predicted_pl C50
1	Anti_NiV_	<chem>FC(F)(F)C(=O)NC1=C(C(=O)NC2=CC=C(C3=CC=CC=C23)C2=C(CCCC2)S1</chem>		7.54	7.77
2	Anti_NiV_002	<chem>CCC(CC)COC(=O)C(C)NP(=O)(OCC1C(C(C(O1)(C#N)C2=CC=C3N2N=CN=C3N)O)OC4=CC=CC=C4</chem>		7.49	7.52
3	Anti_NiV_003	<chem>CCCCCCCCC(=O)OC1C2C(=C(C1OC(=O)C(=CC)C)C)C3C(C(C2(C)OC(=O)C)OC(=O)CCC)(C(C(=O)O3)(C)O)O</chem>		7.30	6.04
4	Anti_NiV_004	<chem>CC1CCC2(C(CC(C(O2)C(C)C(=O)C3=CC=CN3)C)C)OC1CC4=NC5=C(O4)C=CC(=C5C(=O)O)NC</chem>		7.15	7.00
5	Anti_NiV_005	<chem>CC(=O)OCC1C(C(C(O1)N2C(=O)NC(=O)C=N2)O)O</chem>		6.92	6.23
6	Anti_NiV_006	<chem>CN1C(=O)C23CC4=CC=CC(C4N2C(=O)C1(SS3)CO)O</chem>		6.83	6.56

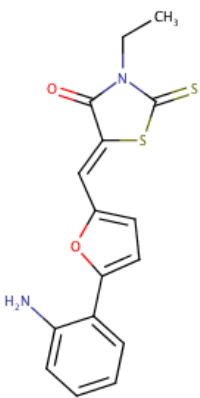
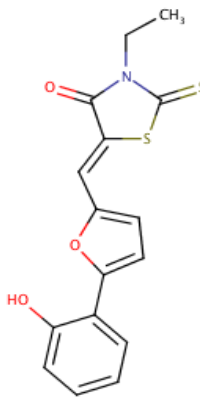
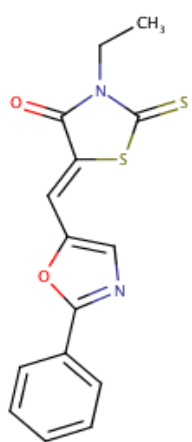
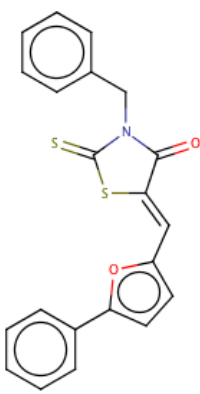
					
7	Anti_NiV_007	<chem>CCN(CC)C1=CC=C(C=C1)C(=C2C=CC(=[N+](CC)CC)C=C2)C3=CC=CC=C3.OS(=O)(=O)[O-]</chem>		6.66	6.08
8	Anti_NiV_008	<chem>CCN1C(=S)S\C(=C/C2=CC=C(O2)C2=CC=CC2OC)C1=O</chem>		6.40	6.19
9	Anti_NiV_009	<chem>C1=CC=C2C(=C1)C=CC3=C2C=CC(=C3)C4=CC(=NN4C5=C(C=C(C5)NC(=O)C(N)C(F)(F)F</chem>		6.40	5.91
10	Anti_NiV_010	<chem>C(C1C(C(C(O1)C2=C(C(=NN2)C(=O)N)O)O)O)O</chem>		6.36	6.52

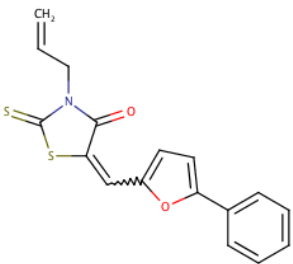
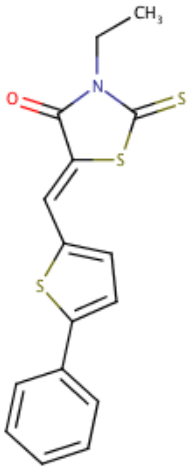
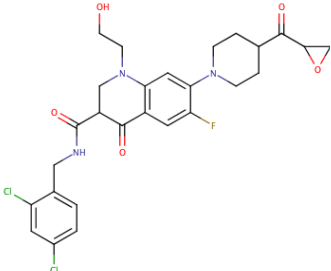
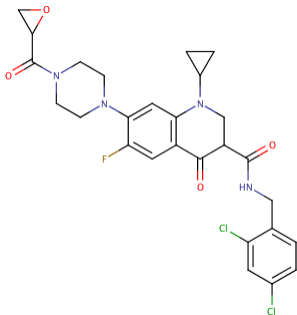
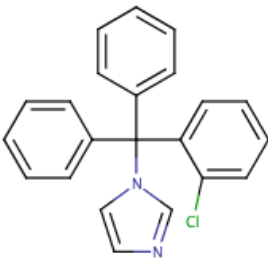
11	Anti_NiV_011	<chem>CCN1C(=O)S\C(=C/C2=CC=C(O2)C2=C</chem> <chem>C=CC=C2[N+](O-)=O)C1=S</chem>		6.31	4.73
12	Anti_NiV_012	<chem>CN(C)C1=CC=C(C=C1)C(=C2C=CC(=[N+](C)C)C=C2)C3=CC=C(C=C3)N(C)C.[Cl-]</chem>		6.28	5.80
13	Anti_NiV_013	<chem>CCN(CC)CCCC(C)N</chem> <chem>C1=C2C=CC(=CC2=NC=C1)Cl</chem>		6.21	5.95
14	Anti_NiV_014	<chem>CCN1C(=O)/C(=C/c2ccc(o2)c3ccccc3C(F)(F)F)/SC1=S</chem>		6.09	6.05
15	Anti_NiV_015	<chem>CCN1C(=O)C(=Cc2ccc(o2)c3ccccc3F)SC1=S</chem>		6.04	5.73
16	Anti_NiV_016	<chem>CCCN1C(=O)/C(=C/c2ccc(o2)c3ccccc3)/SC1=S</chem>		6.02	5.49

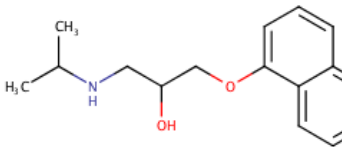
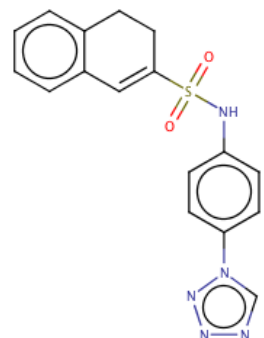
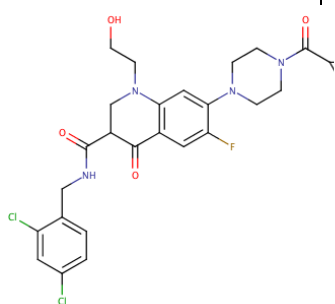
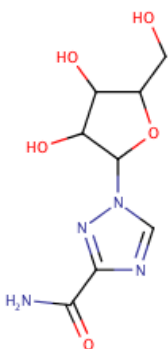
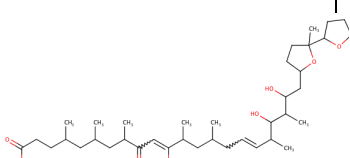
17	Anti_NiV_017	<chem>CCN1C(=O)/C(=C/c2ccc(o2)c3ccccc3[N+](=O)[O-])/SC1=S</chem>		5.99	5.56
18	Anti_NiV_018	<chem>O=C1N(CC#C)C(=S)S\C1=C/C1=CC=C(O1)C1=CC=CC=C1</chem>		5.99	5.58
19	Anti_NiV_019	<chem>c1ccc(cc1)c2ccc(o2)/C=C\3/C(=O)NC(=S)S3</chem>		5.98	5.92
20	Anti_NiV_020	<chem>CCN1C(=S)S\C(=C/C2=CC=C(O2)C2=C(C=CC(OC)=C2)C1=O</chem>		5.94	5.48
21	Anti_NiV_021	<chem>CN1C(=O)/C(=C/c2cc(o2)c3ccccc3)/SC1=S</chem>		5.91	5.59

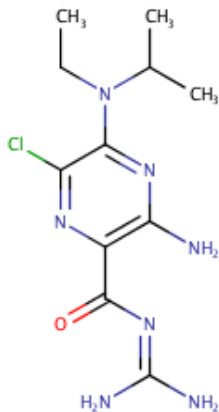
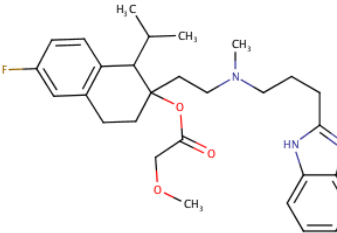
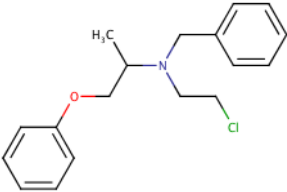
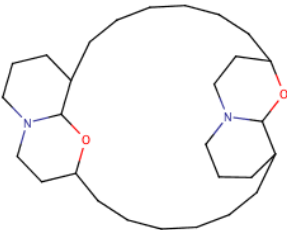
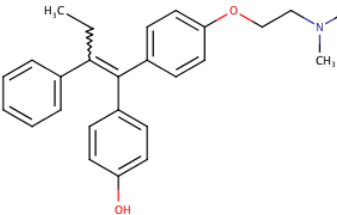
22	Anti_NiV_022	<chem>CCN1C(=O)/C(=C/c2ccc(o2)c3ccccc3Cl)/SC1=S</chem>		5.90	5.90
23	Anti_NiV_023	<chem>CCN1C(=O)/C(=C/c2ccc(o2)c3ccccc(c3)Cl)/SC1=S</chem>		5.85	5.56
24	Anti_NiV_024	<chem>CCN1C(=O)/C(=C/c2ccc(o2)c3ccccc(c3)F)/SC1=S</chem>		5.84	5.90
25	Anti_NiV_025	<chem>NC(=O)C1CCN(CC1)C1=CC2=C(C=C1F)C(=O)C(CN2C1CC1)C(=O)NCC1=CC=C(Cl)C=C1Cl</chem>		5.82	5.35
26	Anti_NiV_026	<chem>C1=CN(C(=O)N=C1N)C2C(C(C(O2)(CO)N=[N+]=[N-])O)O</chem>		5.82	5.45
27	Anti_NiV_027	<chem>F[B-](F)(F)F.CCN1C(=S)S\C(=C/C2=CC=C(O2)C2=CC=CC=C2[N</chem>		5.79	5.89

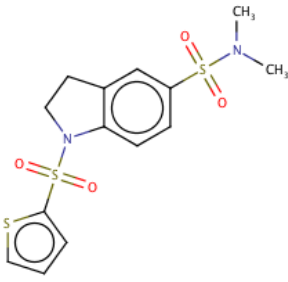
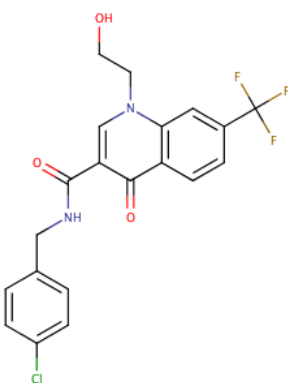
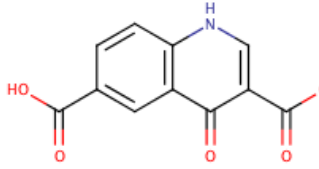
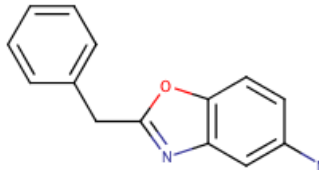
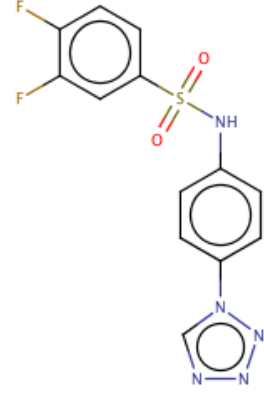
		<chem>+][#N)C1=O</chem>			
28	Anti_NiV_028	<chem>OCCCN1C(=S)S\C(C=C/C2=CC=C(O2)C2=CC=CC=C2)C1=O</chem>		5.76	5.78
29	Anti_NiV_029	<chem>O=C(CCCC1SCC2NC(=O)NC12)OCCCN1C(=S)S\C(C=C/C2=CC=C(O2)C2=CC=CC=C2)C1=O</chem>		5.75	5.40
30	Anti_NiV_030	<chem>CCN1C(=O)/C(=C/c2ccc(o2)c3ccccc3)/SC1=S</chem>		5.75	5.76
31	Anti_NiV_031	<chem>CC(=O)OCCCN1C(=S)S\C(C=C/C2=CC=C(O2)C2=CC=CC=C2)C1=O</chem>		5.72	5.84

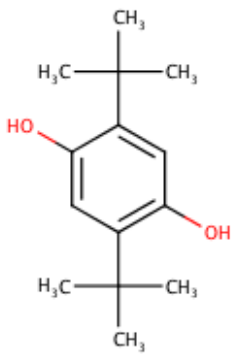
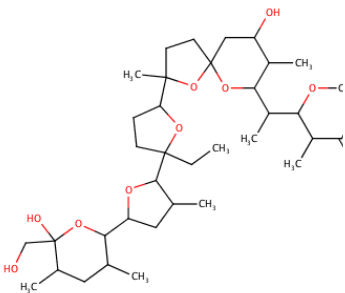
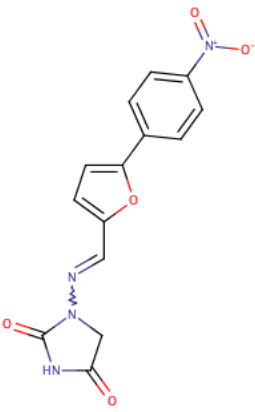
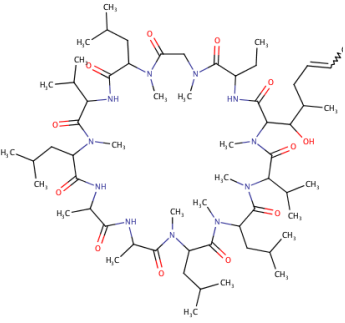
32	Anti_NiV_032	<chem>CCN1C(=S)S\C(=C/C2=CC=C(O2)C2=C</chem> <chem>C=CC=C2N)C1=O</chem>		5.71	5.93
33	Anti_NiV_033	<chem>CCN1C(=S)S\C(=C/C2=CC=C(O2)C2=C</chem> <chem>C=CC=C2O)C1=O</chem>		5.63	5.56
34	Anti_NiV_034	<chem>CCN1C(=S)S\C(=C/C2=CN=C(O2)C2=C</chem> <chem>C=CC=C2)C1=O</chem>		5.62	5.37
35	Anti_NiV_035	<chem>c1ccc(cc1)CN2C(=O)</chem> <chem>/C(=C/c3ccc(o3)c4cc</chem> <chem>ccc4)/SC2=S</chem>		5.60	5.66
36	Anti_NiV_036	<chem>C=CCN1C(=O)C(=C</chem> <chem>C2=CC=C(O2)C3=C</chem> <chem>C=CC=C3)SC1=S</chem>		5.59	5.52

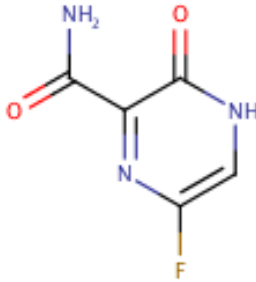
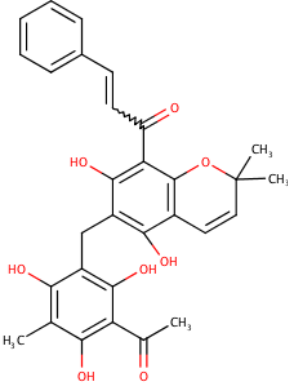
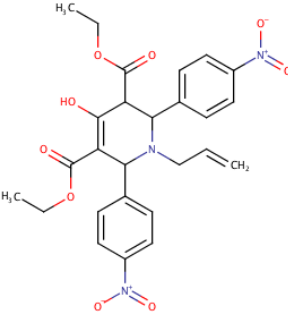
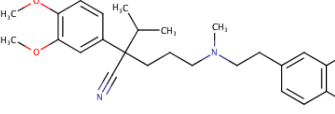
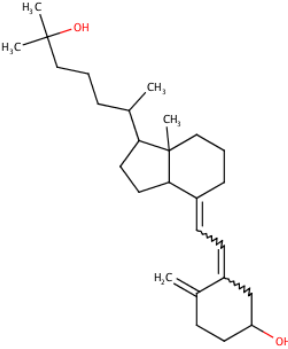
					
37	Anti_NiV_037	<chem>CCN1C(=S)S\C(=C/C2=CC=C(S2)C2=C/C=CC=C2)C1=O</chem>		5.58	5.52
38	Anti_NiV_038	<chem>OCCN1CC(C(=O)NC2=CC=C(Cl)C=C2C(I)C(=O)C2=C1C=C(N1CCC(CC1)C(=O)C1CO1)C(F)=C2</chem>		5.52	5.46
39	Anti_NiV_039	<chem>FC1=CC2=C(C=C1N1CCN(CC1)C(=O)C1CO1)N(CC(C(=O)NC1=CC=C(Cl)C=C1C(I)C2=O)C1CC1</chem>		5.52	5.41
40	Anti_NiV_040	<chem>C1=CC=C(C=C1)C(C2=CC=CC=C2)(C3=CC=CC=C3Cl)N4C=CN=C4</chem>		5.46	4.68
41	Anti_NiV_041	<chem>CC(C)NCC(COC1=C/C=CC2=CC=CC=C2</chem>		5.42	5.34

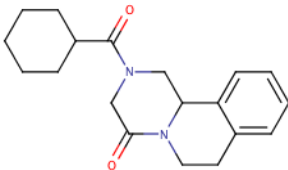
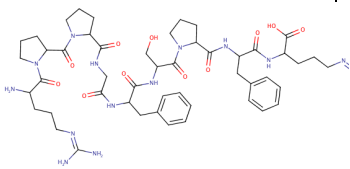
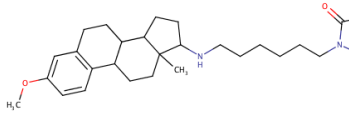
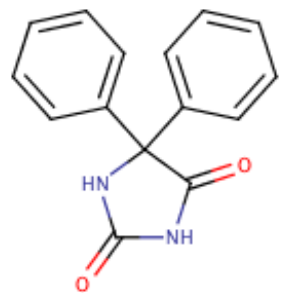
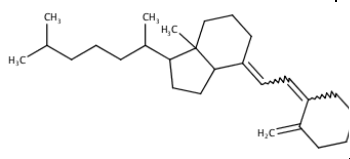
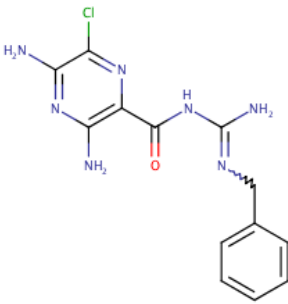
		1)O			
42	Anti_NiV_042	<chem>c1ccc2c(c1)CCC(=C2)S(=O)(=O)Nc3ccc(cc3)n4cn4</chem>		5.41	5.89
43	Anti_NiV_043	<chem>OCCN1CC(C(=O)NC2=CC=C(Cl)C=C2Cl)C(=O)C2=C1C=C(N1CCN(CC1)C(=O)C1CO1)C(F)=C2</chem>		5.40	5.42
44	Anti_NiV_044	<chem>C1=NC(=NN1C2C(C(C(O2)CO)O)O)C(=O)N</chem>		5.38	5.94
45	Anti_NiV_045	<chem>CC(CCC(=O)O)CC(C)CC(C)C(=O)C=C(C(C)CC(C)CC=CC(C)C(C(C)C(CC1CCC(O1)(C)C2CCC(O2)(C)C(C)O)O)O)O</chem>		5.28	4.52

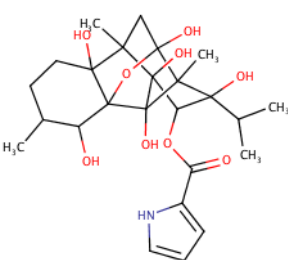
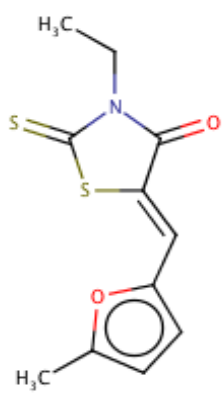
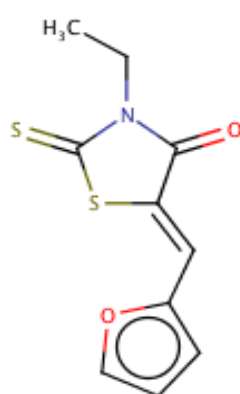
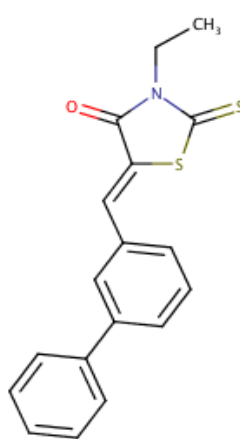
46	Anti_NiV_046	<chem>CCN(C1=NC(=C(N=C1Cl)C(=O)N=C(N)N)N)C(C)C</chem>		5.22	4.45
47	Anti_NiV_047	<chem>CC(C)C1C2=C(CCC1(CCN(C)CCCC3=N4C=CC=CC=C4N3)OC(=O)COC)C=C(C=C2)F</chem>		5.21	5.64
48	Anti_NiV_048	<chem>CC(COC1=CC=CC=C1)N(CCCl)CC2=CC=CC=C2</chem>		5.16	4.51
49	Anti_NiV_049	<chem>C1CCCC2CCN3CCCC(C3O2)CCCCCCC4CCN5CCCC(C5O4)C1</chem>		5.15	4.26
50	Anti_NiV_050	<chem>CCC(=C(C1=CC=CC=C1O)C2=CC=CC=C2)OCCN(C)C3=CC=CC=C3</chem>		5.12	4.81
51	Anti_NiV_051	<chem>CN(C)S(=O)(=O)c1ccc2c(c1)CCN2S(=O)(=O)c3ccccc3</chem>		5.11	5.06

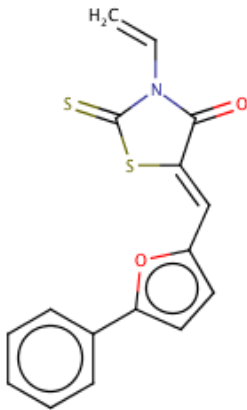
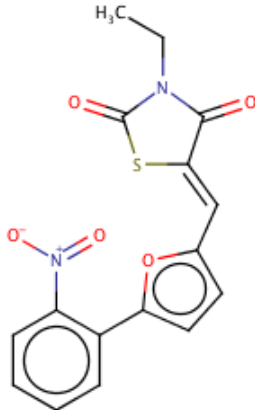
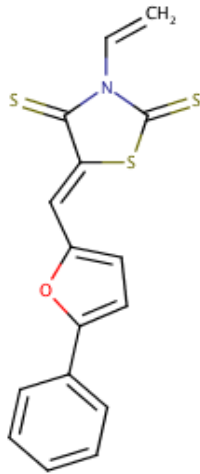
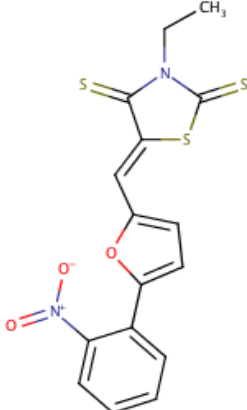
					
52	Anti_NiV_052	<chem>OCCN1C=C(C(=O)NCC2=CC=C(Cl)C=C2)C(=O)C2=C1C=C(C=C2)C(F)(F)F</chem>		5.10	5.58
53	Anti_NiV_053	<chem>OC(=O)C1=CC2=C(NC=C(C(O)=O)C2=O)C=C1</chem>		5.10	4.89
54	Anti_NiV_054	<chem>C1=CC=C(C=C1)CC2=NC3=C(O2)C=CC(=C3)N</chem>		5.10	5.27
55	Anti_NiV_055	<chem>Fc1ccc(cc1F)S(=O)(=O)Nc2ccc(cc2)n3nnnc3</chem>		4.93	5.09

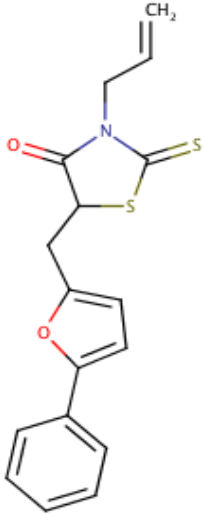
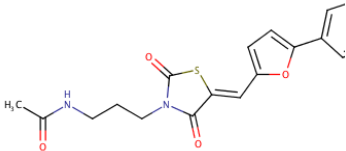
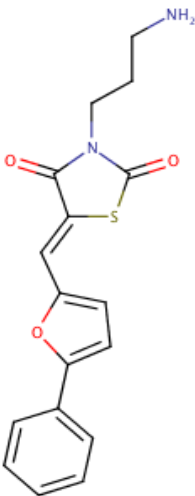
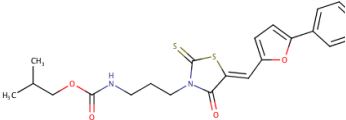
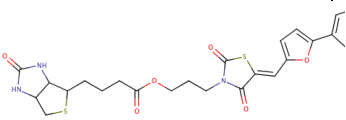
56	Anti_NiV_056	<chem>CC(C)(C)C1=CC(=C(C=C1O)C(C)(C)C)O</chem>		4.91	4.75
57	Anti_NiV_057	<chem>CCC1(CCC(O1)C2(CCC3(O2)CC(C(C(O3)C(C)C(C(C)C(=O)O)OC)C)O)C)C4C(CC(O4)C5C(CC(C(O5)(C)O)O)C)C)C</chem>		4.91	4.67
58	Anti_NiV_058	<chem>C1C(=O)NC(=O)N1N=CC2=CC=C(O2)C3=CC=C(C=C3)[N+](=O)[O-]</chem>		4.91	4.38
59	Anti_NiV_059	<chem>CCC1C(=O)N(CC(=O)N(C(C(=O)NC(C(=O)N(C(C(=O)NC(C(=O)N(C(C(=O)N(C(C(=O)N(C(C(=O)N1C(C(C)CC=CC)O)C)C(C)C)CC(C)C)CC(C)C)CC(C)C)CC(C)C)CC(C)C)CC(C)C)C</chem>		4.90	4.38

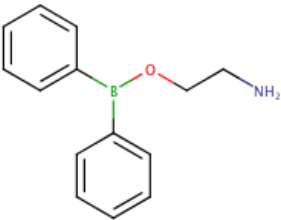
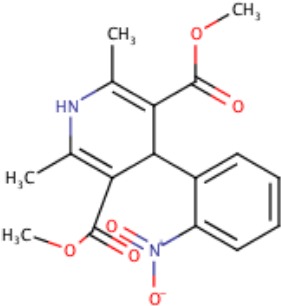
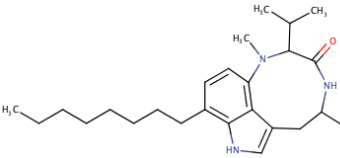
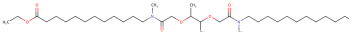
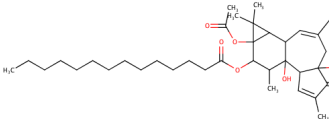
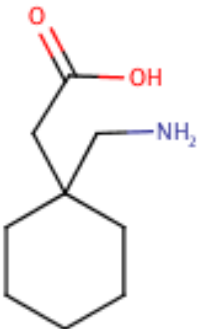
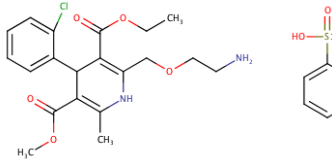
60	Anti_NiV_060	<chem>C1=C(N=C(C(=O)N1)C(=O)N)F</chem>		4.83	4.34
61	Anti_NiV_061	<chem>CC1=C(C(=C(C(=C1O)C(=O)C)O)CC2=C(C3=C(C(=C2O)C(=O)C=CC4=CC=CC=C4)OC(C=C3)(C)C)O)O</chem>		4.70	4.74
62	Anti_NiV_062	<chem>CCOC(=O)C1C(N(C=C)C(C2=CC=C(C=C2)[N+][O-])=O)C(C(=O)OCC)=C1O)C1=CC=C(C=C1)[N+][O-]=O</chem>		4.70	5.17
63	Anti_NiV_063	<chem>CC(C)C(CCCN(C)CC1=CC(=C(C=C1)O)C)OC(C#N)C2=CC(=C(C=C2)OC)OC</chem>		4.66	4.71
64	Anti_NiV_064	<chem>CC(CCCC(C)(C)O)C1CCC2C1(CCCC2=C=C3CC(CCC3=C)O)C</chem>		4.51	4.59
65	Anti_NiV_065	<chem>C1CCC(CC1)C(=O)N2CC3C4=CC=CC=C4CCN3C(=O)C2</chem>		4.47	4.88

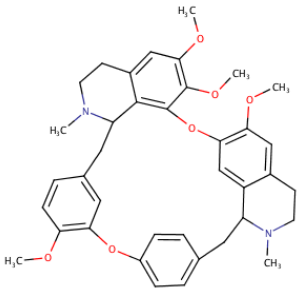
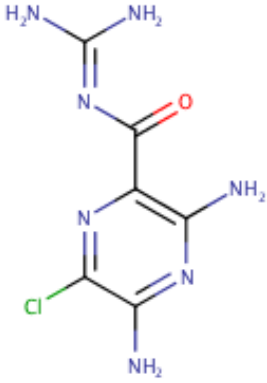
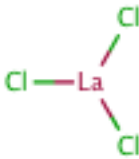
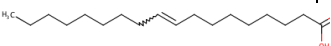
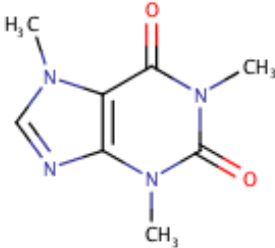
					
66	Anti_NiV_066	<chem>C1CC(N(C1)C(=O)C2CCCN2C(=O)C(CC(CN=C(N)N)N)C(=O)NCC(=O)NC(CC3=C(C=CC=C3)C(=O)NC(CO)C(=O)N4CCCC4C(=O)NC(CC5=CC=CC=C5)C(=O)NC(CC(CN=C(N)N)C(=O)O</chem>		4.47	4.73
67	Anti_NiV_067	<chem>CC12CCCC3C(C1CC2NCCCCCN4C(=O)C=CC4=O)CCC5=C3C=CC(=C5)OC</chem>		4.44	4.96
68	Anti_NiV_068	<chem>C1=CC=C(C=C1)C2(C(=O)NC(=O)N2)C3=CC=CC=C3</chem>		4.29	4.30
69	Anti_NiV_069	<chem>CC(C)CCCC(C)C1C2C2C1(CCCC2=CC=C3CC(CCC3=C)O)C</chem>		4.25	4.57
70	Anti_NiV_070	<chem>C1=CC=C(C=C1)CN=C(N)NC(=O)C2=C(N=C(C(=N2)Cl)N)N</chem>		4.19	4.75
71	Anti_NiV_071	<chem>CC1CCC2(C3(CC4(C5(C(C(C3(C5(C2(C1O)O4)O)O)OC(=O)C6=CC=CN6)(C(C)C)O)C)O)C)O</chem>		4.18	5.21

					
72	Anti_NiV_072	<chem>CCN1C(=O)/C(=C/c2ccc(o2)C)/SC1=S</chem>		4.00	4.16
73	Anti_NiV_073	<chem>CCN1C(=O)/C(=C/c2ccco2)/SC1=S</chem>		4.00	4.74
74	Anti_NiV_074	<chem>CCN1C(=S)S\C(=C/C2=CC=CC(=C2)C2=CC=CC=C2)C1=O</chem>		4.00	5.67

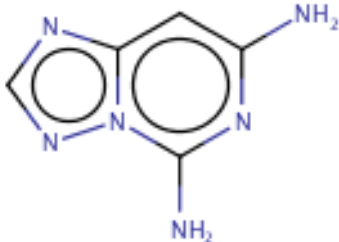
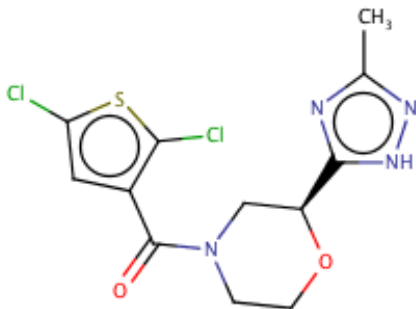
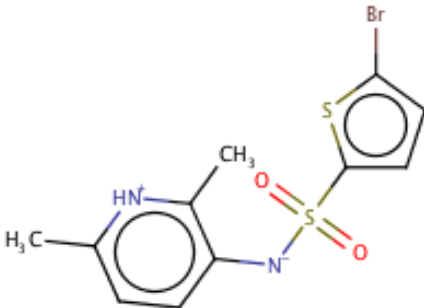
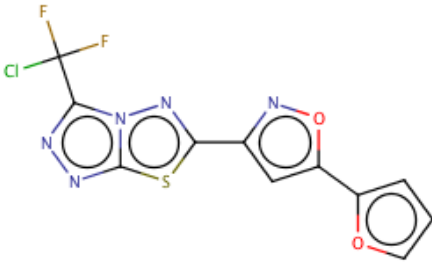
75	Anti_NiV_075	<chem>C=CN1C(=O)/C(=C/c2ccc(o2)c3ccccc3)/SC1=S</chem>		4.00	5.16
76	Anti_NiV_076	<chem>CCN1C(=O)/C(=C/c2ccc(o2)c3ccccc3[N+](=O)[O-])/SC1=O</chem>		4.00	4.84
77	Anti_NiV_077	<chem>C=CN1C(=S)S\C(=C/C2=CC=C(O2)C2=C/C=CC=C2)C1=S</chem>		4.00	5.38
78	Anti_NiV_078	<chem>CCN1C(=S)S\C(=C/C2=CC=C(O2)C2=C/C=CC=C2[N+](=[O-])=O)C1=S</chem>		4.00	5.25

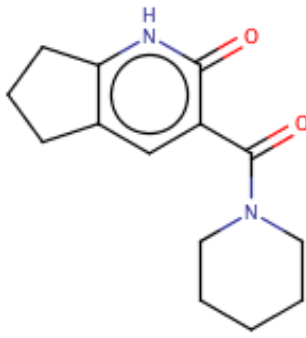
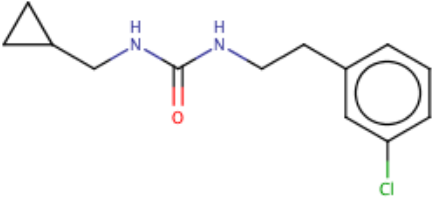
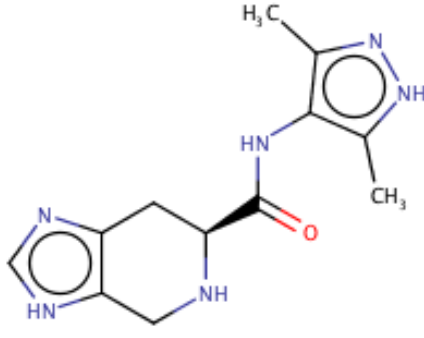
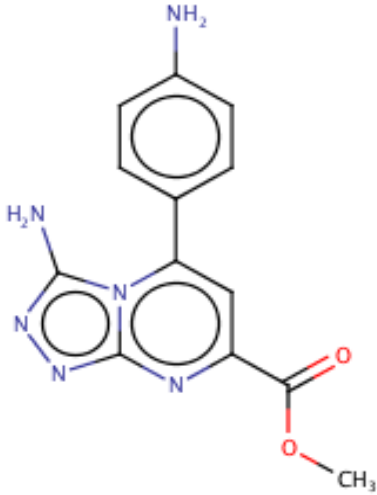
79	Anti_NiV_079	<chem>C=CCN1C(=S)SC(C2=CC=C(O2)C2=C(C=CC=C2)C1=O</chem>		4.00	5.32
80	Anti_NiV_080	<chem>CC(=O)NCCCN1C(=O)S\C(=C/C2=CC=C(O2)C2=CC=CC=C2)C1=O</chem>		4.00	4.63
81	Anti_NiV_081	<chem>NCCCN1C(=O)S\C(=C/C2=CC=C(O2)C2=CC=CC=C2)C1=O</chem>		4.00	5.42
82	Anti_NiV_082	<chem>CC(C)COC(=O)NCCCN1C(=S)S\C(=C/C2=CC=C(O2)C2=CC=CC=C2)C1=O</chem>		4.00	5.38
83	Anti_NiV_083	<chem>O=C(CCCC1SCC2NC(=O)NC12)OCCCN1C(=O)S\C(=C/C2=CC=C(O2)C2=CC=CC=C2)C1=O</chem>		4.00	4.19
84	Anti_NiV_084	<chem>B(C1=CC=CC=C1)(C2=CC=CC=C2)OCCN</chem>		3.88	3.84

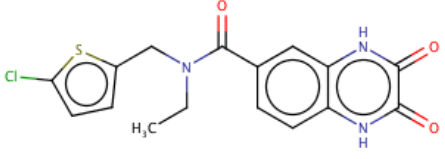
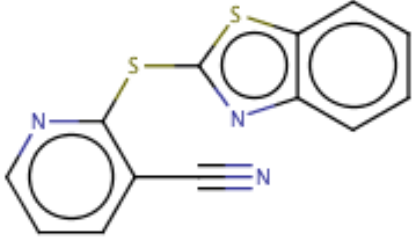
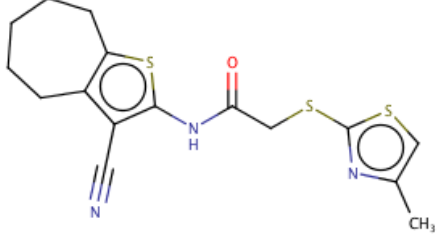
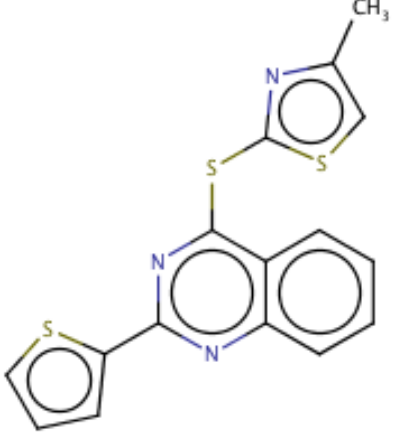
					
85	Anti_NiV_085	<chem>CC1=C(C(C(=C(N1)C)C(=O)OC)C2=CC=CC=C2[N+](=O)[O-])C(=O)OC</chem>		3.61	3.74
86	Anti_NiV_086	<chem>CCCCCCCCC1=C2C3=C(C=C1)N(C(C(=O)NC(CC3=CN2)CO)C(C)C)C</chem>		3.51	4.51
87	Anti_NiV_087	<chem>CCOC(=O)CCCCC(C)C(=O)C(C)C(C)OCC(=O)N(C)CCCCCCCCC(=O)OCC</chem>		3.46	4.20
88	Anti_NiV_088	<chem>CCCCCCCCCCCCC(=O)OC1C(C2(C(C(=O)O)C)C(C3=C(C3=O)C)O)C4C1(C4(C)C)OC(=O)C)O)C</chem>		3.43	3.28
89	Anti_NiV_089	<chem>C1CCC(CC1)(CC(=O)O)CN</chem>		3.27	4.28
90	Anti_NiV_090	<chem>CCOC(=O)C1=C(NC(=C(C1C2=CC=CC=C2Cl)C(=O)OC)C)C(=O)OCCN.C1=CC=C(C=C1)S(=O)(=O)O</chem>		3.19	3.50
91	Anti_NiV_091	<chem>CN1CCC2=CC(=C3C=C2C1CC4=CC=C(C=C4)C</chem>		3.18	4.00

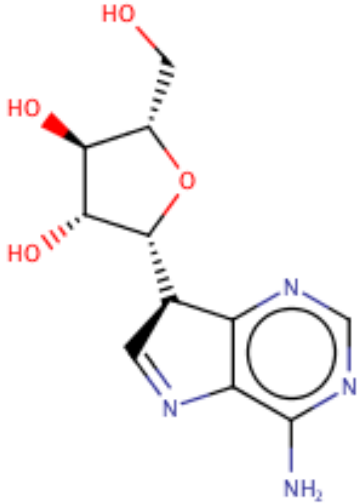
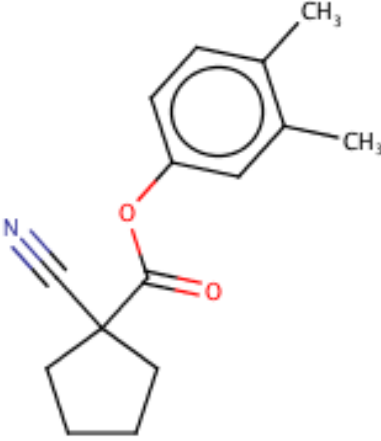
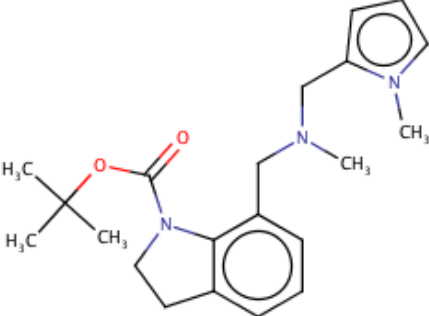
		<chem>C=C4)OC5=C(C=CC(=C5)CC6C7=C(O3)C(=C(C=C7CCN6C)OC)OC)OC)OC</chem>			
92	Anti_NiV_092	<chem>C1(=C(N=C(C(=N1)C)N)N)C(=O)N=C(N)N</chem>		3.18	4.19
93	Anti_NiV_093	<chem>Cl[La](Cl)Cl</chem>		2.99	2.48
94	Anti_NiV_094	<chem>CCCCCCCCC=CCC CCCCC(=O)O</chem>		2.73	3.08
95	Anti_NiV_095	<chem>CN1C=NC2=C1C(=O)N(C(=O)N2C)C</chem>		2.12	3.22

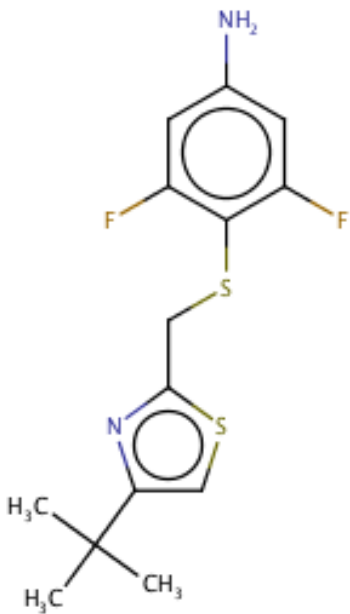
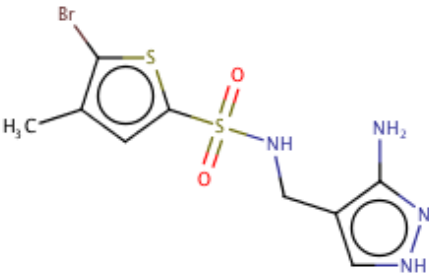
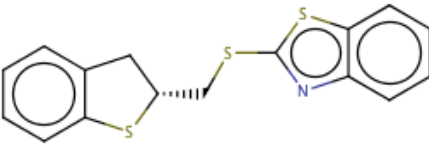
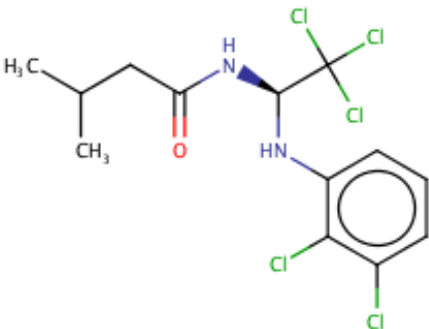
Supplementary Table S3. Details of prediction done using 74 decoy set through prediction model employing support vector machine along with their structures

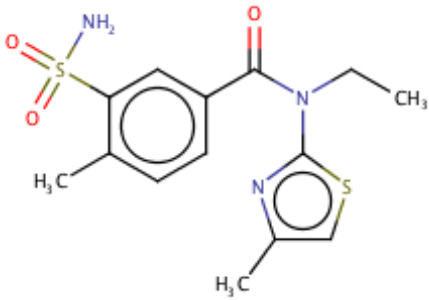
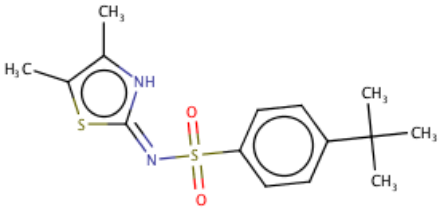
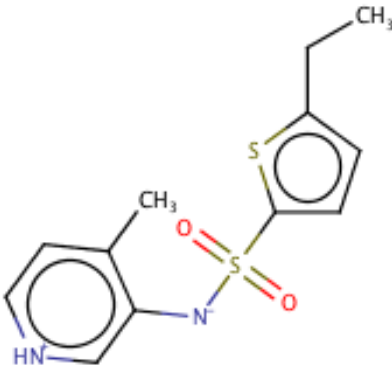
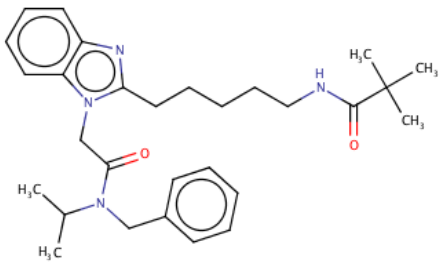
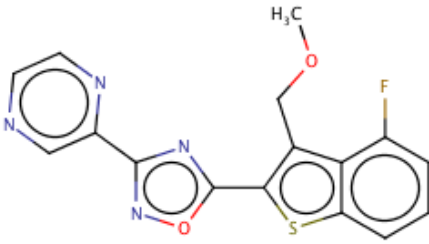
S.No.	ZINC_ID	SMILES	Images	Predicted_pI C50
1	ZINC01418565	<chem>Nc1nc(N)n2c(c1)ncn2</chem>		3.8867641
2	ZINC76045055	<chem>Cc1n[nH]c(n1)[C@H]1OCCN(C1)C(=O)c1cc(sc1Cl)Cl</chem>		5.8360873
3	ZINC94666930	<chem>BrC1CCC(S1)S(=O)(=O)[N-]C1CCC([NH+]C1C)C</chem>		5.4610064
4	ZINC61718549	<chem>FC1C=NC2=NC(S2)C1=NC(F)Cl</chem>		5.8472315

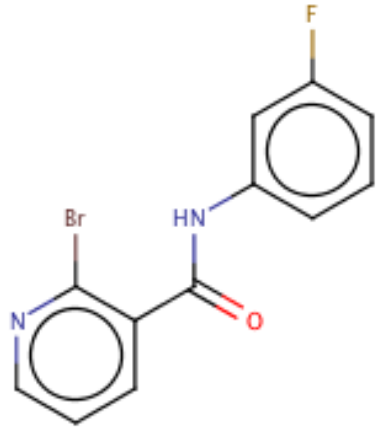
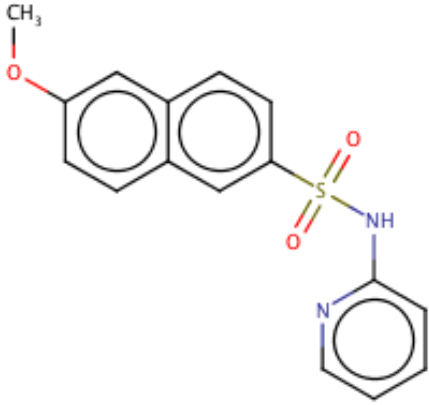
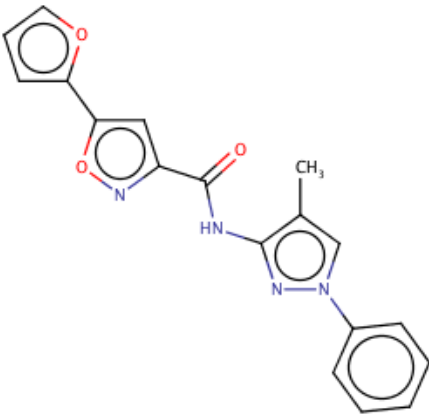
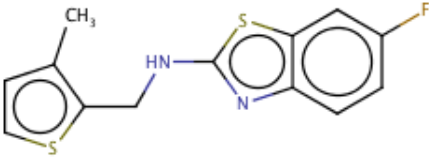
5	ZINC49551322	<chem>O=C(c1cc2CCCCc2[nH]c1=O)N1CCCCC1</chem>		4.729709
6	ZINC32909472	<chem>O=C(NCC1CC1)NCCc1cccc(c1)Cl</chem>		4.3834935
7	ZINC92779969	<chem>O=C([C@H]1NCc2c(C1)nc[nH]2)Nc1c(C)n[nH]c1C</chem>		5.7719926
8	ZINC08655749	<chem>COC(=O)c1nc2nnc(n2c(c1)c1ccc(cc1)N)N</chem>		6.019685

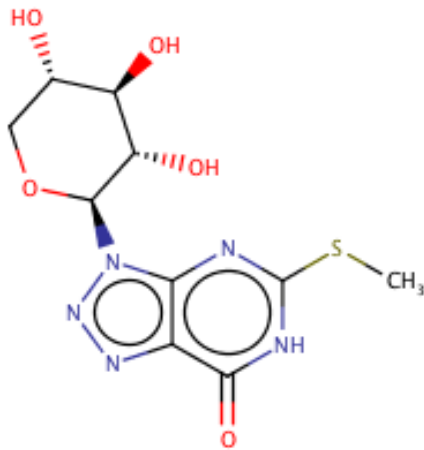
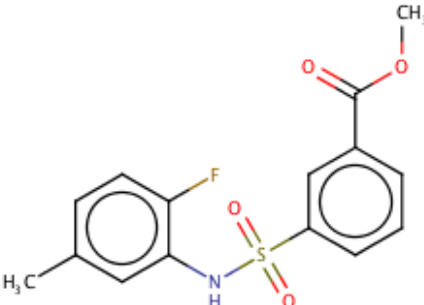
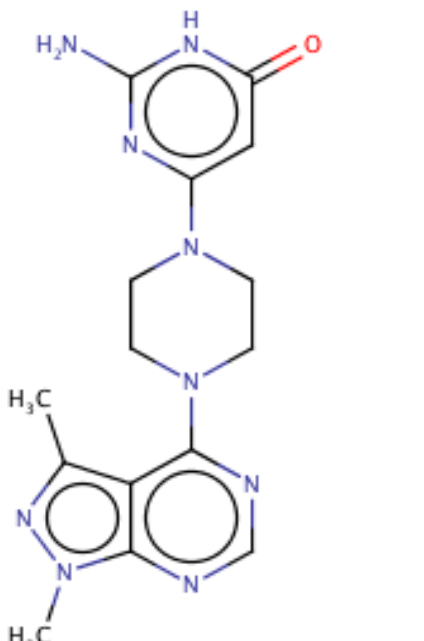
9	ZINC40162136	<chem>CCN(C(=O)c1ccc2c(c1)[nH]c(=O)c(=O)[nH]2)Cc1ccc(s1)Cl</chem>		5.3902657
10	ZINC19846561	<chem>N#Cc1cccnc1Sc1nc2c(s1)cccc2</chem>		5.0631296
11	ZINC28802886	<chem>N#Cc1c(NC(=O)CSc2sc(n2)C)sc2c1CCC</chem>		6.863947
12	ZINC07780252	<chem>Cc1csc(n1)Sc1nc(nc2c1cccc2)c1cccs1</chem>		4.6468422

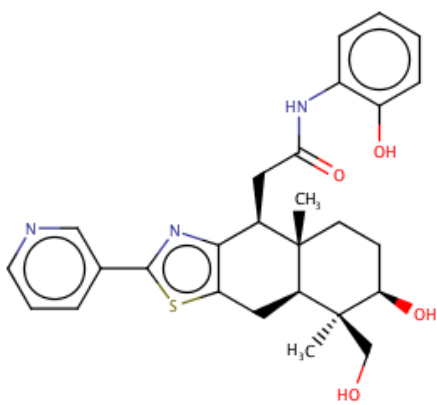
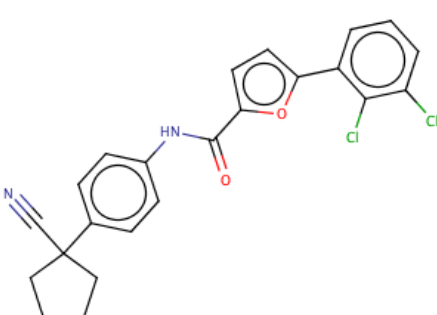
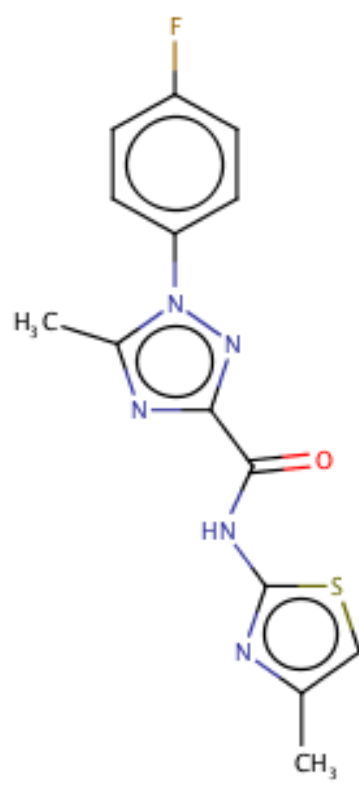
13	ZINC16940346	<chem>OC[C@@H]1O[C@@H]([C@@H]([C@H]1O)O)[C@@H]1C=Nc2c1ncnc2N</chem>		6.0687112
14	ZINC70807776	<chem>N#CC1(CCCC1)C(=O)Oc1ccc(c(c1)C)C</chem>		5.1389496
15	ZINC93584610	<chem>CN(Cc1cccn1C)Cc1cccc2c1N(CC2)C(=O)OC(C)(C)C</chem>		4.2884885

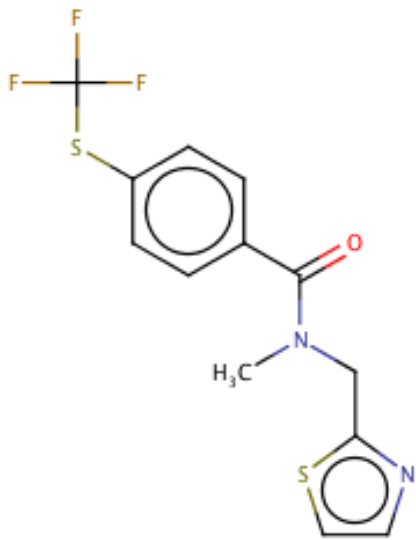
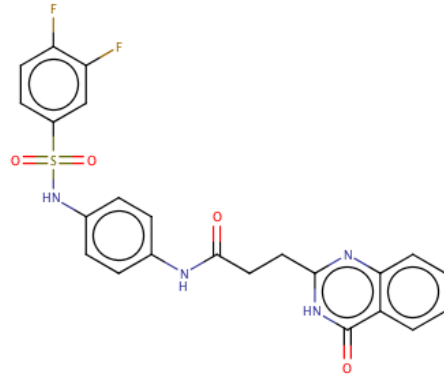
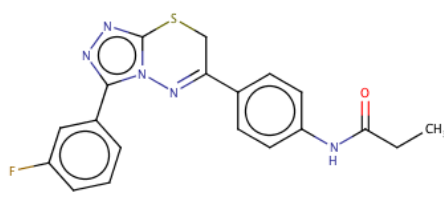
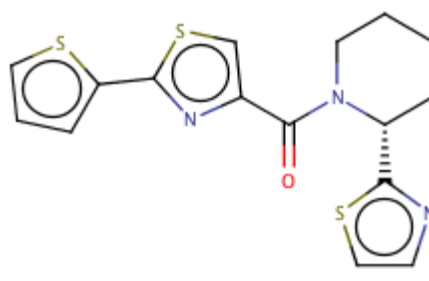
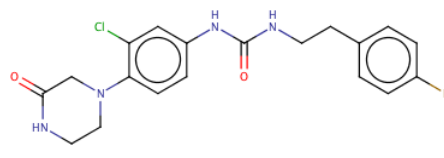
16	ZINC94975524	<chem>Nc1cc(F)c(c(c1)F)SCc1scc(n1)C(C)(C)C</chem>		4.3705865
17	ZINC94541485	<chem>Nc1n[nH]cc1CNS(=O)(=O)c1cc(c(s1)Br)C</chem>		6.0091462
18	ZINC92711562	<chem>c1ccc2c(c1)S[C@H](C2)CSc1nc2c(s1)cc2</chem>		4.9740363
19	ZINC02666989	<chem>CC(CC(=O)N[C@@H](C(Cl)(Cl)Cl)Nc1ccc(Cl)Cl)c1</chem>		4.9088033

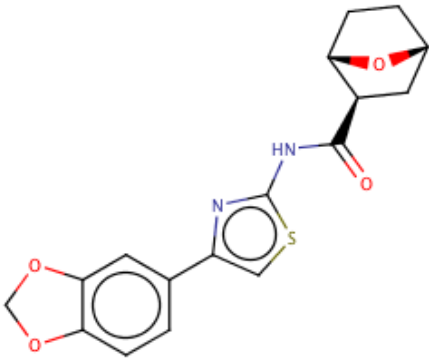
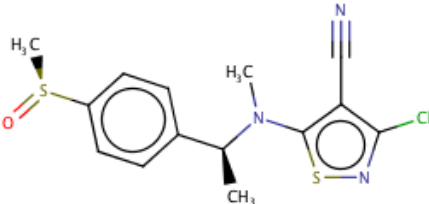
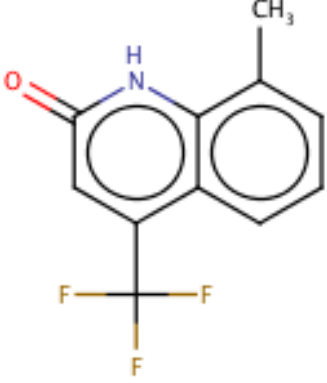
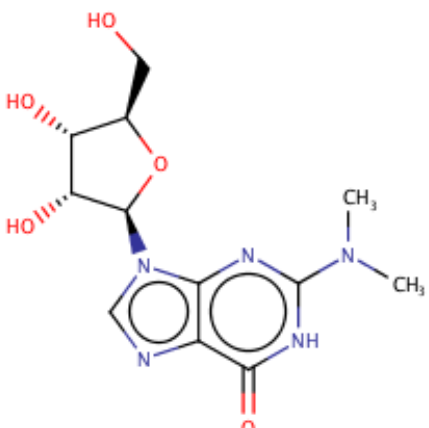
20	ZINC81462747	<chem>CCN(C(=O)c1ccc(c(c1)S(=O)(=O)N)C)c1scc(n1)C</chem>		4.7152084
21	ZINC28304734	<chem>Cc1[nH]/c(=N\S(=O)(=O)c2ccc(cc2)C(C)C)/sc1C</chem>		4.7252084
22	ZINC85235369	<chem>CCc1ccc(s1)S(=O)(=O)[N-]c1c[nH+]ccc1C</chem>		5.8046097
23	ZINC40212035	<chem>CC(N(C(=O)Cn1c(CCCCCNC(=O)C(C)(C)C)nc2c1cccc2)Cc1cccc1)C</chem>		4.6624828
24	ZINC84509637	<chem>COCc1c(sc2c1c(F)cc2)c1onc(n1)c1cnccn1</chem>		5.4898942

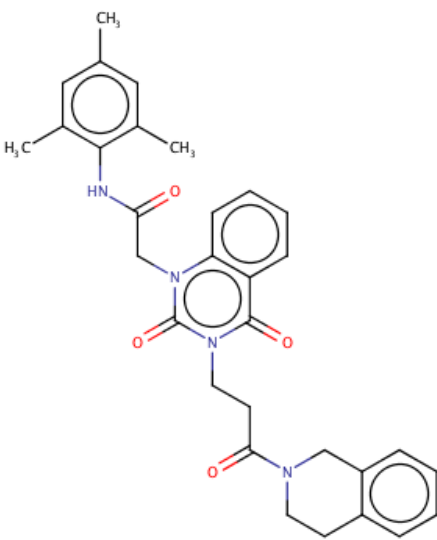
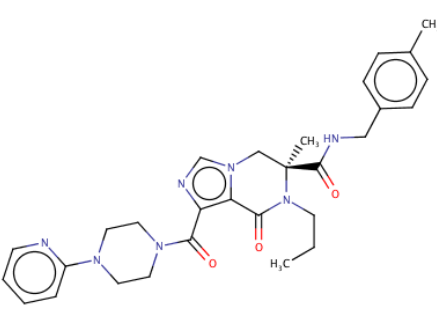
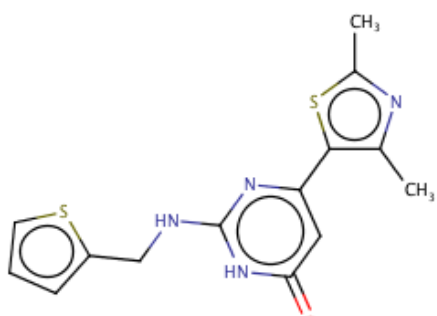
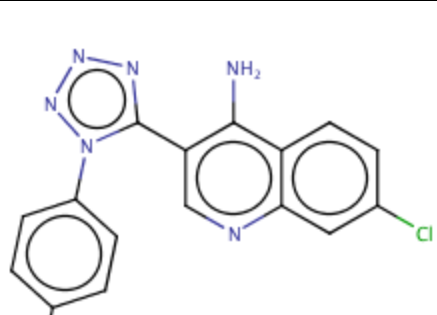
28	ZINC41107492	<chem>Fc1cccc(c1)NC(=O)c1cccnc1Br</chem>		4.757407
29	ZINC00192078	<chem>COc1ccc2c(c1)ccc(c2)S(=O)(=O)Nc1cccn1</chem>		5.7803614
30	ZINC71883568	<chem>Cc1cn(nc1NC(=O)c1noc(c1)c1cccoc1)c1ccccc1</chem>		5.6745762
31	ZINC94883725	<chem>Fc1ccc2c(c1)sc(n2)NCc1sccc1C</chem>		5.5519799

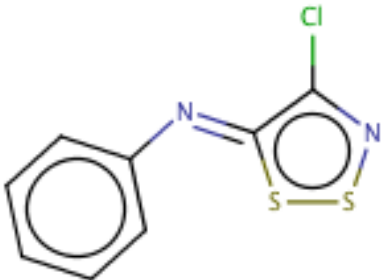
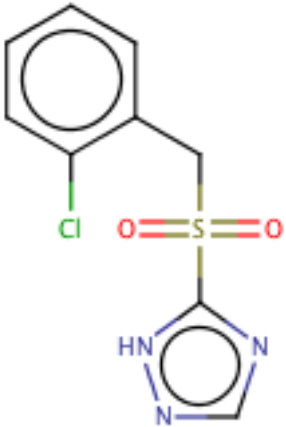
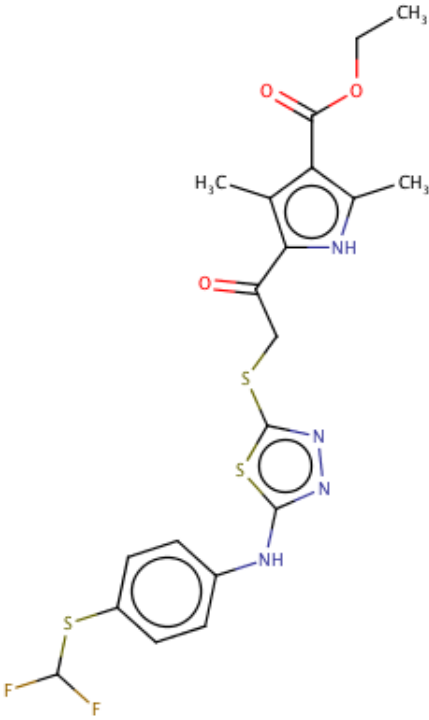
32	ZINC16952310	<chem>CSc1[nH]c(=O)c2c(n1)n(nn2)[C@H]1O[C@@H]([C@H]([C@@H]1O)O)O</chem>		6.4557595
33	ZINC24257777	<chem>COC(=O)c1cccc(c1)S(=O)(=O)Nc1cc(C)ccc1F</chem>		5.3899743
34	ZINC72481528	<chem>O=c1cc(nc([nH]1)N)N1CCN(CC1)c1ncn(C)c2c1c(C)nn2C</chem>		4.4301798

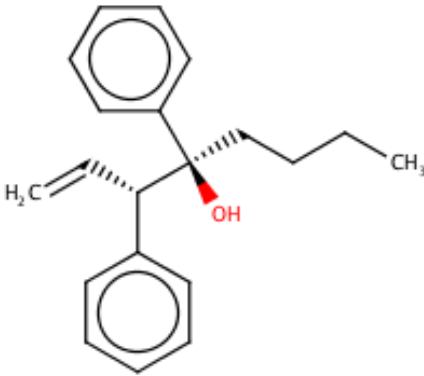
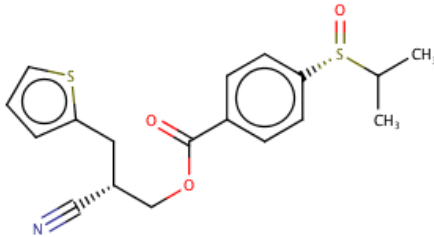
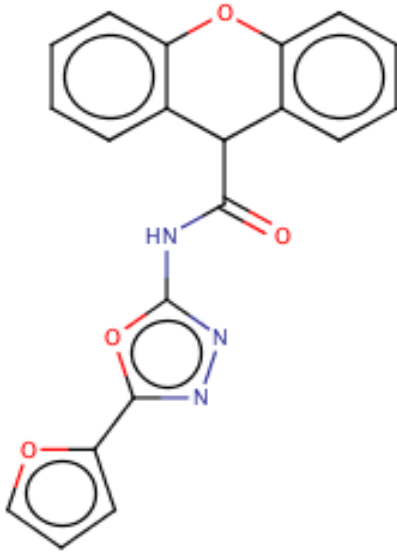
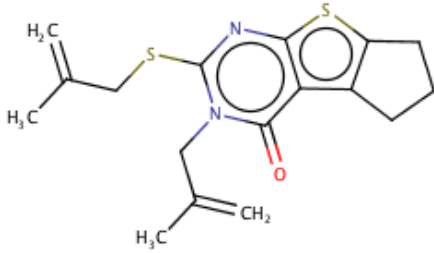
35	ZINC04260552	<chem>OC[C@]1(C)[C@H](O)CC[C@@]2([C@H]1Cc1sc(nc1[C@H]2CC(=O)Nc1cccc1O)c1cccnc1)C</chem>		5.9589788
36	ZINC20496761	<chem>N#CC1(CCCC1)c1ccc(cc1)NC(=O)c1ccc(o1)c1cccc(c1Cl)Cl</chem>		6.2292559
37	ZINC10555431	<chem>Fc1ccc(cc1)n1nc(nc1C(=O)Nc1scn1)C</chem>		4.8477151

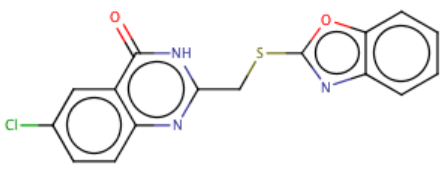
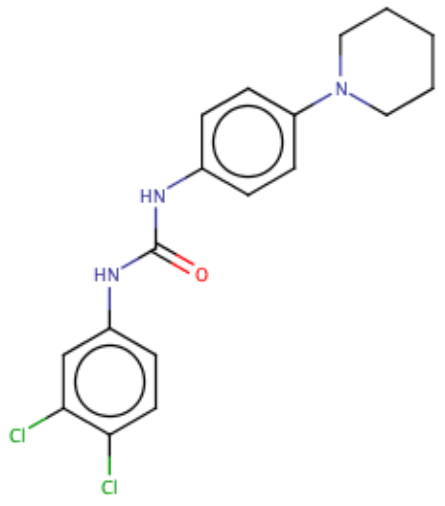
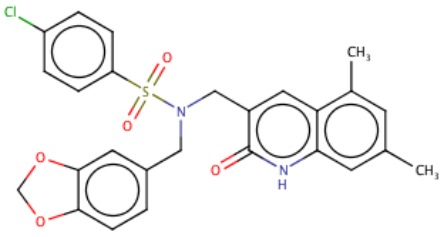
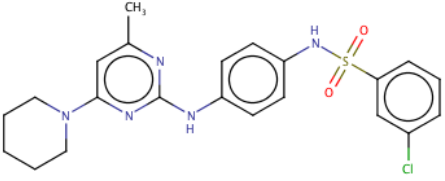
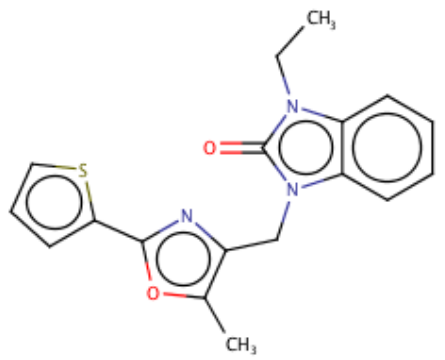
38	ZINC80529481	<chem>CN(C(=O)c1ccc(cc1)SC(F)(F)F)Cc1nccs1</chem>		3.8880513
39	ZINC09670144	<chem>O=C(Nc1ccc(cc1)NS(=O)(=O)c1ccc(c(c1)F)F)CCc1nc2ccccc2c(=O)[nH]1</chem>		5.2087045
40	ZINC07006610	<chem>CCC(=O)Nc1ccc(cc1)C1=NN2c(SC1)nnc2c1cccc(c1)F</chem>		5.2481278
41	ZINC82108957	<chem>O=C(N1CCCC[C@@H]1c1nccs1)c1csc(n1)c1cccc1</chem>		4.8600598
42	ZINC48561162	<chem>O=C(Nc1ccc(c(c1)Cl)N1CCNC(=O)C1)NCCc1ccc(cc1)F</chem>		5.1645088

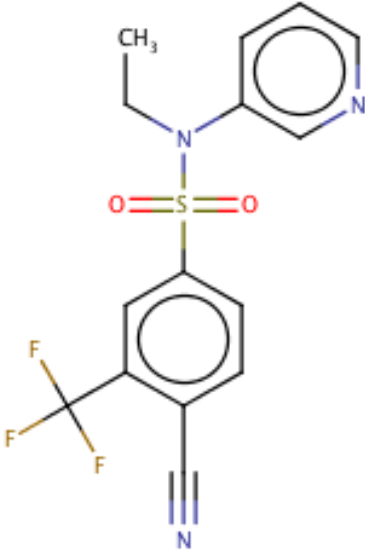
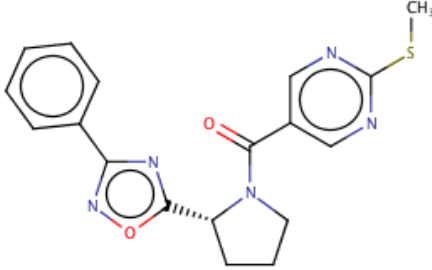
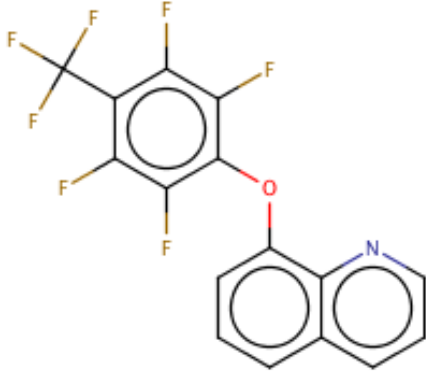
43	ZINC72646183	<chem>O=C([C@@H]1C[C@@H]2O[C@H]1CC2)Nc1scc(n1)c1cc c2c(c1)OCO2</chem>		4.7391872
44	ZINC92664040	<chem>N#Cc1c(Cl)nsc1N([C@H](c1ccc(cc1)[S@@]([=O])C)C)C</chem>		5.6224617
45	ZINC12955489	<chem>O=c1cc(c2c([nH]1)c(C)ccc2)C(F)(F)F</chem>		4.9421349
46	ZINC05115341	<chem>OC[C@H]1O[C@H]([C@@H]([C@@H]1O)O)n1cnc2c1nc([nH]c2=O)N(C)C</chem>		5.3034263

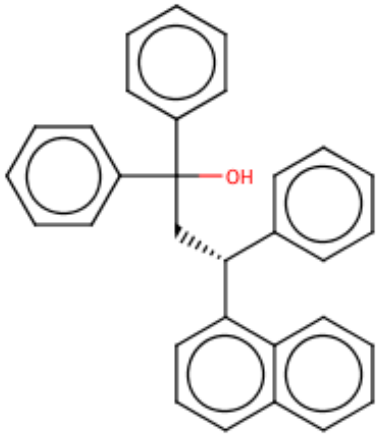
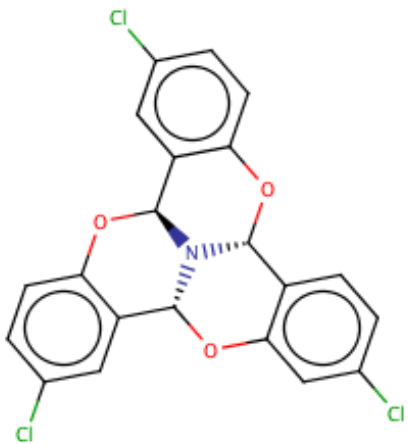
47	ZINC08593803	<chem>Cc1cc(C)c(c(c1)C)NC(=O)Cn1c2ccccc2c(=O)n(c1=O)CCC(=O)N1CCc2c(C1)cccc2</chem>		4.8599469
48	ZINC64953026	<chem>CCCNC1C(=O)c2n(C[C@@]1(C)C(=O)NC1ccc(cc1)C)cnc2C(=O)N1CCN(CC1)c1cccn1</chem>		4.473165
49	ZINC19560635	<chem>Cc1nc(c(s1)c1cc(=O)[nH]c(n1)NCc1cccs1)C</chem>		5.2568595
50	ZINC19596883	<chem>COc1ccc(cc1)n1nnnc1c1cnc2c(c1N)ccc(c2)Cl</chem>		6.296559

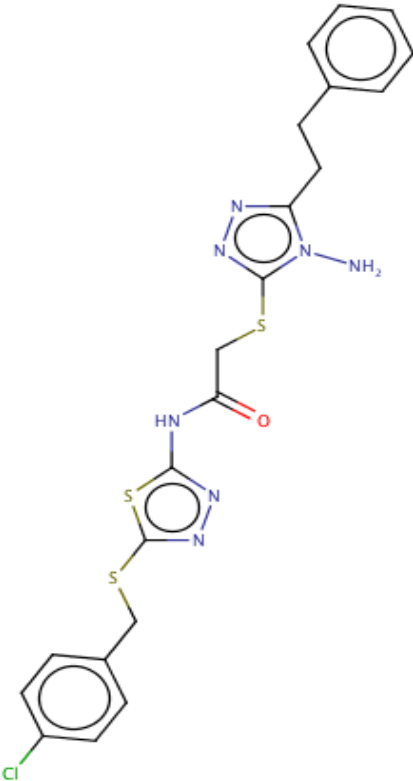
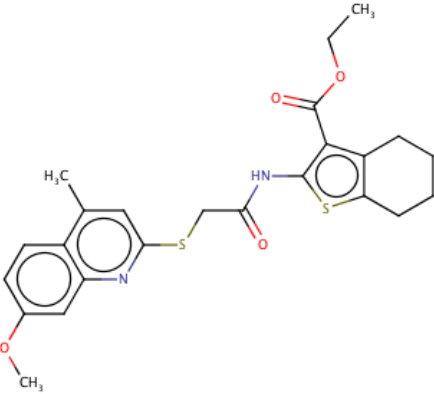
51	ZINC12375827	<chem>Clc1nss/c/1=N\c1cccc1</chem>		4.2259402
52	ZINC05998403	<chem>Clc1ccccc1CS(=O)(=O)c1ncn[nH]1</chem>		5.2383476
53	ZINC03378586	<chem>CCOC(=O)c1c(C)[nH]c(c1C)C(=O)CSc1nnc(s1)Nc1ccc(cc1)SC(F)F</chem>		4.4241811

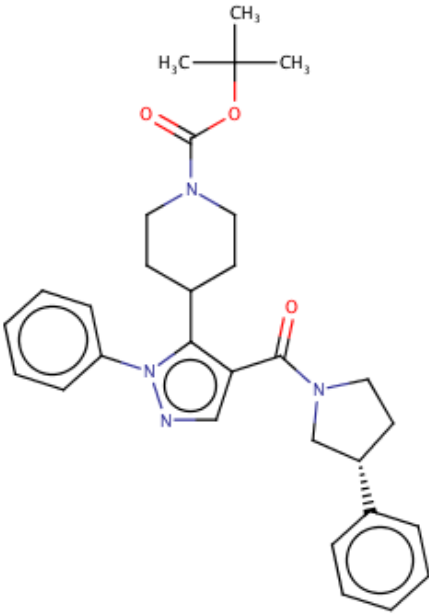
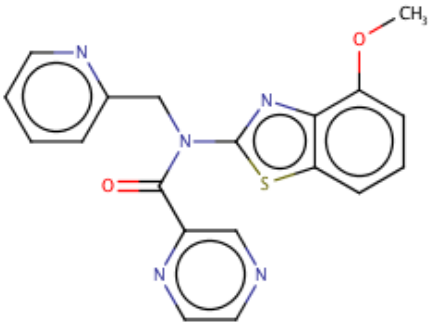
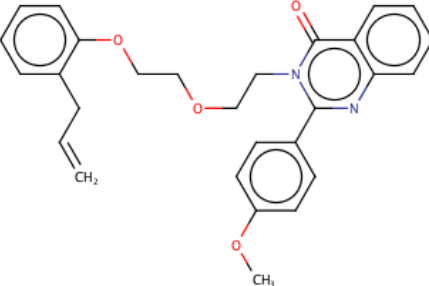
54	ZINC05309880	<chem>CCCC[C@]([C@H](c1ccccc1)C=C)(c1ccc(O)cc1)O</chem>		4.7219278
55	ZINC89297038	<chem>N#[C@H](Cc1cccs1)COC(=O)c1ccc(cc1)[S@](=O)(=O)C(C)C</chem>		5.981777
56	ZINC23156662	<chem>O=C(C1c2ccccc2Oc2c1ccccc2)Nc1nnc(O)c1ccco1</chem>		6.0546415
57	ZINC00440729	<chem>CC(=C)CSc1nc2sc3c(c2c(=O)n1CC(=C)C)CCC3</chem>		5.9091266

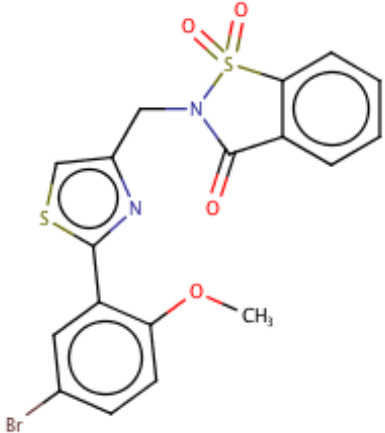
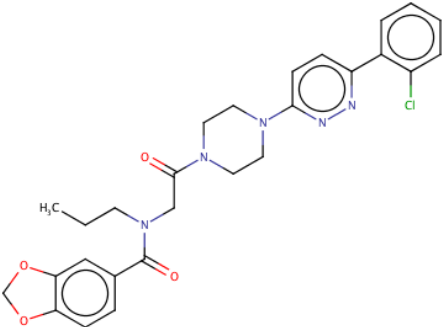
58	ZINC07059876	<chem>Clc1ccc2c(c1)c(=O)[nH]c(n2)CSc1nc2c(o1)cccc2</chem>		6.2928883
59	ZINC54581012	<chem>O=C(Nc1ccc(c(c1)Cl)Cl)Nc1ccc(cc1)N1CCCC1</chem>		4.8949908
60	ZINC00924062	<chem>Clc1ccc(cc1)S(=O)(=O)N(Cc1cc2c(C)cc(c2[nH]c1=O)C)Cc1ccc2c(c1)OCO2</chem>		5.591317
61	ZINC17013891	<chem>Cc1nc(Nc2ccc(cc2)NS(=O)(=O)c2cccc(c2)Cl)nc(c1)N1CCCC1</chem>		5.36896
62	ZINC10877144	<chem>CCn1c(=O)n(c2c1ccc2)Cc1nc(oc1C)c1cccs1</chem>		3.9105695

63	ZINC83537860	<chem>CCN(S(=O)(=O)c1cc(c(c1)C(F)(F)F)C#N)c1cccnc1</chem>		5.0422614
64	ZINC91636449	<chem>CSc1ncc(cn1)C(=O)N1CCC[C@H]1c1onc(n1)c1ccccc1</chem>		5.2808292
65	ZINC04776575	<chem>Fc1c(Oc2cccc3c2nc(c3)c(F)c(c(c1F)C(F)(F)F)F)F</chem>		5.2331511

66	ZINC16971039	<chem>OC(c1ccccc1)(c1cccc1)C[C@@H](c1cccc2c1cccc2)c1cccc1</chem>		5.2560289
67	ZINC39391565	<chem>Clc1ccc2c(c1)[C@H]1Oc3cc(Cl)ccc3[C@@H]3N1[C@@H](O2)c1cc(Cl)ccc1O3</chem>		4.8347449

68	ZINC59047046	<chem>O=C(Nc1nnc(s1)SCc1ccc(cc1)Cl)CSc1nn</chem> <chem>c(n1N)CCc1ccccc1</chem>		6.1241522
69	ZINC12625468	<chem>CCOC(=O)c1c(NC(=O)CSc2cc(C)c3c(n2)cc(cc3)OC)sc2c1CC</chem> <chem>CC2</chem>		7.5485037

70	ZINC09610473	<chem>O=C(N1CCC(CC1)c1c(cnn1c1cccc1)C(=O)N1CC[C@@H](C1)c1cccc1)OC(C)(C)C</chem>		4.9914512
71	ZINC36691722	<chem>COc1cccc2c1nc(s2)N(C(=O)c1nccnc1)C1CCCCN1</chem>		6.1128335
72	ZINC02398782	<chem>C=CCc1cccc1OCCOCCn1c(nc2c(c1=O)cccc2)c1ccc(cc1)OC</chem>		5.089154

73	ZINC12791027	<chem>COc1ccc(cc1c1scc(n1)CN1C(=O)c2c(S1(=O)=O)cccc2)Br</chem>		6.3387781
74	ZINC36074317	<chem>CCCN(C(=O)c1ccc2c(c1)OCO2)CC(=O)N1CCN(CC1)c1ccc(nn1)c1cccc1Cl</chem>		5.0062977