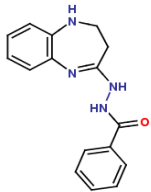
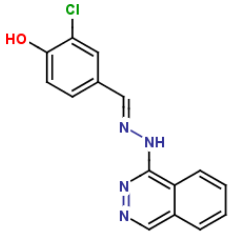
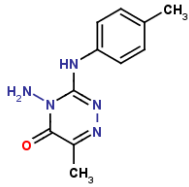
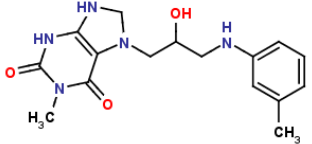
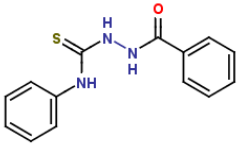
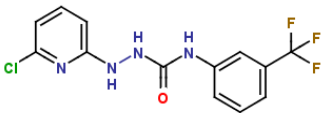
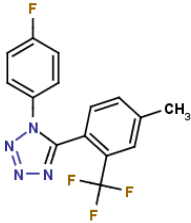
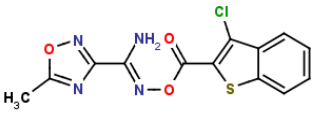
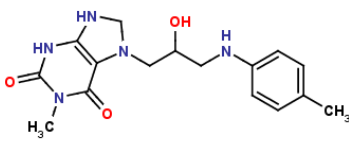
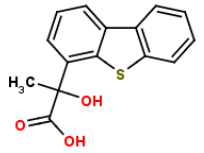
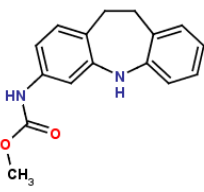
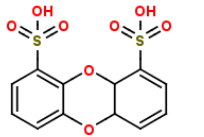
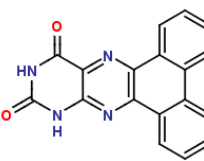
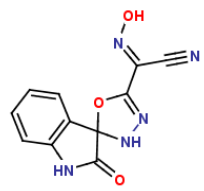
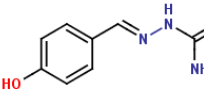
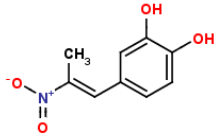
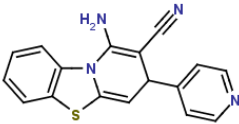


**Supplementary Table S1 .** Complete inventory of compounds tested for their anti-parasitic activity. Code T-1 to T-11 represent set of compounds whose target was Pf-Ed-TRS, while A-1 to A-6 targeted Pf-Ed-ARS.

Sr. No.	Code	IUPAC names	2D structures	Docking Score	IC <sub>50</sub> (μM)
1.	T1	<b>N'-(2,3-dihydro-1H-1,5-benzodiazepin-4-yl)benzohydrazide</b>		-9.2	>150
2.	T2	<b>3-chloro-4-hydroxybenzaldehyde 1-phthalazinylhydrazone</b>		-8.7	≈75
3.	T3	<b>4-amino-6-methyl-3-(4-toluidino)-1,2,4-triazin-5(4H)-one</b>		-8.4	>150

4.	T4	7-[2-hydroxy-3-(3-toluidino)propyl]-1,3-dimethyl-3,7-dihydro-1H-purine-2,6-dione		-8.6	>150
5.	T5	2-(2-cyclohexen-1-ylcarbonyl)-N-phenylhydrazinecarbothioamide		-8.4	>150
6.	T6	2-(6-chloro-2-pyridinyl)-N-[3-(trifluoromethyl)phenyl]hydrazinecarboxamide		-8.8	>150
7.	T7	5-[1-(4-fluorophenyl)-1H-tetrazol-5-yl]-4-(trifluoromethyl)pyrimidin-2-amine		-8.8	>150
8.	T8	N'-{[(3-chloro-1-benzothien-2-yl)carbonyl]oxy}-5-methyl-1,2,4-oxadiazole-3-carboximidamide		-8.8	≈ 120
9.	T9	7-[2-hydroxy-3-(4-toluidino)propyl]-1,3-dimethyl-3,7-dihydro-1H-purine-2,6-dione		-8.7	≈ 115

10.	T10	2-dibenzo[b,d]thien-4-yl-2-hydroxypropanoic acid		-8.3	>150
11.	T11	methyl 10,11-dihydro-5H-dibenzo[b,f]azepin-3-ylcarbamate		-8.7	>150
12.	A1	1,9-oxanthrenedisulfonic acid		-8	≈ 120
13.	A2	phenanthro[9,10-g]pteridine-11,13(10H,12H)-dione		-9	>150
14.	A3	5-[cyano(hydroxyimino)methyl]-2'-oxo-1',2,3,3'-tetrahydrospiro[1,3,4-oxadiazole-2,3'-(2'H)-indole]		-8.1	≈ 95
15.	A4	4-hydroxybenzaldehyde semicarbazone		-7.4	>150

16.	A5	4-{2-nitro-1-propenyl}-1,2-benzenediol	 <p>The structure shows a benzene ring with two hydroxyl groups (OH) at the 1 and 2 positions. At the 4 position, there is a propenyl chain with a nitro group (NO<sub>2</sub>) at the 2-position and a methyl group (CH<sub>3</sub>) at the 1-position.</p>	-7.9	≈ 8
17.	A6	1-amino-3-(4-pyridinyl)-3H-pyrido[2,1-b][1,3]benzothiazole-2,4-dicarbonitrile	 <p>The structure is a complex polycyclic system. It features a benzothiazole core fused to a pyridine ring. The pyridine ring has a cyano group (C≡N) at the 2-position and a 4-pyridinyl group at the 3-position. The benzothiazole part has an amino group (H<sub>2</sub>N) at the 1-position and cyano groups (C≡N) at the 2 and 4 positions.</p>	-7.4	>150