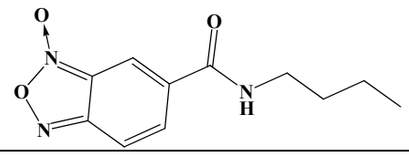
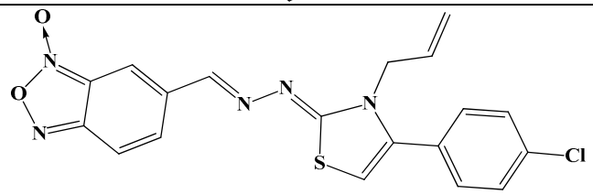
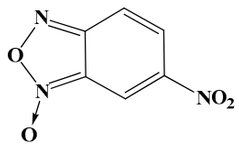
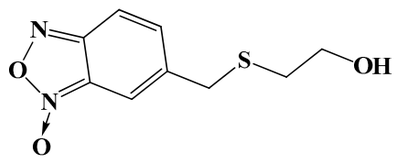
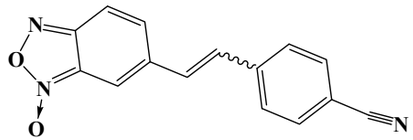
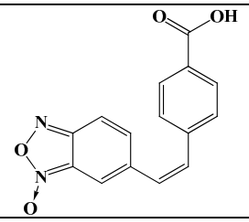
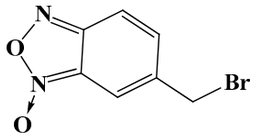
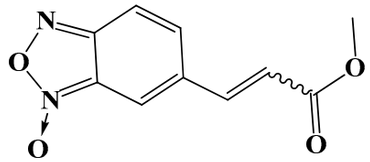
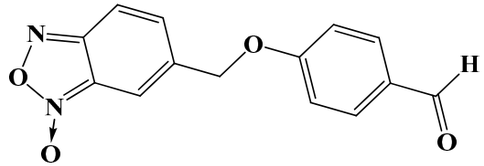
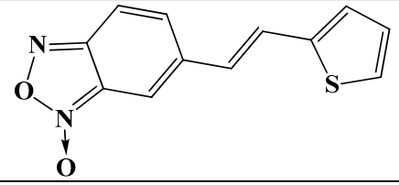
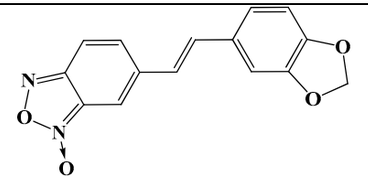
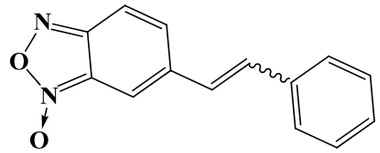
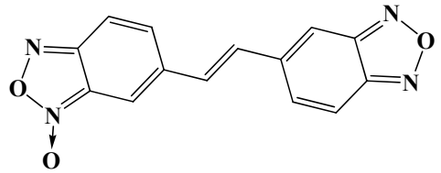
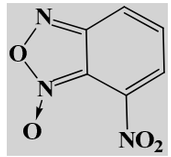
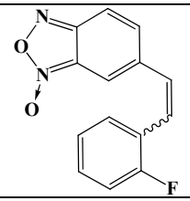
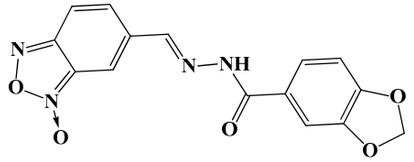
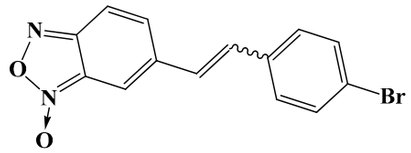
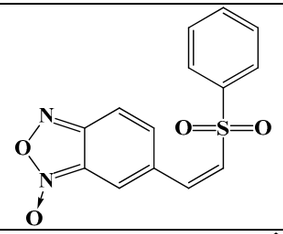
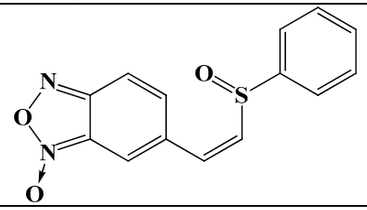
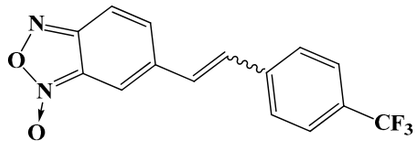
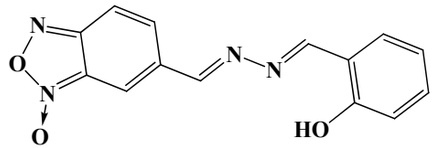
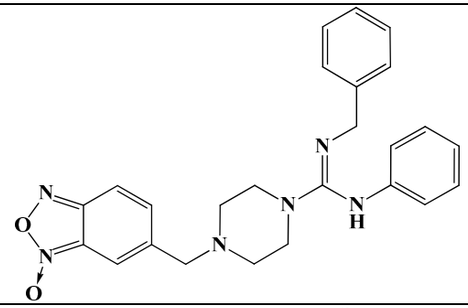
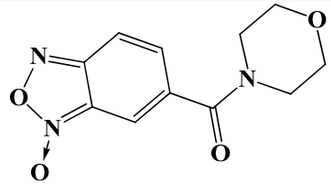
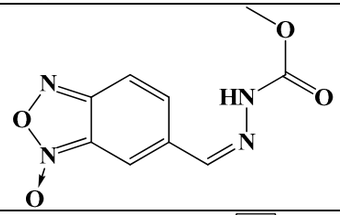
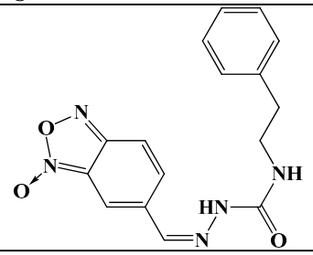
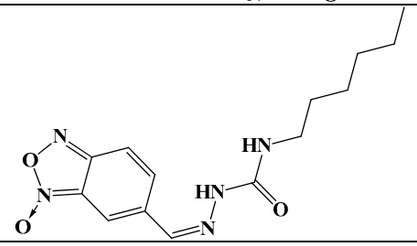
Table S1. Chemical structure of compounds used in primary screening.

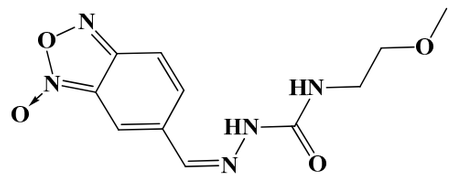
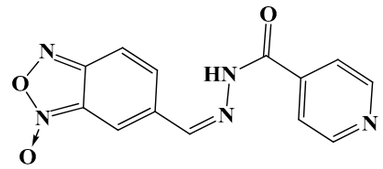
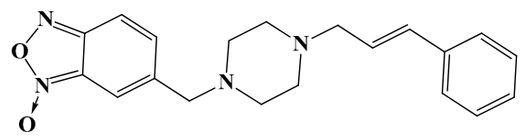
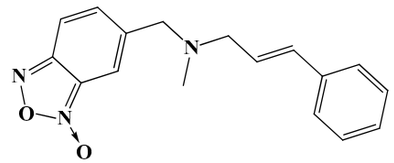
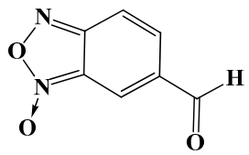
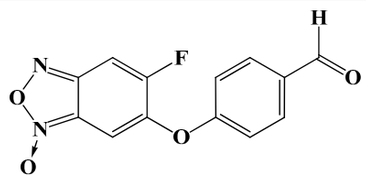
Nº	Chemotype	*Rm*TIM %inhibition at 100µM	BME26 %inhibition at 100µM
Benzofuroxans			
1		0	Nd
2		0	Nd
3		0	Nd
4		0	Nd

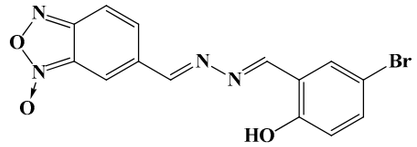
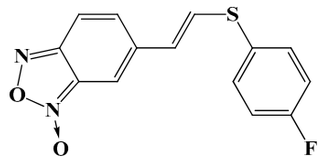
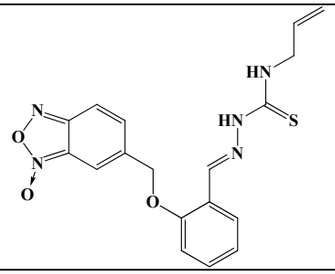
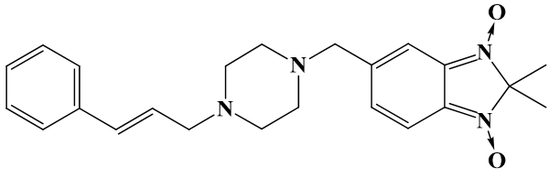
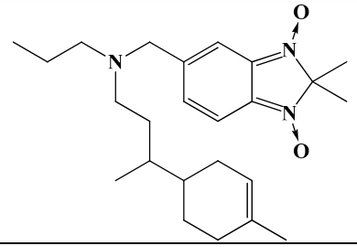
5		0	Nd
6		0	Nd
7		0	Nd
8		0	Nd
9		0	Nd
10		0	Nd

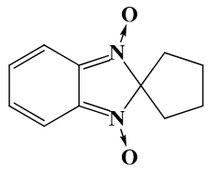
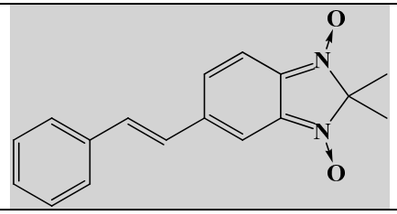
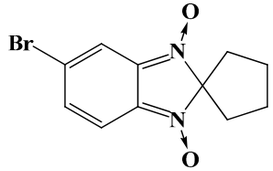
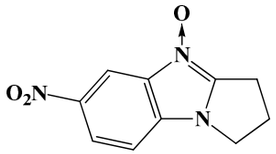
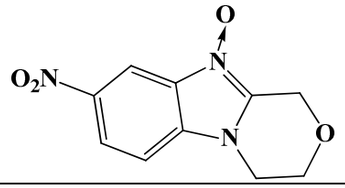
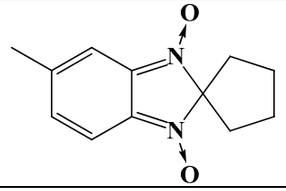
11		0	Nd
12		0	Nd
13		0	Nd
14		87	95
15		0	Nd
16		0	Nd

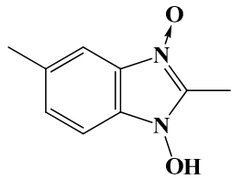
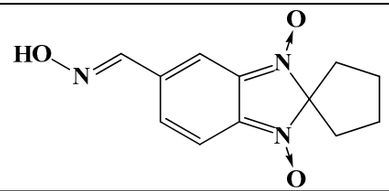
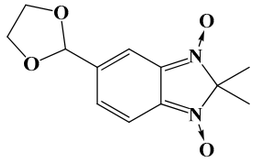
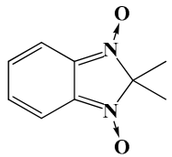
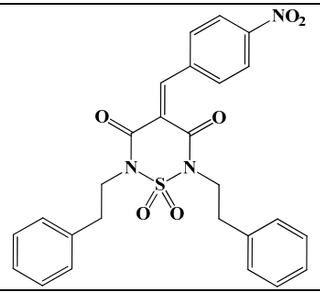
17		0	Nd
18		0	Nd
19		0	Nd
20		0	Nd
21		0	Nd

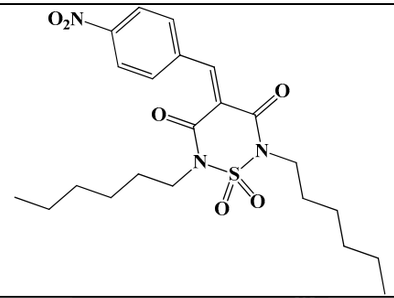
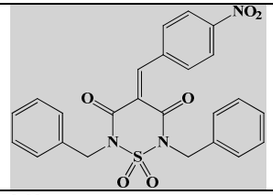
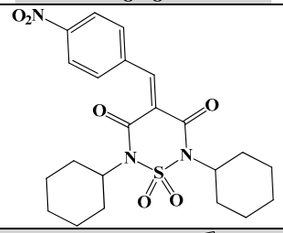
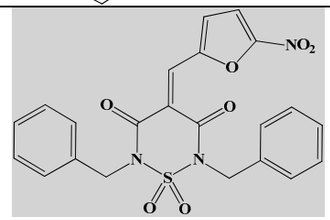
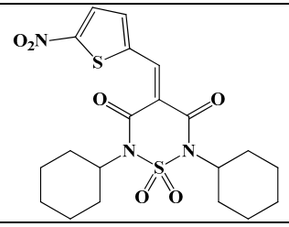
22		0	Nd
23		0	Nd
24		0	Nd
25		0	Nd
26		0	Nd

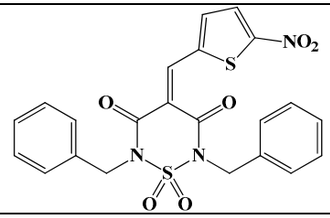
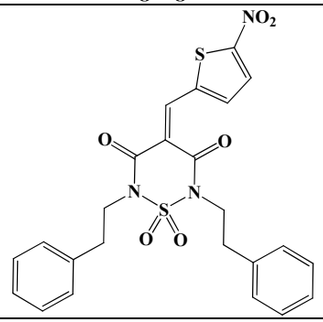
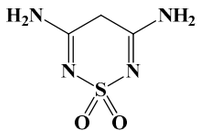
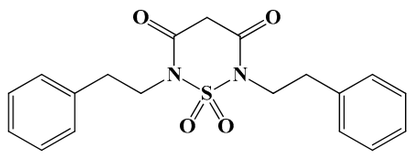
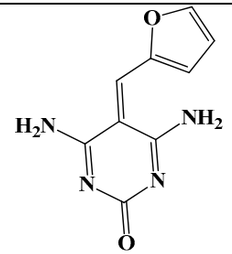
27		0	Nd
28		0	Nd
29		0	Nd
30		0	Nd
31		0	Nd
32		0	Nd

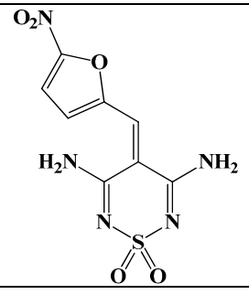
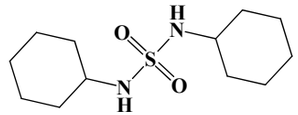
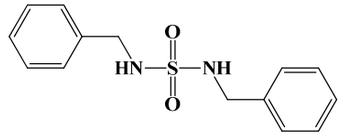
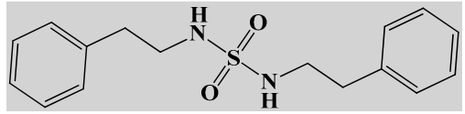
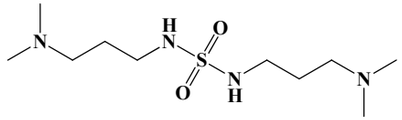
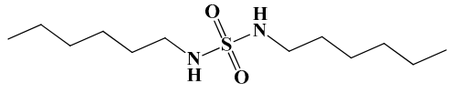
33		0	Nd
34		0	Nd
35		0	Nd
Benzimidazoles			
36		0	Nd
37		0	Nd

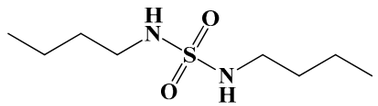
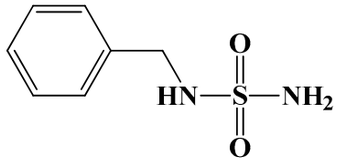
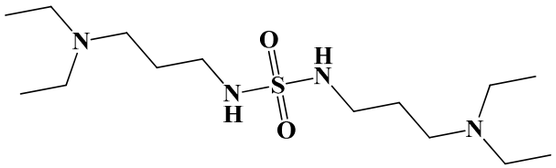
38		0	Nd
39		70	Nd
40		0	Nd
41		0	Nd
42		0	Nd
43		0	Nd

44		0	Nd
45		0	Nd
46		0	Nd
47		0	Nd
Thiadiazines and synthetic precursors			
48		0	Nd

49		0	Nd
50		92	50
51		0	Nd
52		52	0
53		0	Nd

54		0	Nd
55		0	Nd
56		0	Nd
57		0	Nd
58		0	Nd

59		0	Nd
60		0	Nd
61		0	Nd
62		70	Nd
63		0	Nd
64		0	Nd

65		0	Nd
66		0	Nd
67		0	Nd
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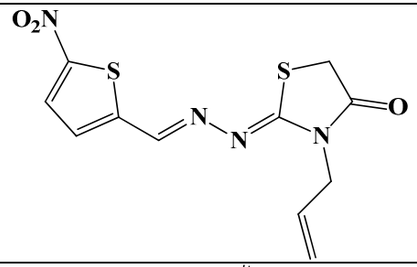
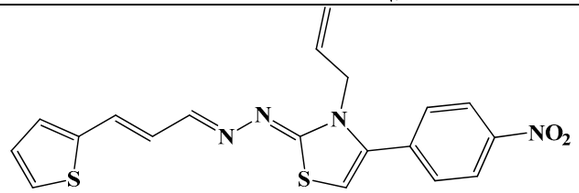
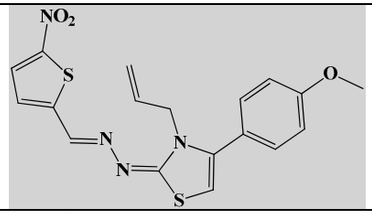
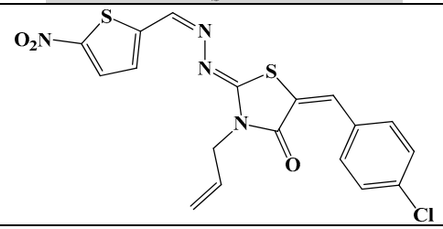
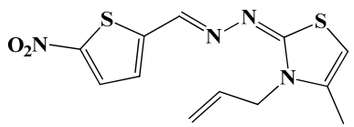
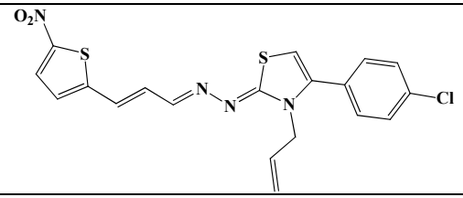
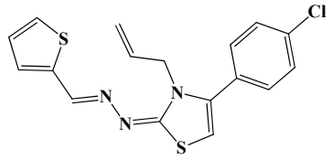
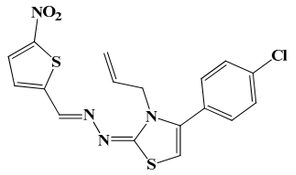
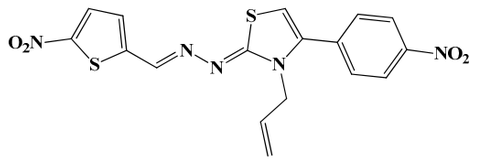
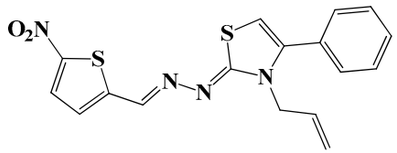
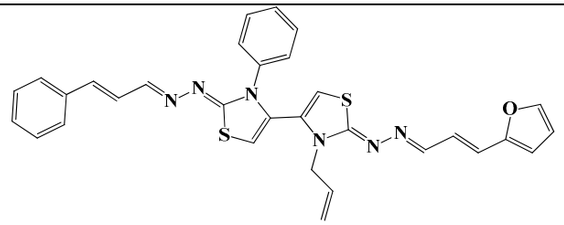
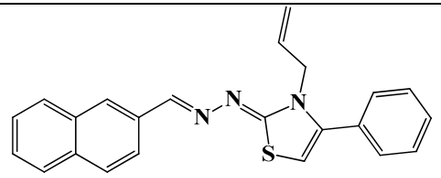
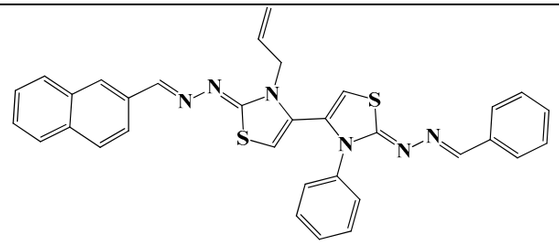
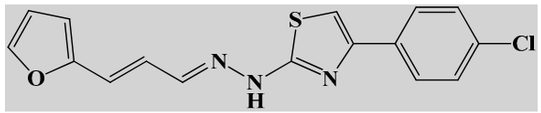
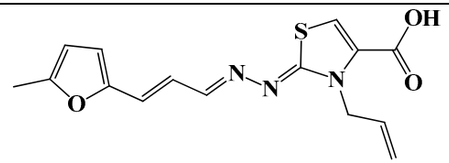
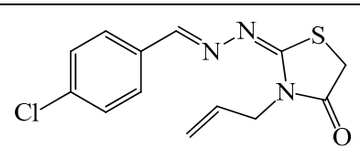
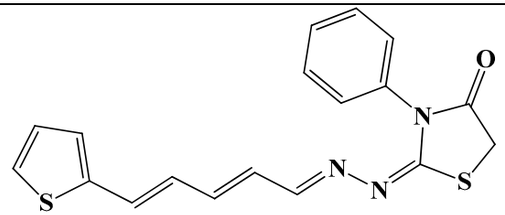
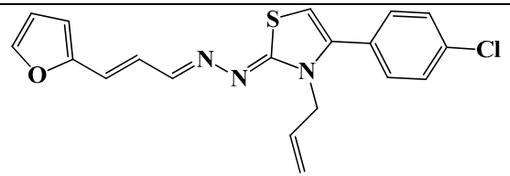
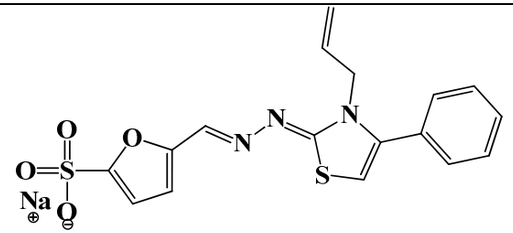
68		0	Nd
69		0	Nd

70		55	Nd
71		0	Nd
72		0	Nd
73		0	Nd
74		0	Nd
75		0	Nd

76		0	Nd
77		0	Nd
78		0	Nd
79		0	Nd
80		0	Nd

81		80	25
82		0	Nd
83		0	Nd
84		0	Nd
85		0	Nd

86		0	Nd
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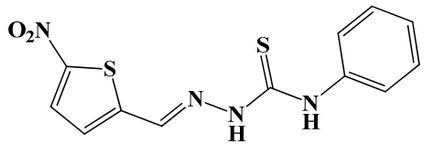
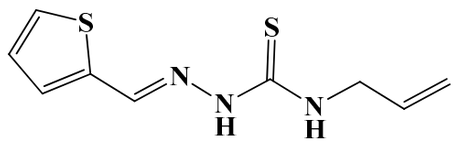
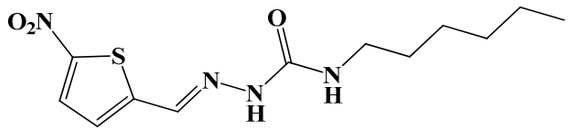
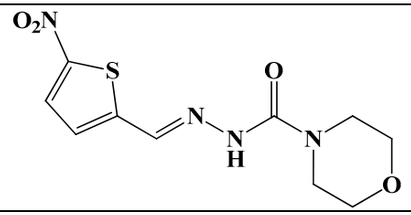
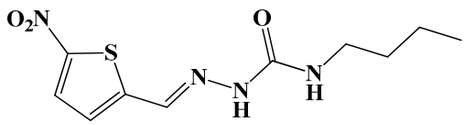
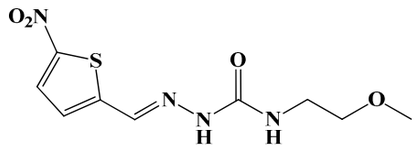
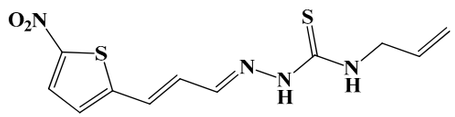
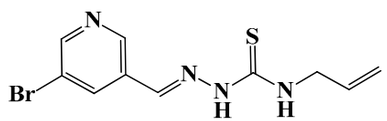
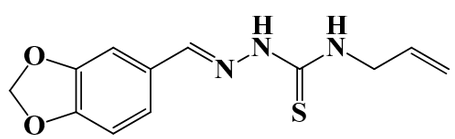
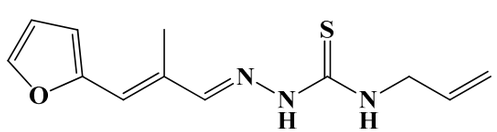
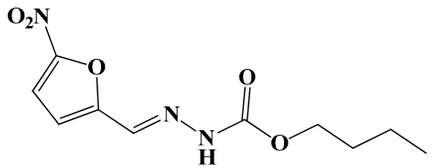
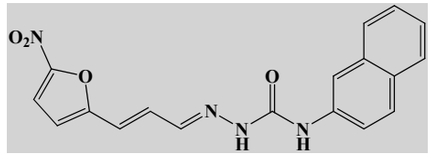
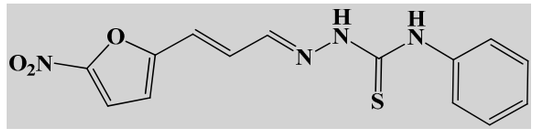
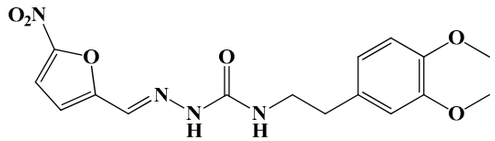
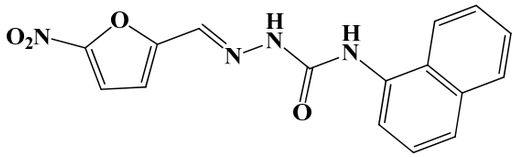
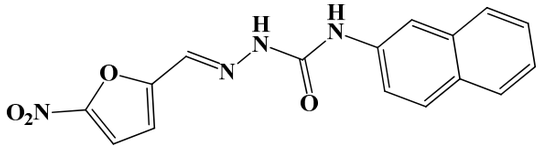
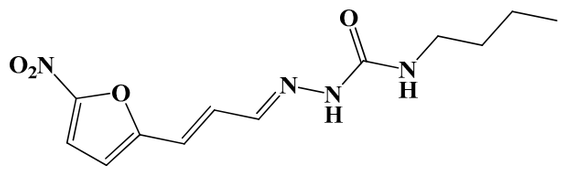
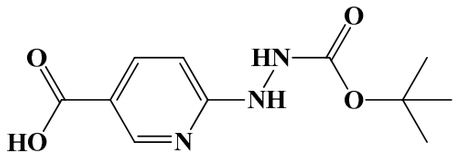
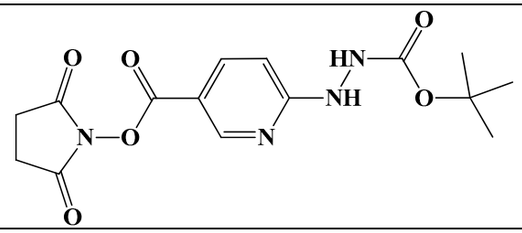
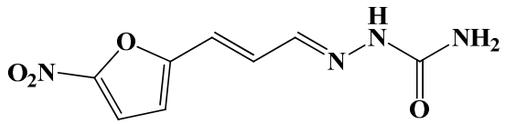
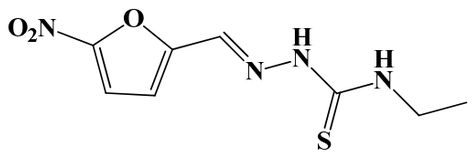
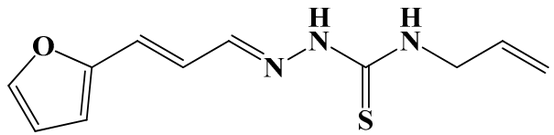
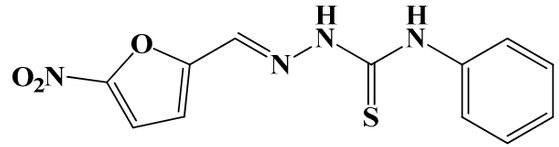
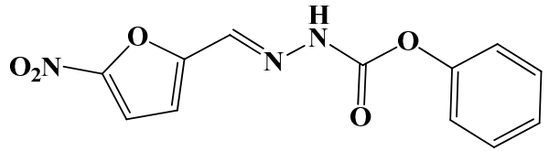
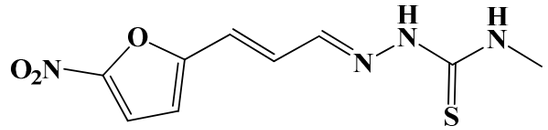
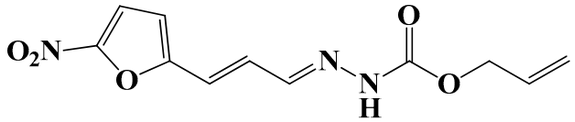
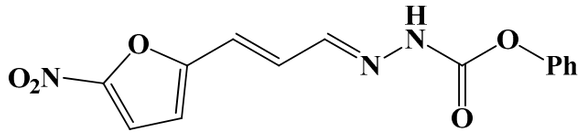
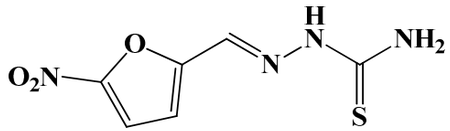
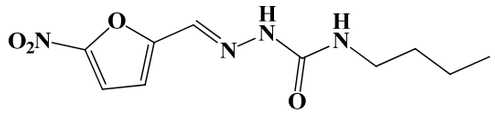
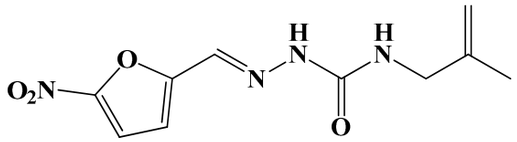
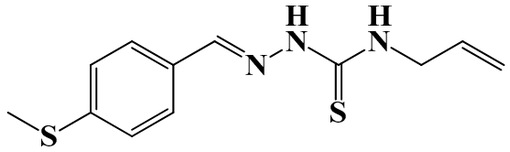
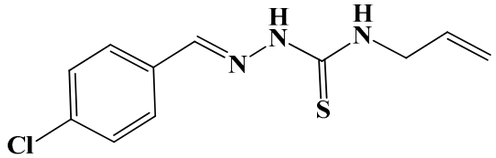
87		0	Nd
88		0	Nd
89		0	Nd
90		0	Nd

91		0	Nd
92		0	Nd
93		0	Nd
94		0	Nd
95		0	Nd
96		0	Nd

97		0	Nd
98		90	50
99		50	Nd
100		0	Nd
101		0	Nd
102		0	Nd

103		0	Nd
104		0	Nd
105		0	Nd
106		0	Nd
107		0	Nd
108		0	Nd

109		0	Nd
110		0	Nd
111		0	Nd
112		0	Nd
113		0	Nd
114		0	Nd

115		0	Nd
116		0	Nd
117		0	Nd
118		0	Nd
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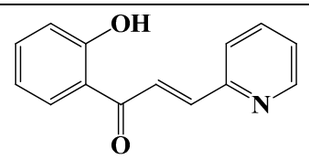
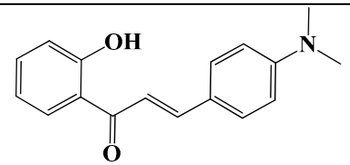
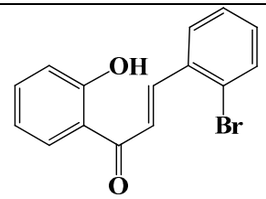
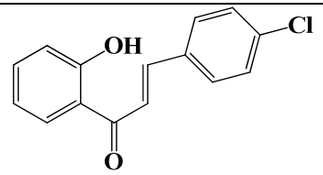
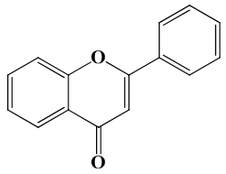
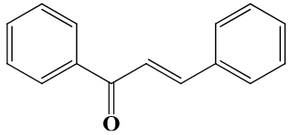
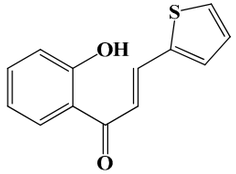
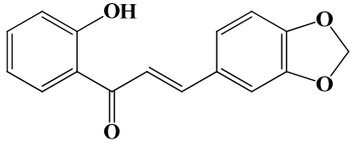
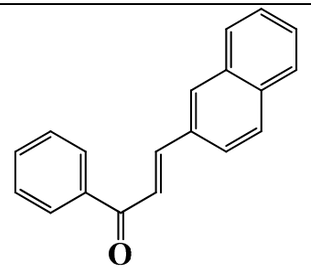
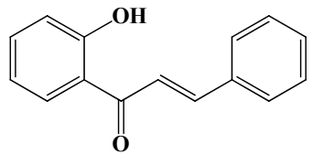
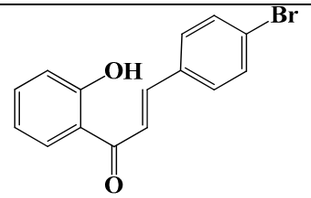
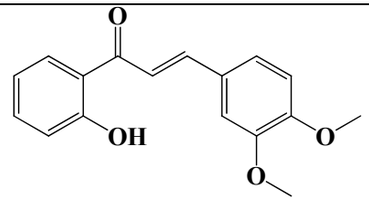
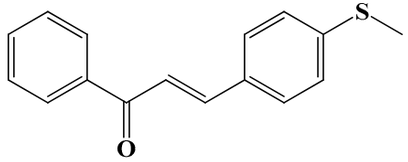
119		0	Nd
120		0	Nd

121		0	Nd
122		0	Nd
123		0	Nd
124		0	Nd
125		0	Nd
126		0	Nd

127		0	Nd
128		0	Nd
129		0	Nd
130		0	Nd
131		0	Nd
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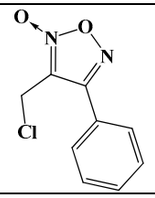
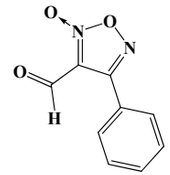
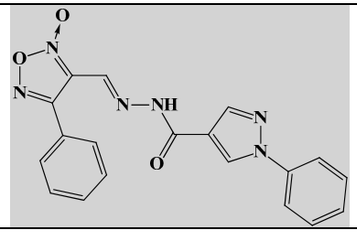
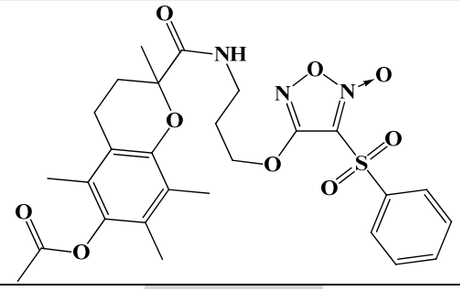
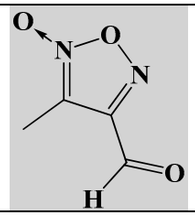
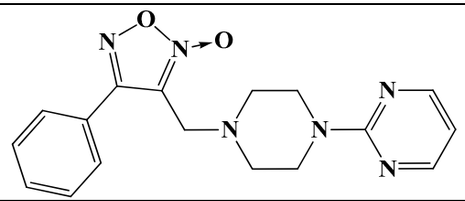
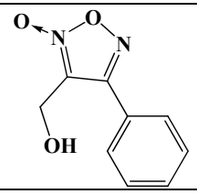
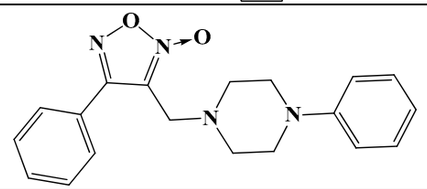
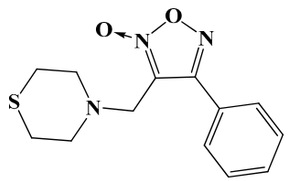
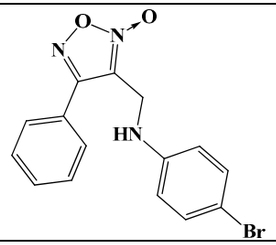
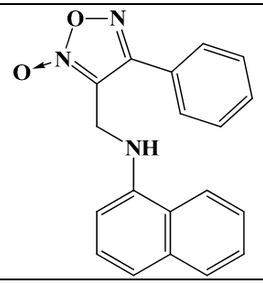
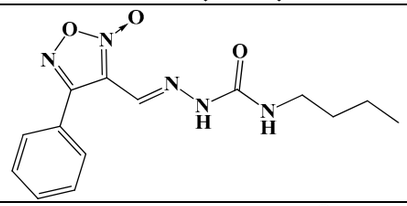
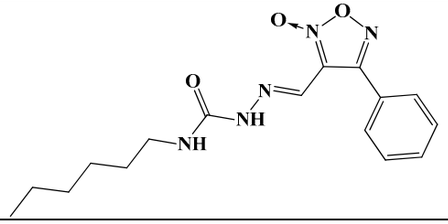
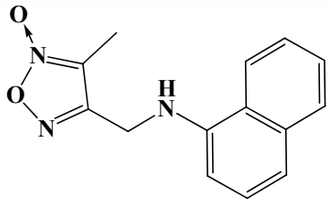
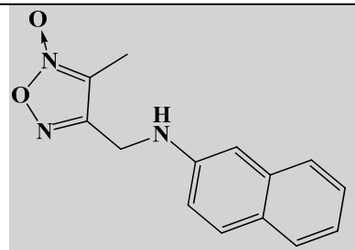
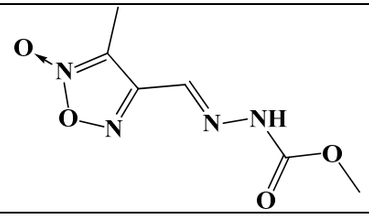
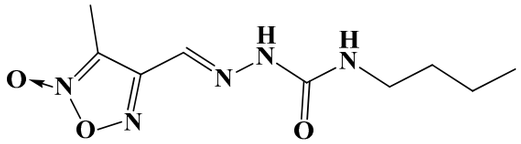
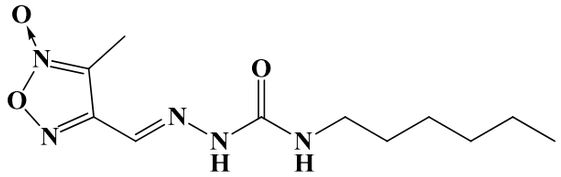
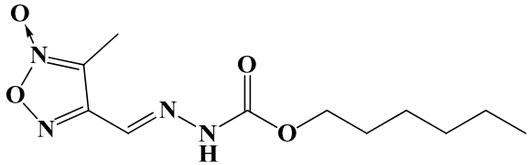
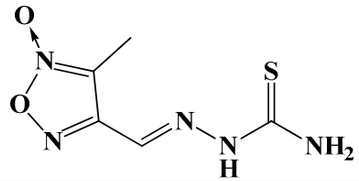
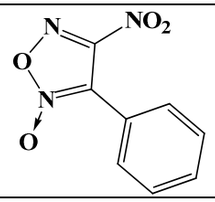
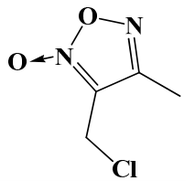
132		0	Nd
133		0	Nd
134		77	Nd
135		0	Nd
136		94	Nd

137		0	Nd
138		0	Nd
139		0	Nd
140		0	Nd
141		0	Nd

142		0	Nd
143		0	Nd
144		0	Nd
145		0	Nd
146		85	Nd

147		0	Nd
148		0	Nd
149		0	Nd
150		0	Nd
151		0	Nd
152		0	Nd

153		0	Nd
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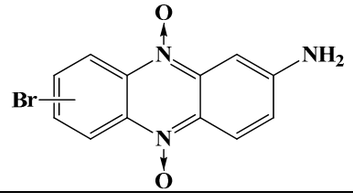
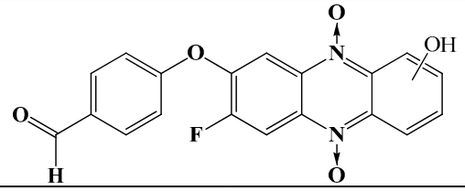
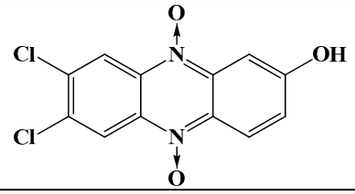
154		0	Nd
155		0	Nd
156		0	Nd
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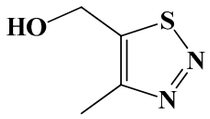
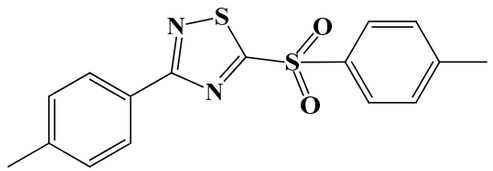
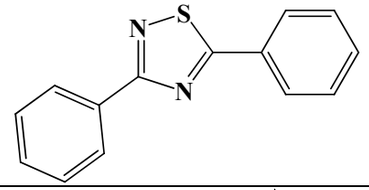
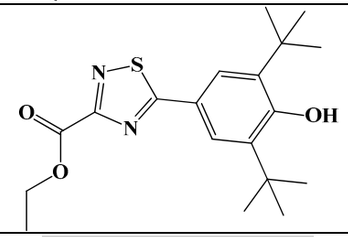
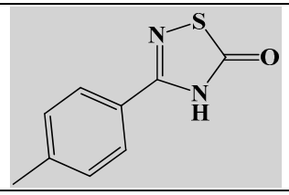
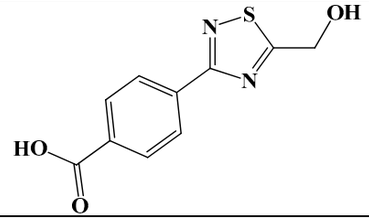
157		0	Nd

158		0	Nd
159		0	Nd
160		0	Nd
161		98	Nd
162		0	Nd
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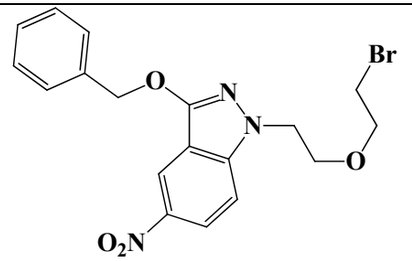
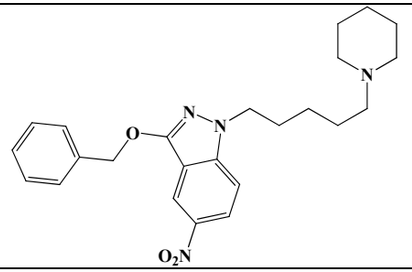
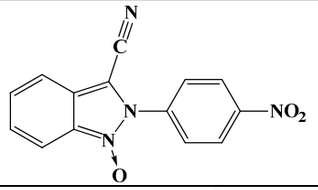
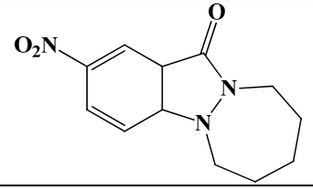
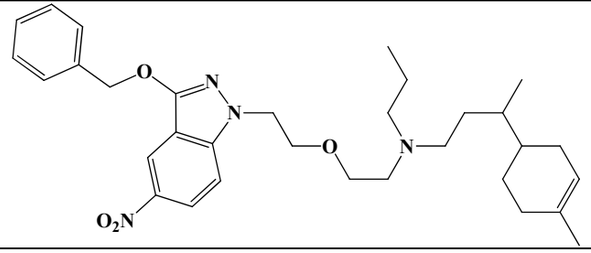
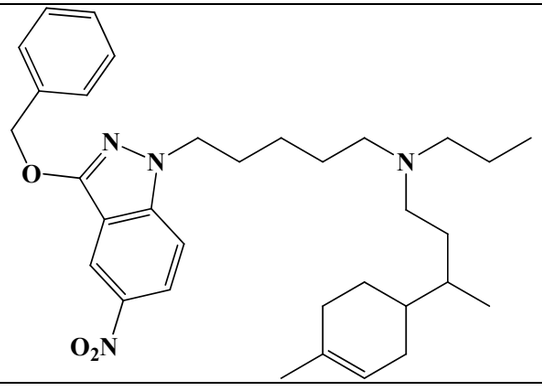
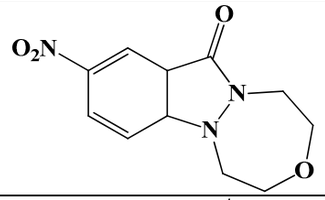
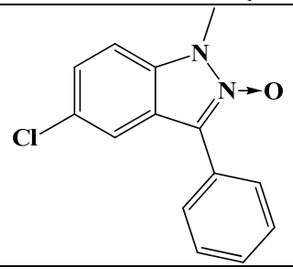
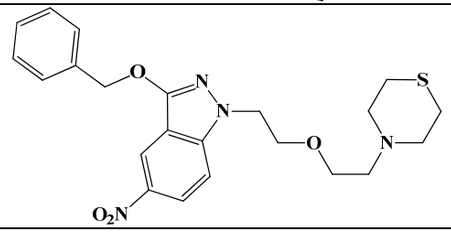
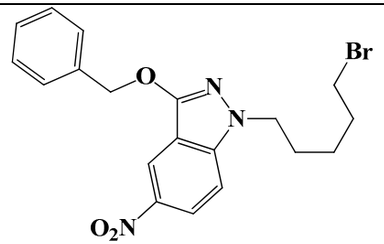
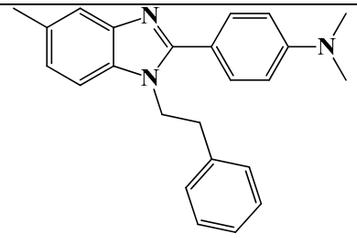
163		0	Nd
164		0	Nd
165		0	Nd
166		0	Nd
167		0	Nd

168		0	Nd
169		0	Nd
170		0	Nd
171		0	Nd

172		0	Nd
173		0	Nd
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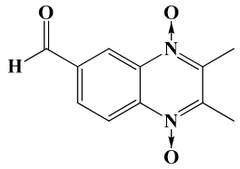
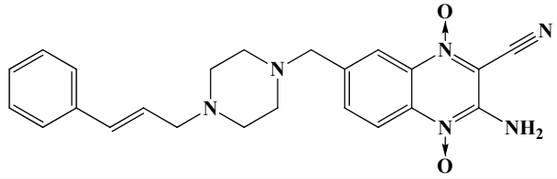
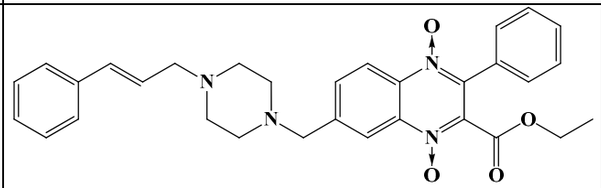
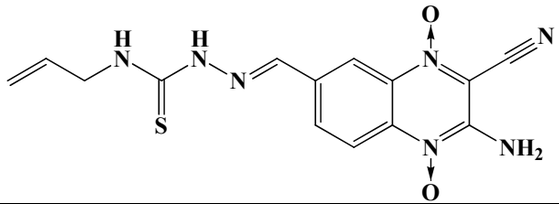
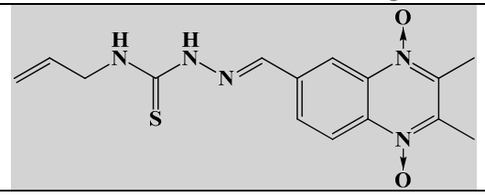
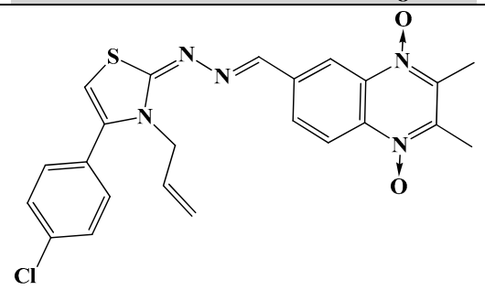
174		0	Nd
175		0	Nd
176		0	Nd

177		0	Nd
178		91	Nd
179		0	Nd
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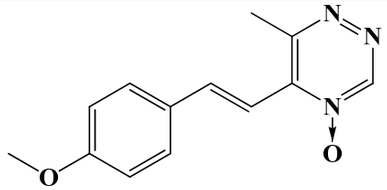
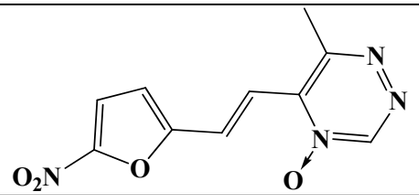
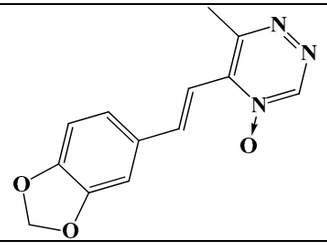
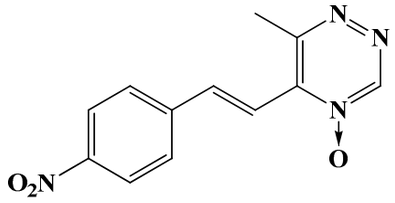
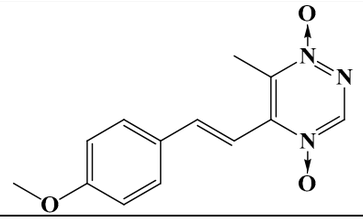
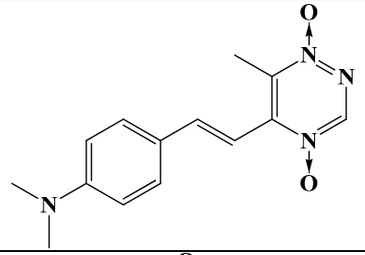
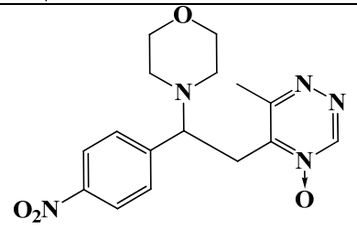
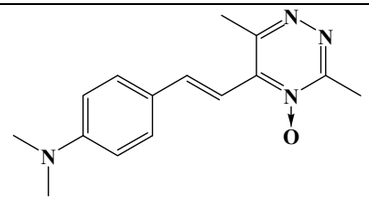
180		0	Nd
181		0	Nd

182		0	Nd
183		0	Nd
184		0	Nd
185		0	Nd
186		0	Nd

187		0	Nd
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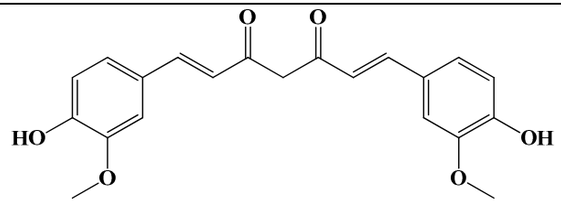
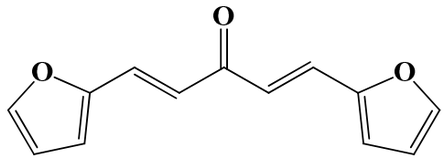
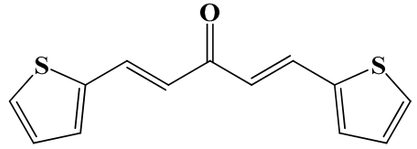
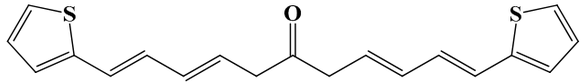
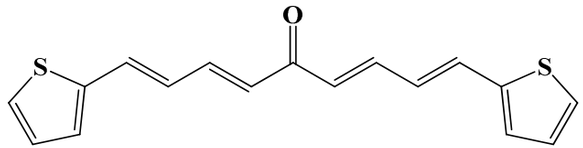
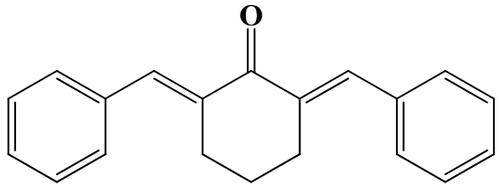
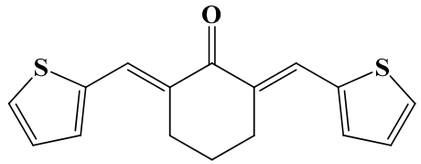
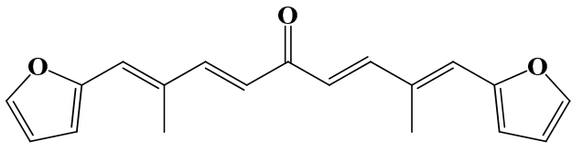
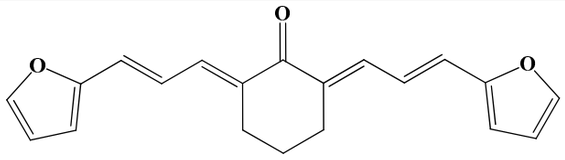
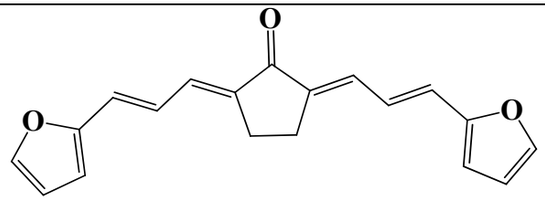
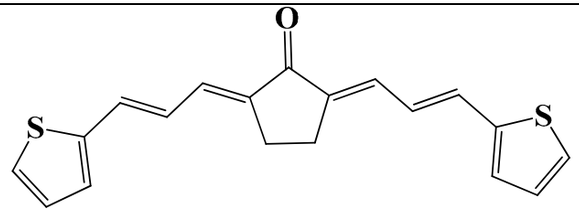
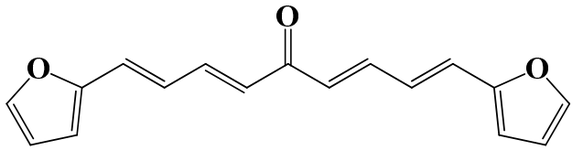
188		0	Nd
189		0	Nd
190		0	Nd
191		0	Nd

192		0	Nd
193		0	Nd
194		0	Nd
195		0	Nd
196		0	Nd
197		0	Nd

198		0	Nd
199		0	Nd
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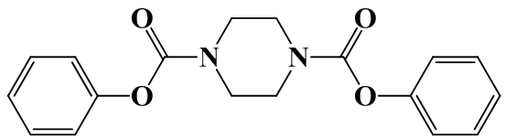
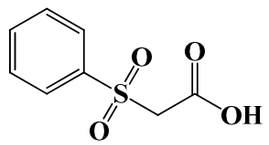
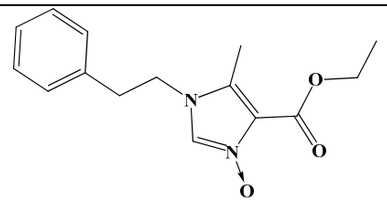
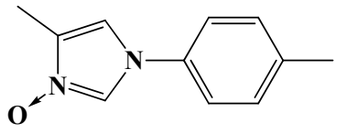
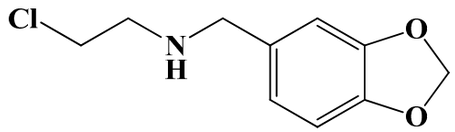
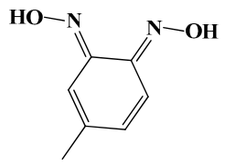
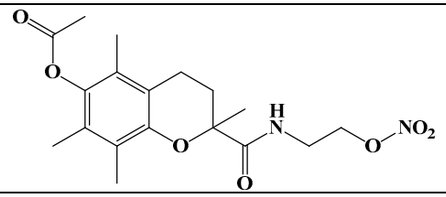
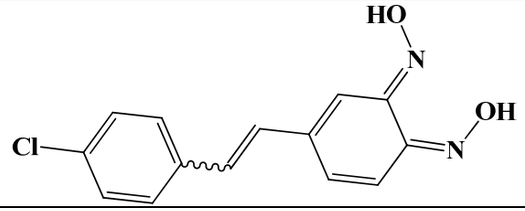
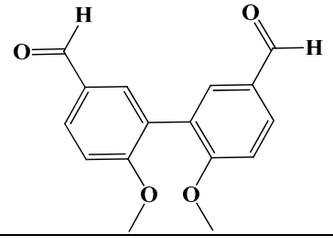
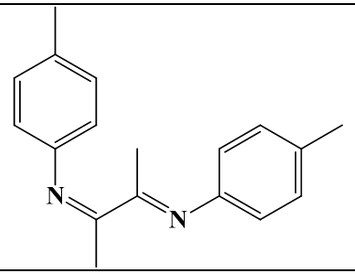
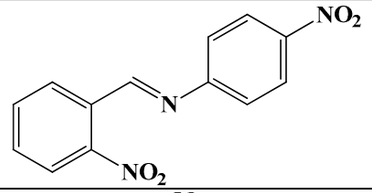
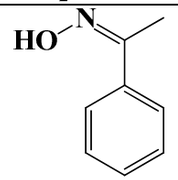
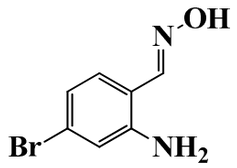
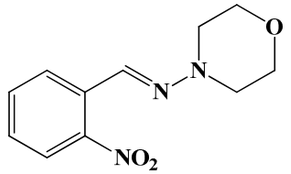
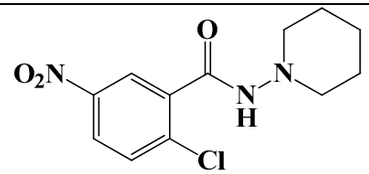
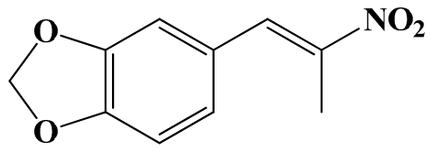
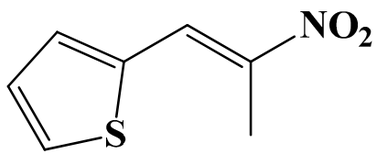
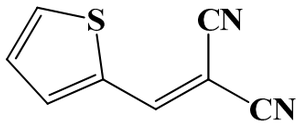
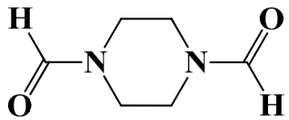
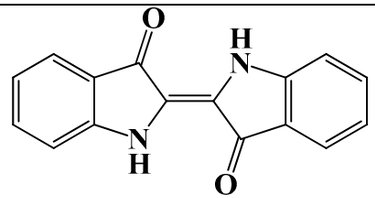
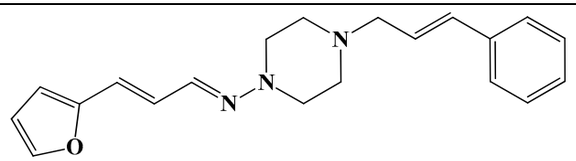
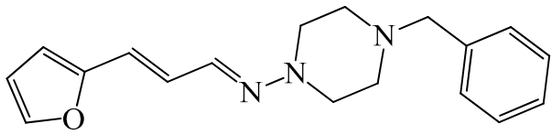
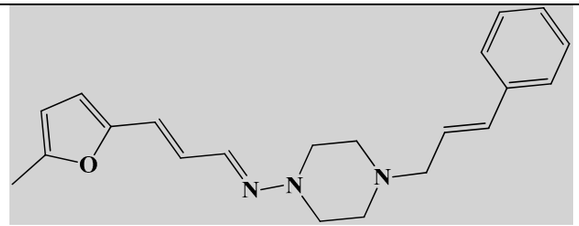
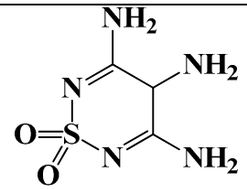
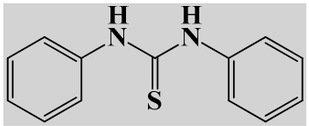
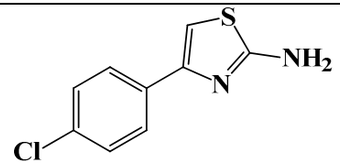
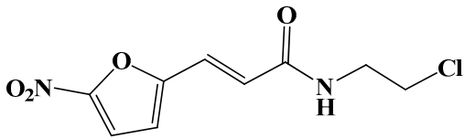
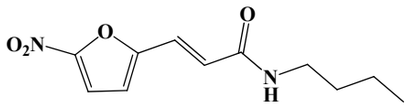
200		0	Nd
201		0	Nd
202		0	Nd

203		0	Nd
204		0	Nd
205		0	Nd
206		0	Nd
207		0	Nd
208		0	Nd

209		0	Nd
210		0	Nd
211		0	Nd
212		0	Nd
213		0	Nd

214		0	Nd
215		0	Nd
216		0	Nd
217		0	Nd
218		0	Nd
219		0	Nd

220		0	Nd
221		0	Nd
222		60	75
223		0	Nd
224		60	10
225		0	0

226		0	Nd
227		0	Nd

In gray are highlighted the best TIM inhibitors.

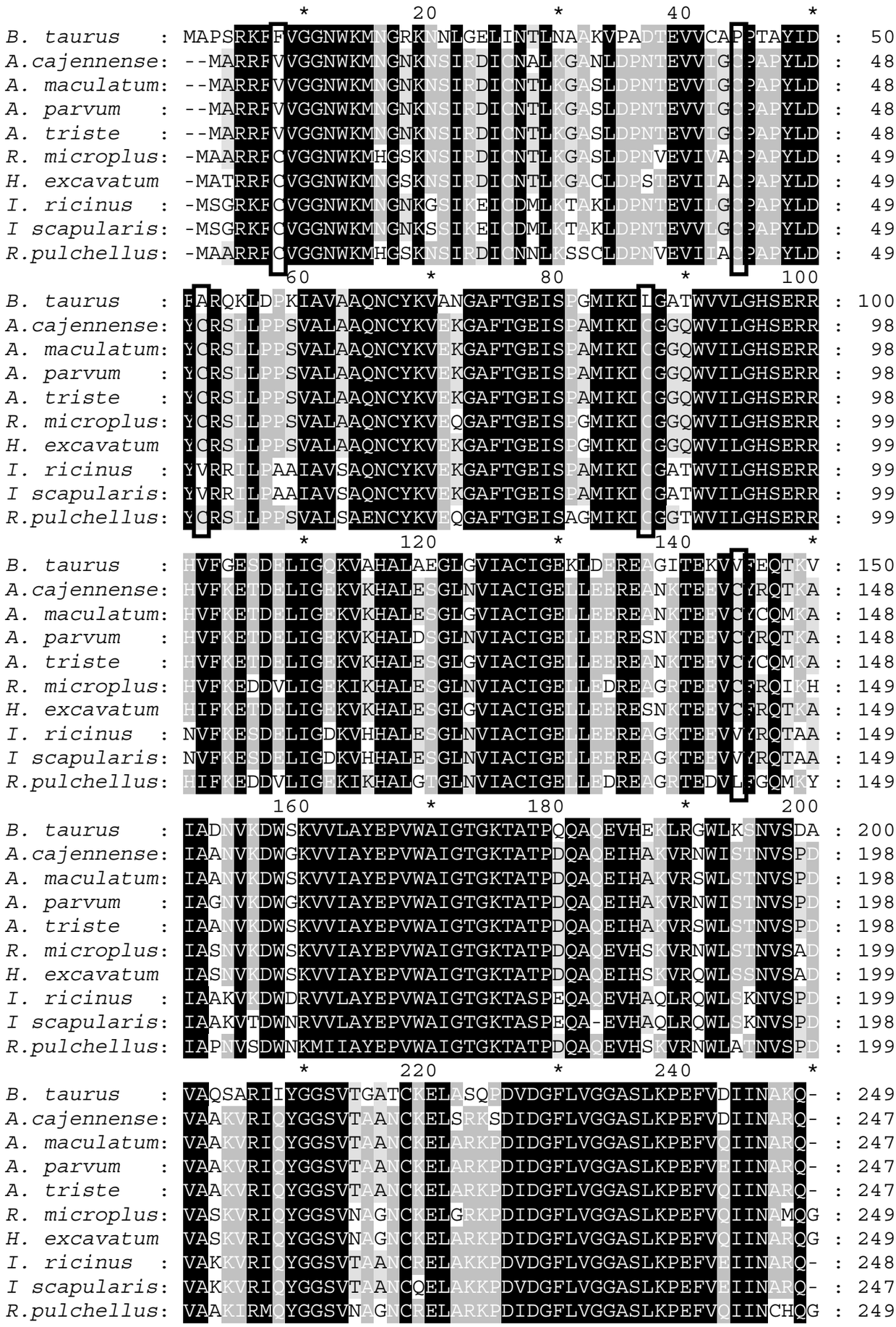


Figure S1: Multiple alignment of the amino acid sequence among TIM from different ticks and *B. Taurus.*

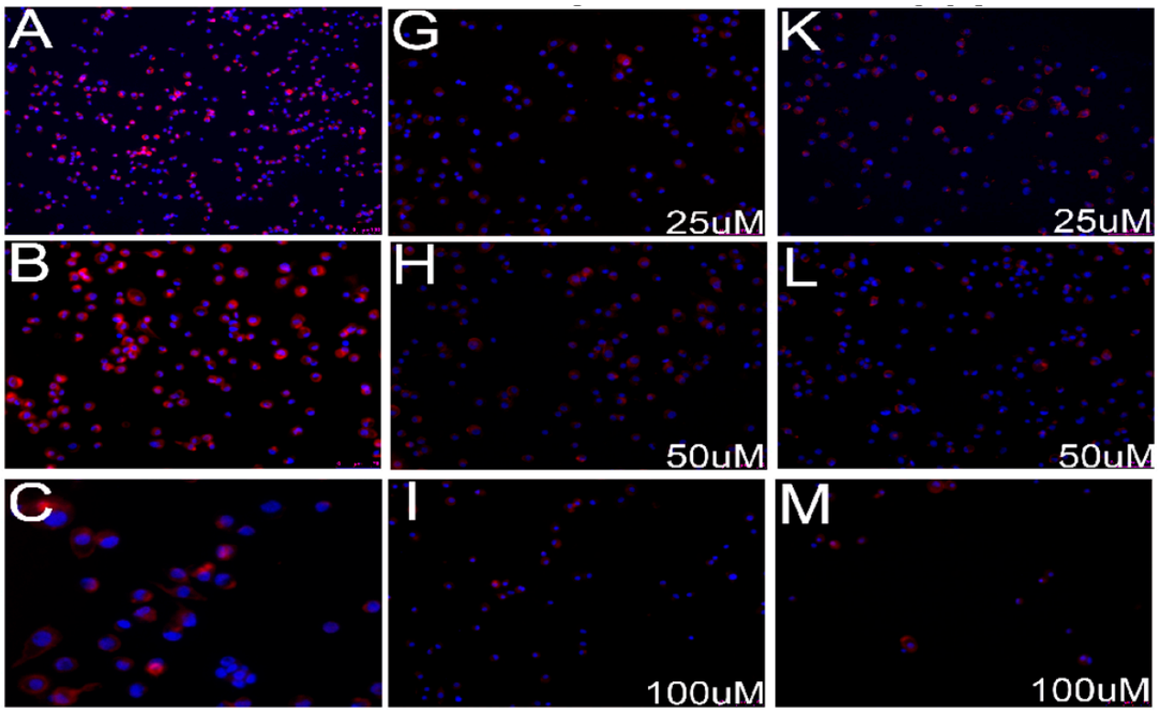


Figure S2: *In vitro* activity in BME26 embryonic cell from *R. microplus*.