Supplementary Materials

Table of Contents

Table S1. 2D chemical structure, G-score and MM-GBSA values of the 69 best hits, obtained after docking simulations against *h-telo* and *c-myc* G4 structures. The CID ID indicates the identifier for the test compounds; G-score and MM-GBSA values are expressed in kcal/mol. The ligands marked with the asterisk belong to the final selection of compounds currently under experimental investigations.

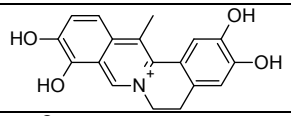
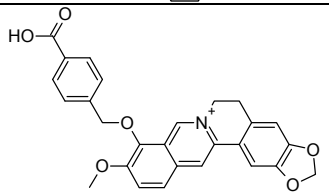
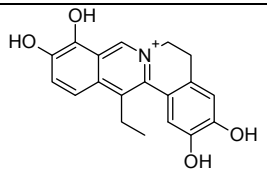
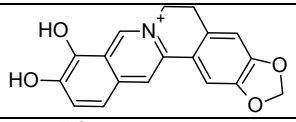
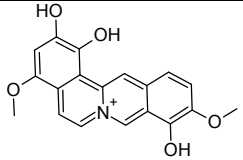
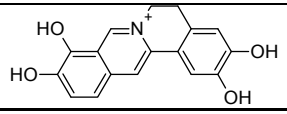
Berberine Analogues						Anticancer Activity and if Available Target
		h-telo		*c-myc*		
CID ID	**2D Chemical Structure**	**G-Score**	**MM/GBSA**	**G-Score**	**MM/GBSA**	
10269105 *		−6.77	−53.64	−8.60	−43.71	Antitumor [1]
71496902 *		−6.88	−46.76	−8.44	−44.15	-
10133114		−6.13	−45.92	−8.05	−43.18	Antitumor [1]
68426959		−6.15	−43.18	−8.32	−38.01	Phospholipase A2 inhibitor [2]
21417729 *		−7.36	−42.23	−8.27	−36.21	Antitumor [3]
9880653 *		−6.37	−40.41	−9.06	−48.23	Rac GTPases inhibitor [4]

Table S1. *Cont.*

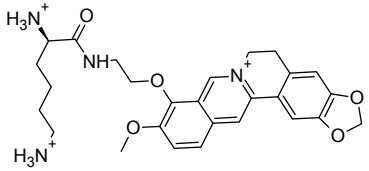
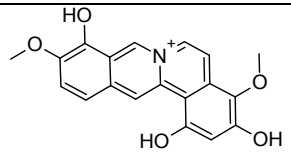
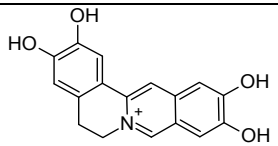
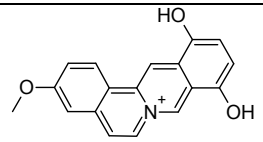
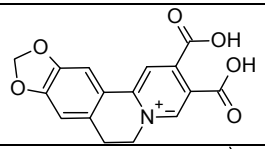
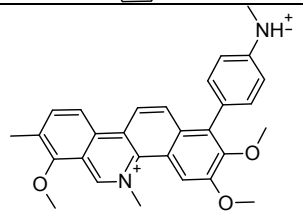
Berberine Analogues						Anticancer Activity and if Available Target
		h-telo		*c-myc*		
CID ID	**2D Chemical Structure**	**G-Score**	**MM/GBSA**	**G-Score**	**MM/GBSA**	
49870985 *		−10.05	−39.87	−9.49	−49.12	Calf thymus (CT) DNA binder [5]
21417482 *		−6.83	−38.67	−8.38	−38.71	Antitumor [3]
11618402 *		−6.43	−38.42	−9.34	−54.37	Rac GTPases inhibitor [4]
21417576 *		−6.59	−36.50	−8.89	−32.52	Antitumor [6]
3939583 *		−7.17	−35.16	−8.94	−41.29	-
58064859 *		−6.46	−35.13	−8.59	−34.37	-

Table S1. *Cont.*

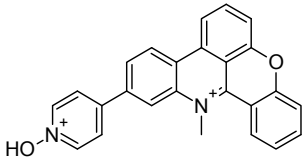
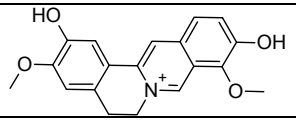
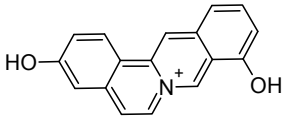
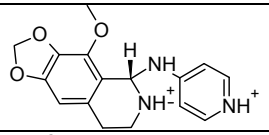
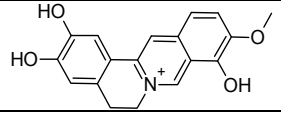
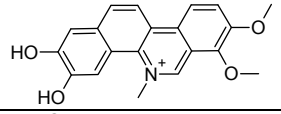
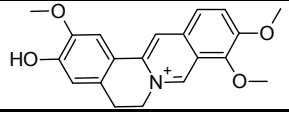
Berberine Analogues						Anticancer Activity and if Available Target
		h-telo		*c-myc*		
CID ID	**2D Chemical Structure**	**G-Score**	**MM/GBSA**	**G-Score**	**MM/GBSA**	
71165335		−7.30	−34.72	−9.73	−51.64	Telomerase inhibitor [7]
10358881 *		−6.03	−34.52	−8.67	−49.48	-
21417681 *		−6.55	−34.47	−9.22	−32.79	-
29146231 *		−7.68	−34.26	−9.06	−38.74	-
68071758 *		−7.21	−34.04	−8.97	−49.92	-
25164618 *		−6.29	−33.82	−9.01	−43.44	Antitumor [8]
72323 *		−6.29	−33.40	−8.71	−39.71	Antitumor [9]

Table S1. *Cont.*

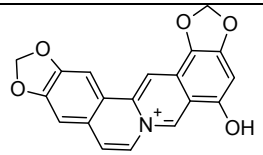
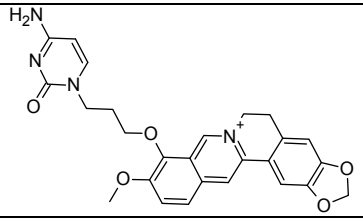
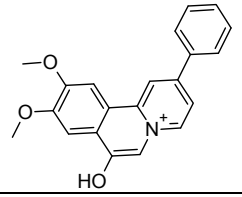
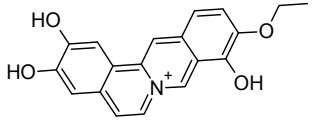
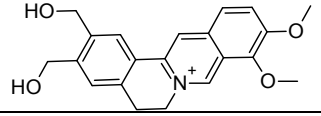
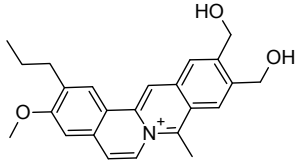
Berberine Analogues						Anticancer Activity and if Available Target
		h-telo		*c-myc*		
CID ID	**2D Chemical Structure**	**G-Score**	**MM/GBSA**	**G-Score**	**MM/GBSA**	
21417634		−6.06	−33.30	−8.06	−31.81	-
44583341 *		−6.20	−33.04	−8.11	−45.42	G4 binder [10,11]
53343538		−6.71	−32.78	−8.52	−34.01	-
21417462 *		−6.65	−32.13	−9.14	−49.69	-
70848286		−6.36	−32.10	−8.56	−41.83	-
66602686		−6.53	−31.70	−8.87	−34.34	-

Table S1. *Cont.*

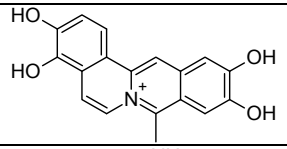
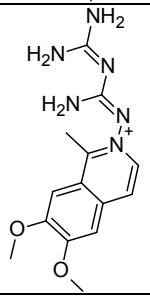
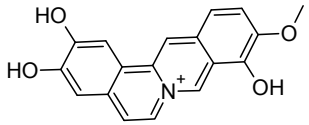
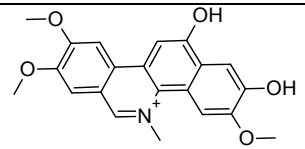
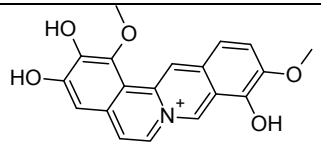
Berberine Analogues						Anticancer Activity and if Available Target
		h-telo		*c-myc*		
CID ID	**2D Chemical Structure**	**G-Score**	**MM/GBSA**	**G-Score**	**MM/GBSA**	
45483073		−6.83	−31.44	−9.22	−43.96	Rac GTPases inhibitor [12]
24839791		−6.15	−31.12	−8.49	−41.03	-
21417600 *		−6.98	−30.95	−8.86	−48.51	-
24200207		−6.09	−30.81	−9.13	−38.58	Antitumor [13]
21417591 *		−6.86	−30.42	−8.29	−47.09	-

Table S1. *Cont.*

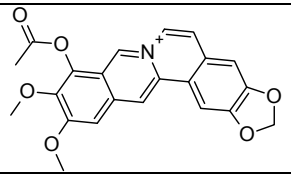
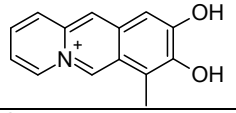
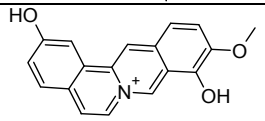
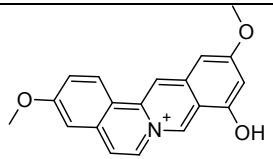
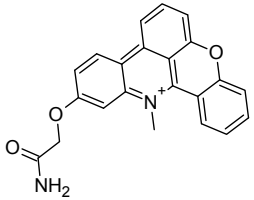
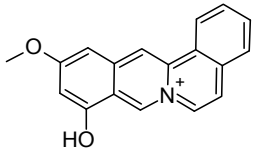
Berberine Analogues						Anticancer Activity and if Available Target
		h-telo		*c-myc*		
CID ID	**2D Chemical Structure**	**G-Score**	**MM/GBSA**	**G-Score**	**MM/GBSA**	
21417448		−6.32	−30.22	−8.10	−28.79	-
161372		−6.20	−30.20	−8.58	−40.49	Antitumor [14]
21417712		−7.25	−30.11	−8.47	−35.08	-
21417707		−6.33	−30.10	−8.18	−31.68	-
71476670		−6.38	−29.98	−8.98	−34.24	Telomerase inhibitor [7]
21417594		−6.50	−29.90	−8.22	−31.63	-

Table S1. *Cont.*

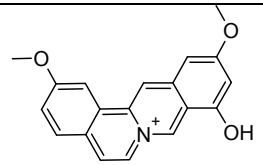
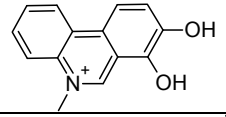
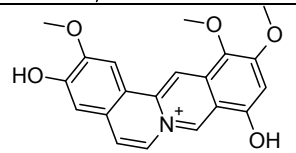
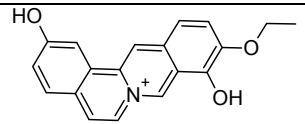
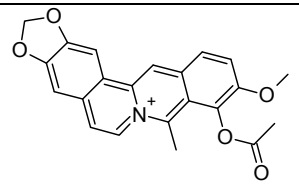
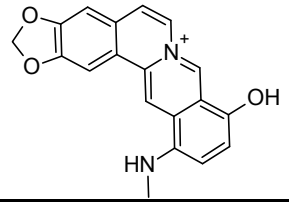
Berberine Analogues						Anticancer Activity and if Available Target
		h-telo		*c-myc*		
CID ID	**2D Chemical Structure**	**G-Score**	**MM/GBSA**	**G-Score**	**MM/GBSA**	
21417589		−6.30	−29.82	−8.27	−29.61	-
25093287		−6.28	−29.32	−8.27	−32.60	Bcl-XL Inhibitor [15]
21417511		−6.25	−28.99	−8.08	−35.17	-
21417657		−6.84	−28.52	−8.18	−37.81	-
21417566		−6.13	−28.47	−8.03	−30.27	-
68119699		−6.07	−28.17	−8.22	−32.10	-

Table S1. *Cont.*

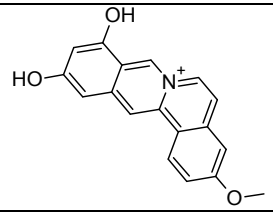
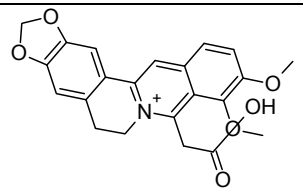
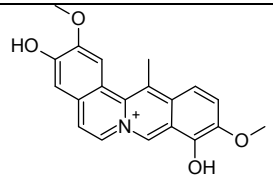
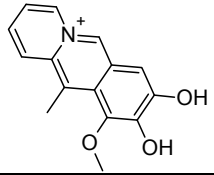
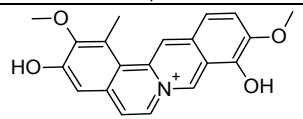
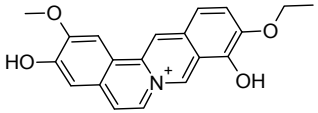
Berberine Analogues						Anticancer Activity and if Available Target
		h-telo		*c-myc*		
CID ID	**2D Chemical Structure**	**G-Score**	**MM/GBSA**	**G-Score**	**MM/GBSA**	
21417545		−6.82	−28.01	−8.84	−33.02	-
24198806		−6.53	−27.78	−8.24	−40.44	-
21417717		−6.11	−27.73	−8.81	−39.15	-
24196957		−6.00	−27.45	−8.65	−43.45	-
68119998		−6.25	−27.18	−8.03	−39.11	-
21417624		−6.05	−26.91	−8.99	−29.19	-

Table S1. *Cont.*

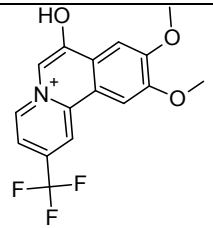
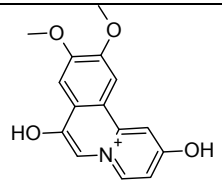
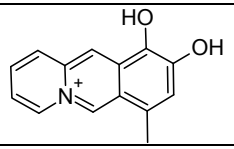
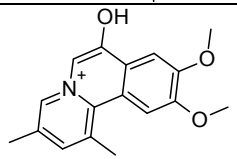
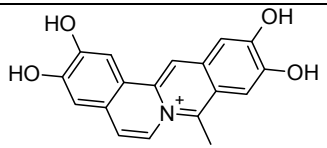
Berberine Analogues						Anticancer Activity and if Available Target
		h-telo		*c-myc*		
CID ID	**2D Chemical Structure**	**G-Score**	**MM/GBSA**	**G-Score**	**MM/GBSA**	
53343867		−6.39	−26.10	−8.05	−31.53	-
53343540		−6.70	−25.79	−8.46	−32.32	-
53902617		−6.21	−25.78	−8.71	−34.77	-
53343542		−6.43	−24.29	−8.28	−31.15	-
25165620		−6.51	−24.04	−9.61	−44.41	Rac GTPases inhibitors [12]

Table S1. *Cont.*

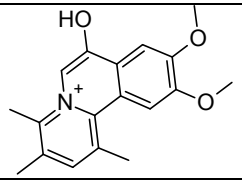
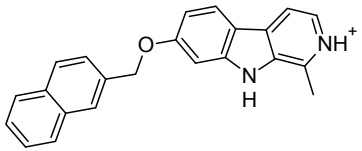
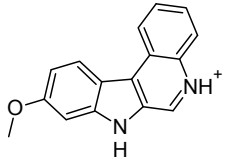
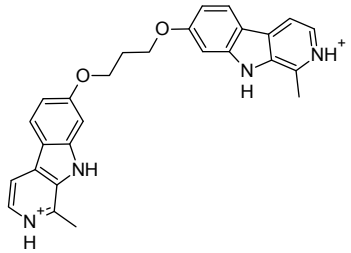
Berberine Analogues						
		h-telo		*c-myc*		Anticancer Activity and if Available Target
CID ID	**2D Chemical Structure**	**G-Score**	**MM/GBSA**	**G-Score**	**MM/GBSA**	
53343544		−6.13	−23.84	−8.29	−28.59	-
Natural Alkaloids						
		h-telo		*c-myc*		
CID	**2D Chemical structure**	**G-Score**	**MM/GBSA**	**G-Score**	**MM/GBSA**	
53318152 *		−6.29	−38.57	−8.07	−31.44	Antitumor [16]
24828402		−6.10	−32.94	−8.30	−35.15	-
25258753		−6.84	−32.57	−8.33	−44.26	Antitumor [17]

Table S1. *Cont.*

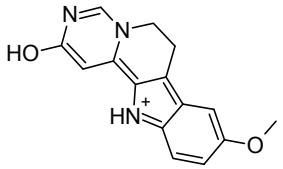
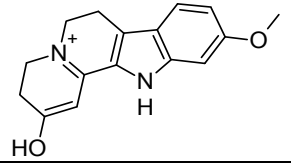
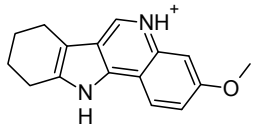
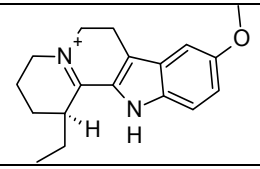
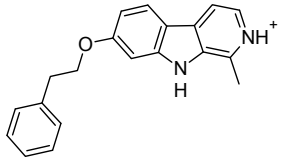
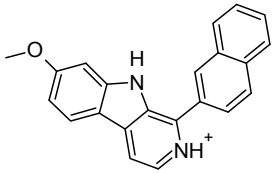
Berberine Analogues						Anticancer Activity and if Available Target
		h-telo		*c-myc*		
CID ID	**2D Chemical Structure**	**G-Score**	**MM/GBSA**	**G-Score**	**MM/GBSA**	
24951900		−8.21	−30.34	−8.03	−39.19	-
10890876		−6.76	−30.09	−8.17	−31.69	-
12443570		−6.48	−29.45	−8.09	−34.28	-
20472807		−6.38	−29.33	−8.31	−32.93	-
53322103		−6.22	−29.27	−8.15	−30.19	Antitumor [16,18]
49801392		−6.31	−28.76	−8.17	−29.81	Antitumor [19]

Table S1. *Cont.*

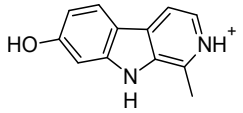
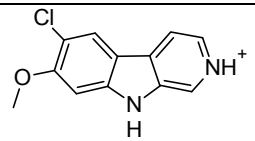
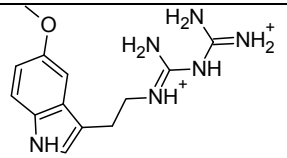
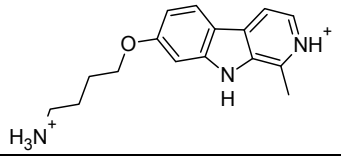
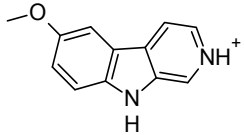
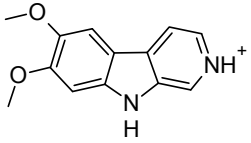
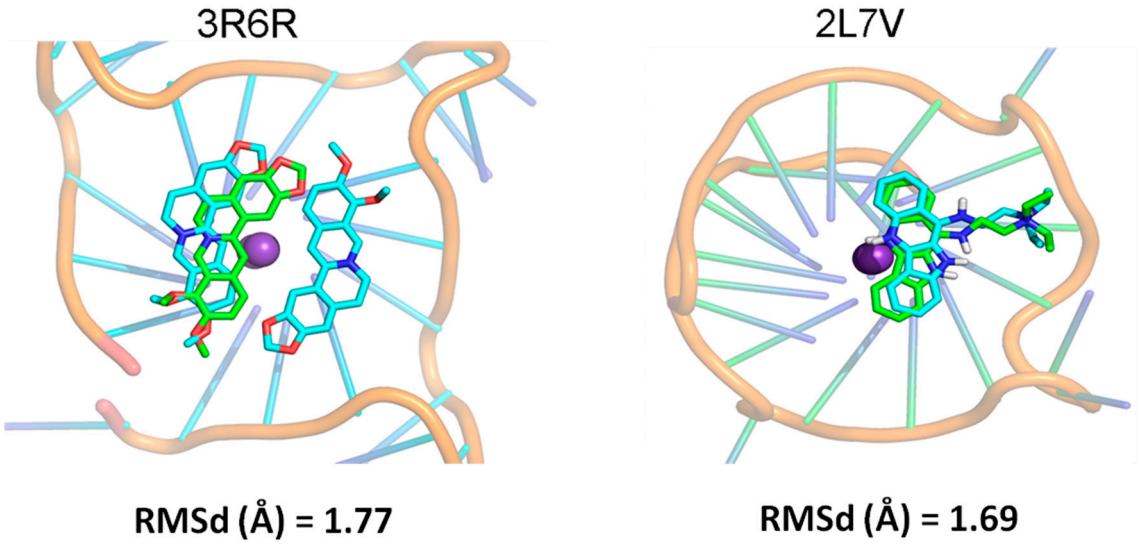
Berberine Analogues						Anticancer Activity and if Available Target
		h-telo		*c-myc*		
CID ID	**2D Chemical Structure**	**G-Score**	**MM/GBSA**	**G-Score**	**MM/GBSA**	
5137933		−6.83	−27.37	−8.21	−32.46	Antitumor [5,20]
21362738		−6.10	−27.09	−8.57	−31.83	IκB kinase inhibitor [21]
3373692		−9.11	−25.93	−8.28	−31.47	-
54575584		−6.90	−25.78	−10.02	−32.15	Haspin kinase inhibitor [22,23]
607775		−7.18	−24.11	−8.37	−28.53	IKK inhibitor [24]
5314681		−6.46	−23.95	−8.65	−31.72	-

Figure S1. Best redocking poses and RMSd values obtained using the Glide-SP algorithm for berberine and quindoline against 3R6R (*h-telo*) and 2L7V (*c-myc*) receptors, respectively. Redocked poses are displayed as green carbon sticks, while crystallographic conformation is shown as cyan carbon sticks.



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