



## wwPDB EM Validation Summary Report ⓘ

Mar 17, 2025 – 05:05 PM EDT

PDB ID : 9E78  
EMDB ID : EMD-47661  
Title : 48-nm repeat of the Leishmania tarentolae doublet microtubule  
Authors : Doran, M.H.; Ren, P.; Hoog, J.L.; Brown, A.  
Deposited on : 2024-11-01  
Resolution : 2.90 Å(reported)  
Based on initial model : .

This is a wwPDB EM Validation Summary Report for a publicly released PDB entry.

We welcome your comments at [validation@mail.wwpdb.org](mailto:validation@mail.wwpdb.org)

A user guide is available at

<https://www.wwpdb.org/validation/2017/EMValidationReportHelp>  
with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

<http://www.wwpdb.org/validation/2017/FAQs#types>.

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The following versions of software and data (see [references ⓘ](#)) were used in the production of this report:

EMDB validation analysis : 0.0.1.dev117  
Mogul : 2022.3.0, CSD as543be (2022)  
MolProbity : 4.02b-467  
buster-report : 1.1.7 (2018)  
Percentile statistics : 20231227.v01 (using entries in the PDB archive December 27th 2023)  
MapQ : 1.9.13  
Ideal geometry (proteins) : Engh & Huber (2001)  
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)  
Validation Pipeline (wwPDB-VP) : 2.41.4



# 1 Overall quality at a glance

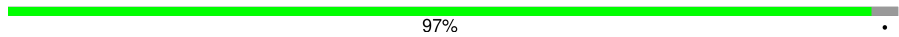
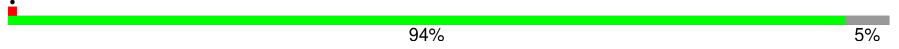
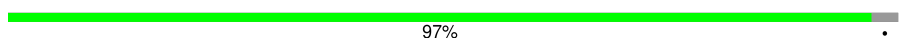


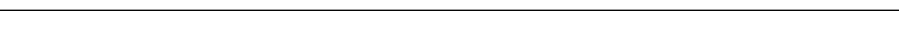
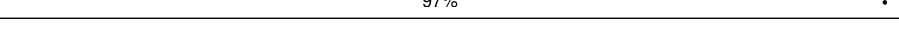
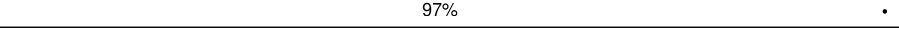
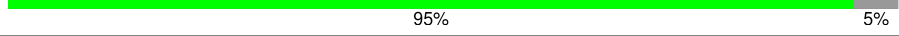
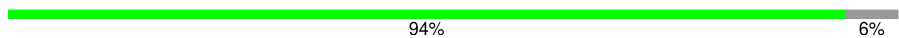
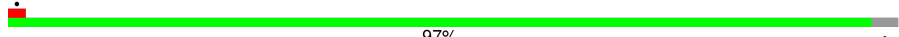


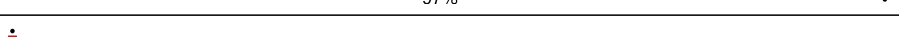
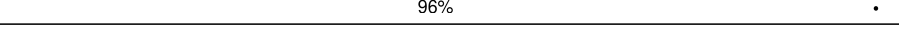
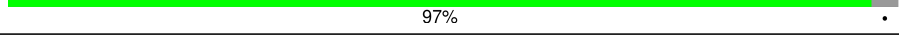
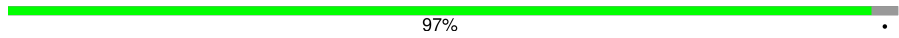
The following experimental techniques were used to determine the structure:

*ELECTRON MICROSCOPY*

The reported resolution of this entry is 2.90 Å.

There are no overall percentile quality scores available for this entry.

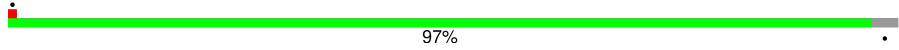
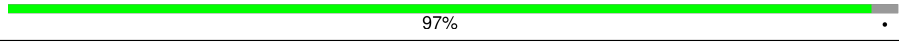
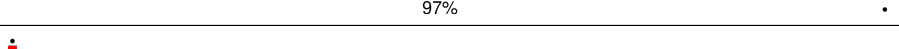
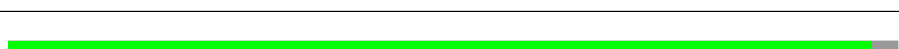

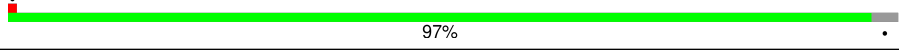
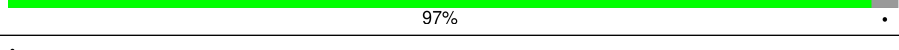
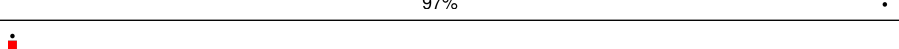
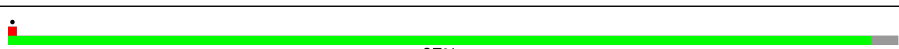
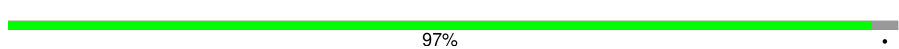
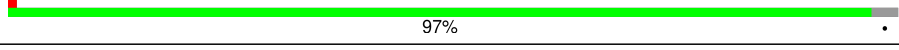
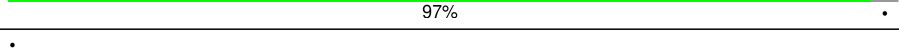
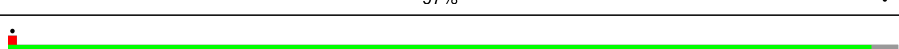
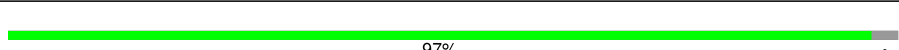
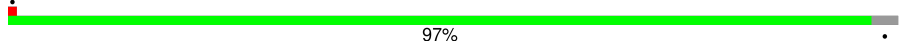
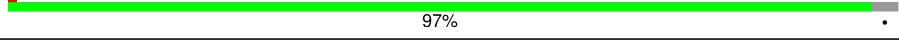
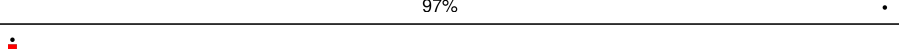


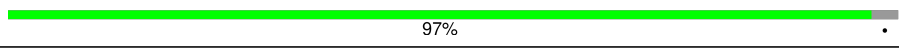
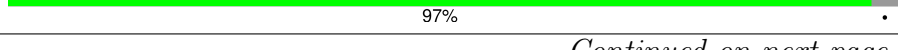



The table below summarises the geometric issues observed across the polymeric chains and their fit to the map. The red, orange, yellow and green segments of the bar indicate the fraction of residues that contain outliers for  $\geq 3$ , 2, 1 and 0 types of geometric quality criteria respectively. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions  $\leq 5\%$ . The upper red bar (where present) indicates the fraction of residues that have poor fit to the EM map (all-atom inclusion  $< 40\%$ ). The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	A	443	 97% .
1	AB	443	 94% 5% .
1	AD	443	 97% .
1	AF	443	 97% .
1	AH	443	 97% .
1	AJ	443	 97% .
1	AL	443	 97% .
1	AN	443	 95% 5% .
1	B	443	 94% 6% .
1	BB	443	 97% .
1	BD	443	 97% .
1	BF	443	 97% .
1	BH	443	 96% .
1	BJ	443	 97% .
1	BL	443	 97% .
1	BN	443	 97% .
1	CA	443	 96% .

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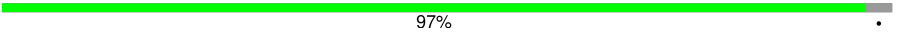
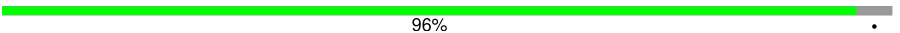
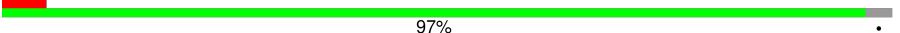
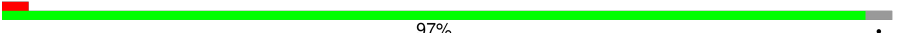

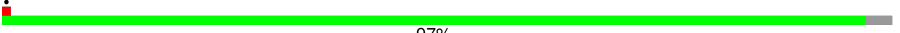









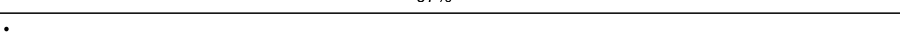
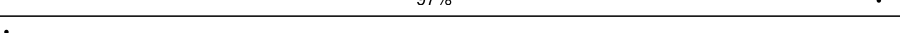
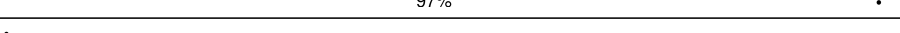
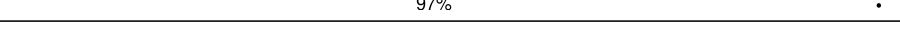
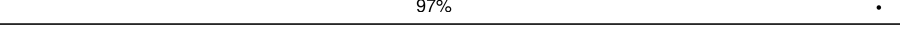
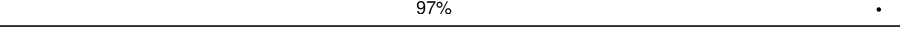
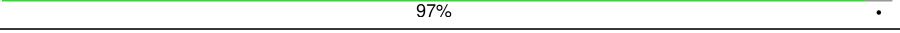
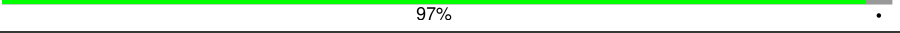
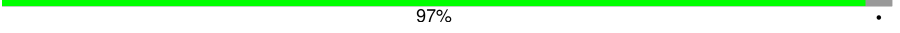
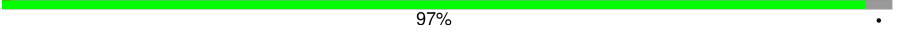
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Mol	Chain	Length	Quality of chain
1	CC	443	
1	CE	443	
1	CG	443	
1	CI	443	
1	CK	443	
1	CM	443	
1	DA	443	
1	DC	443	
1	DE	443	
1	DG	443	
1	DI	443	
1	DK	443	
1	DM	443	
1	E	443	
1	EB	443	
1	ED	443	
1	EF	443	
1	EH	443	
1	EJ	443	
1	EL	443	
1	F	443	
1	FB	443	
1	FD	443	
1	FF	443	
1	FH	443	

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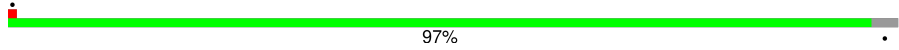
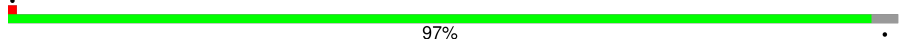
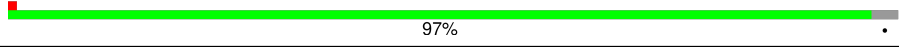
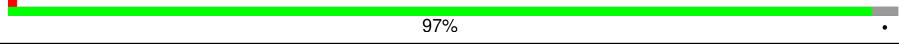
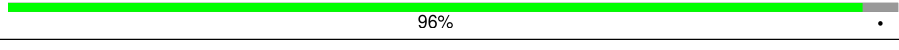
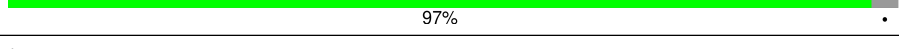
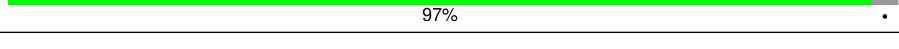
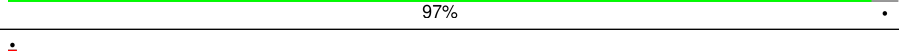
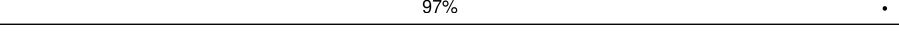
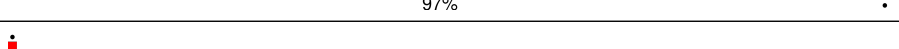
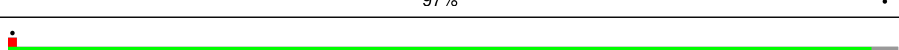
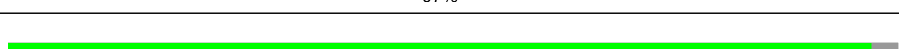
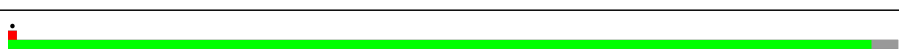
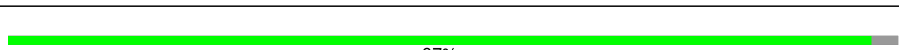
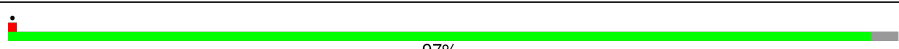
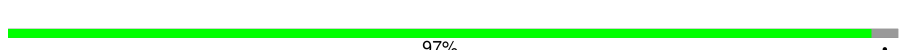

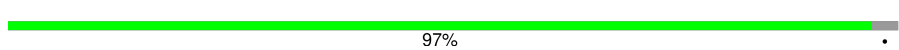
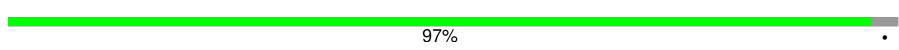
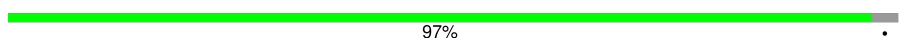
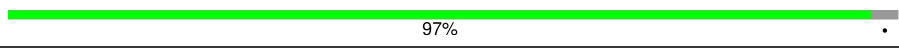
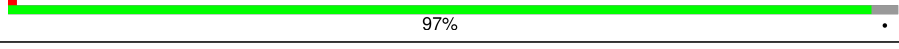
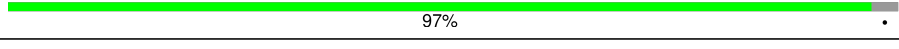
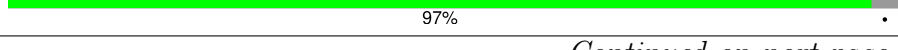

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Mol	Chain	Length	Quality of chain
1	FJ	443	 97%
1	FL	443	 96%
1	G	443	 5% 97%
1	GB	443	 97%
1	GD	443	 96%
1	GF	443	 97%
1	GH	443	 97%
1	GJ	443	 96%
1	GL	443	 97%
1	H	443	 5% 97%
1	HB	443	 97%
1	HD	443	 97%
1	HF	443	 97%
1	HH	443	 97%
1	HJ	443	 97%
1	HL	443	 97%
1	I	443	 97%
1	IB	443	 97%
1	ID	443	 97%
1	IF	443	 97%
1	IH	443	 97%
1	IJ	443	 97%
1	IL	443	 97%
1	JA	443	 97%
1	JC	443	 97%

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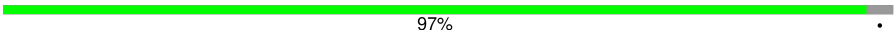
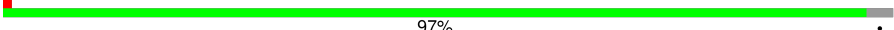
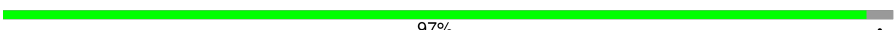
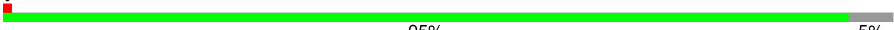






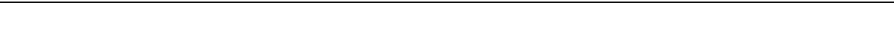

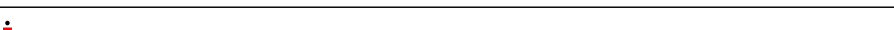
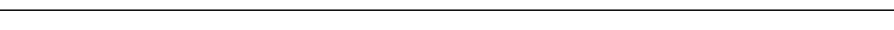
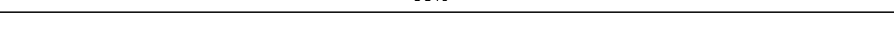
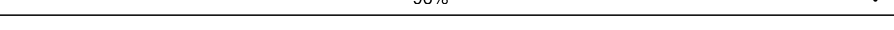
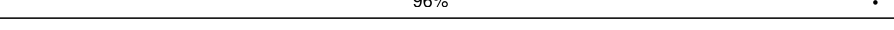
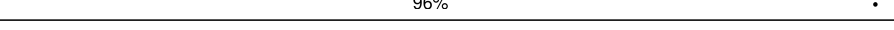

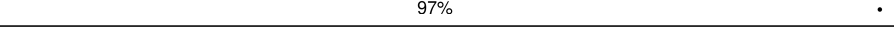
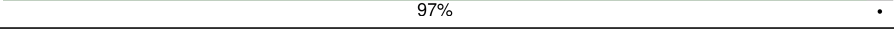
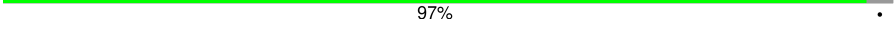
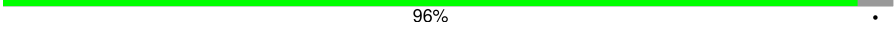
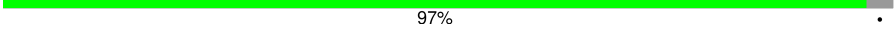
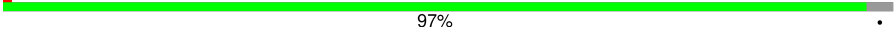
*Continued from previous page...*

Mol	Chain	Length	Quality of chain
1	JE	443	
1	JG	443	
1	JI	443	
1	JK	443	
1	JM	443	
1	KA	443	
1	KC	443	
1	KE	443	
1	KG	443	
1	KI	443	
1	KK	443	
1	KM	443	
1	LA	443	
1	LC	443	
1	LE	443	
1	LG	443	
1	LI	443	
1	LK	443	
1	LM	443	
1	LO	443	
1	M	443	
1	MB	443	
1	MD	443	
1	MF	443	
1	MH	443	

*Continued on next page...*



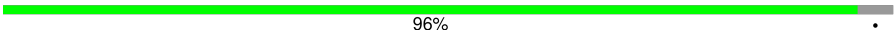
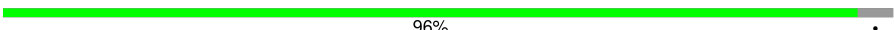
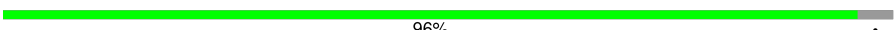
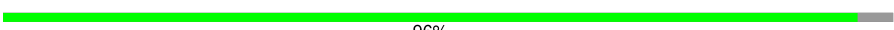






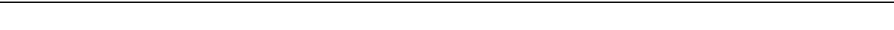

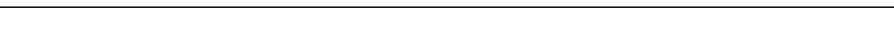
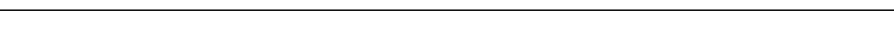
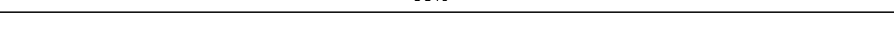
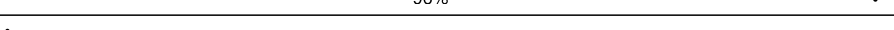
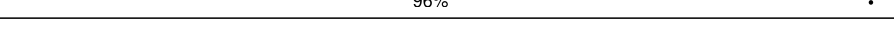
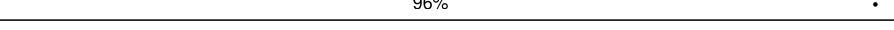
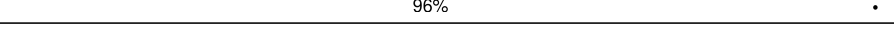
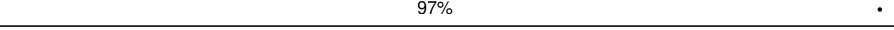
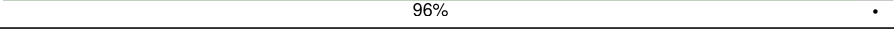
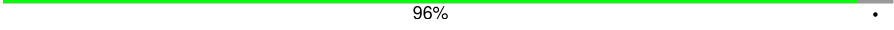
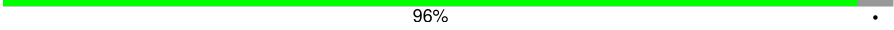
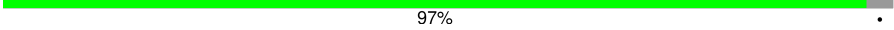
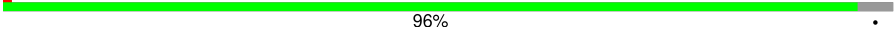
*Continued from previous page...*

Mol	Chain	Length	Quality of chain
1	MJ	443	 97% .
1	ML	443	 97% .
1	MN	443	 97% .
1	N	443	 95% 5% .
1	NB	443	 95% 5% .
1	ND	443	 96% .
1	NF	443	 96% .
1	NH	443	 96% .
1	NJ	443	 97% .
1	NL	443	 96% .
1	O	443	 96% .
1	OB	443	 96% .
1	OD	443	 96% .
1	OF	443	 96% .
1	OH	443	 96% .
1	OJ	443	 96% .
1	OL	443	 96% .
1	P	443	 90% 9% .
1	PB	443	 97% .
1	PD	443	 97% .
1	PF	443	 97% .
1	PH	443	 96% .
1	PJ	443	 97% .
1	PL	443	 97% .
1	QA	443	 96% .

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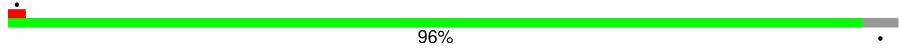
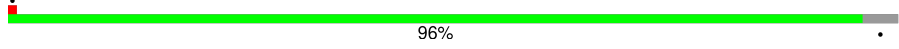
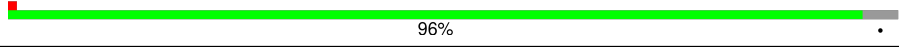
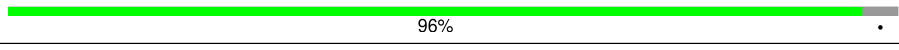
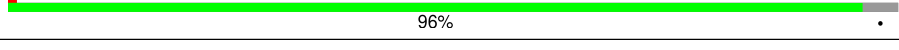
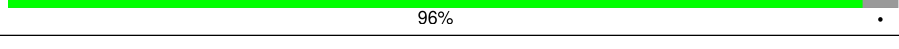
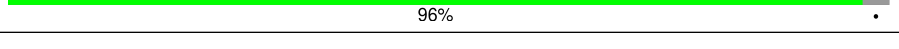
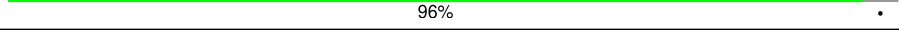
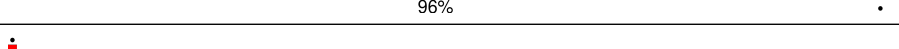
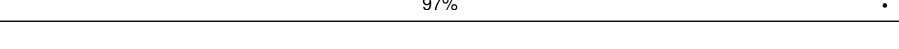
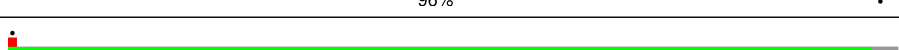
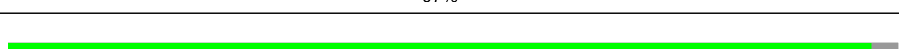
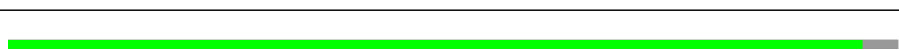
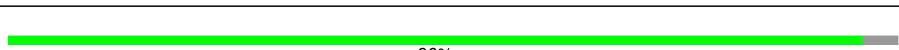
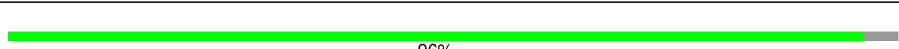
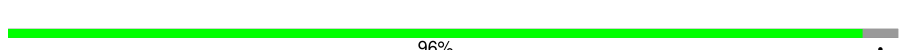

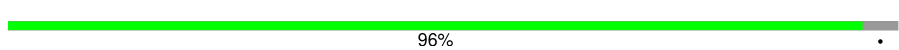
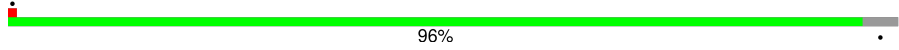
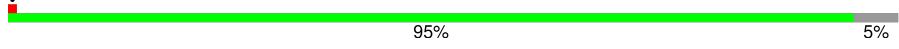
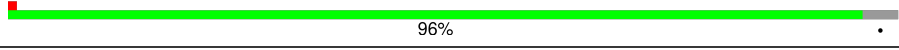
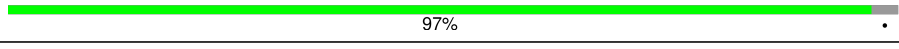
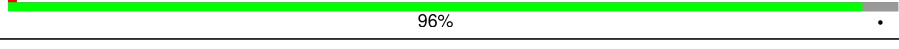
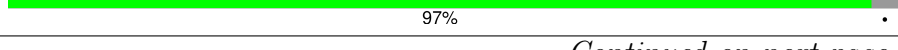

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Mol	Chain	Length	Quality of chain
1	QC	443	 96% .
1	QE	443	 96% .
1	QG	443	 96% .
1	QI	443	 96% .
1	QK	443	 96% .
1	RA	443	 96% .
1	RC	443	 97% .
1	RE	443	 96% .
1	RG	443	 96% .
1	RI	443	 96% .
1	RK	443	 97% .
1	S	443	 96% .
1	SB	443	 96% .
1	SD	443	 96% .
1	SF	443	 96% .
1	SH	443	 96% .
1	SJ	443	 96% .
1	T	443	 96% .
1	TB	443	 97% .
1	TD	443	 96% .
1	TF	443	 96% .
1	TH	443	 96% .
1	TJ	443	 97% .
1	TL	443	 96% .
1	U	443	 96% .

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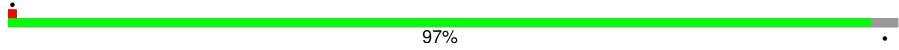
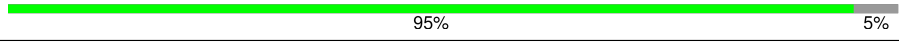
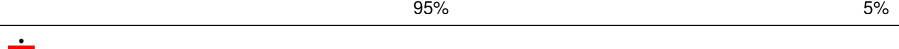
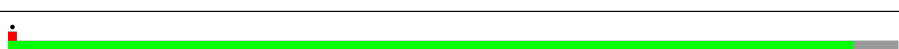
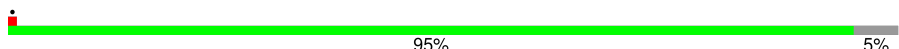
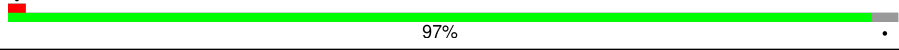
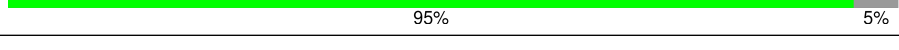
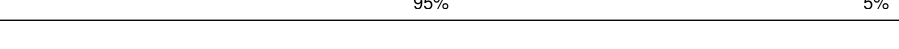
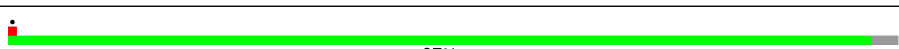
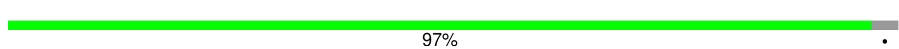
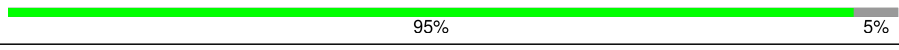
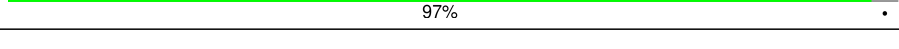
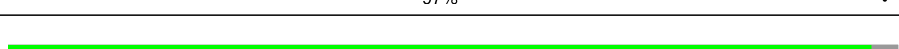
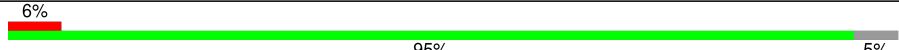
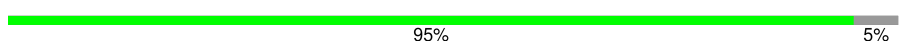
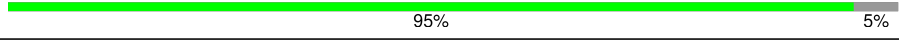
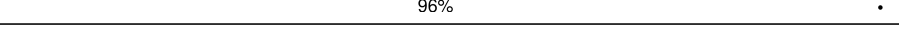


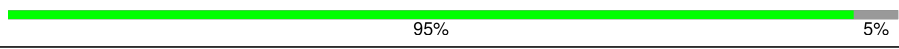
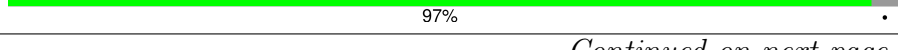



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Mol	Chain	Length	Quality of chain
1	UB	443	 96%.
1	UD	443	 96%.
1	UF	443	 96%.
1	UH	443	 96%.
1	UJ	443	 96%.
1	UL	443	 96%.
1	V	443	 96%.
1	VB	443	 96%.
1	VD	443	 96%.
1	VF	443	 97%.
1	VH	443	 96%.
1	VJ	443	 97%.
1	VL	443	 97%.
1	W	443	 96%.
1	WB	443	 96%.
1	WD	443	 96%.
1	WF	443	 96%.
1	WH	443	 96%.
1	WJ	443	 96%.
1	WL	443	 96%.
2	AA	451	 95% 5%.
2	AC	451	 96%.
2	AE	451	 97%.
2	AG	451	 96%.
2	AI	451	 97%.

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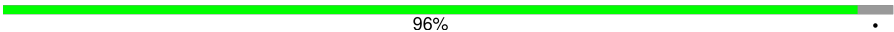
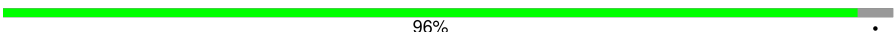
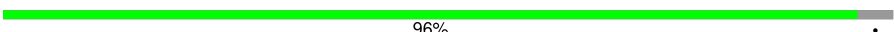

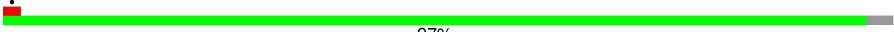







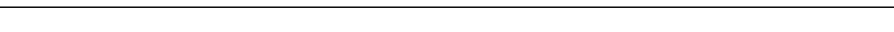

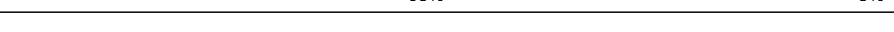
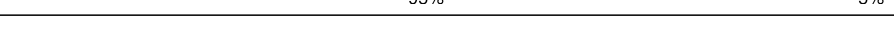
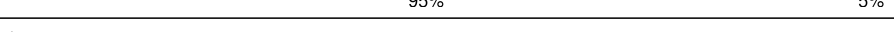
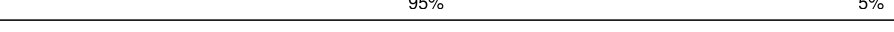
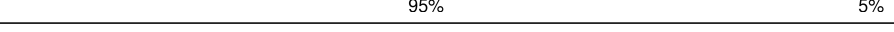
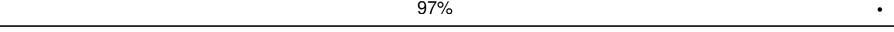
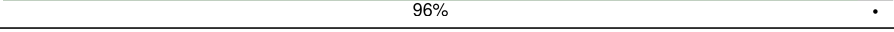
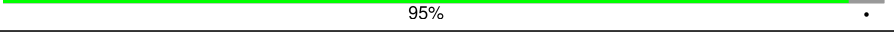
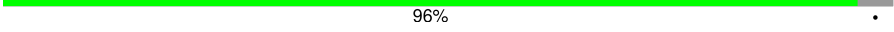

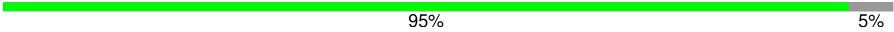
*Continued from previous page...*

Mol	Chain	Length	Quality of chain
2	AK	451	
2	AM	451	
2	BA	451	
2	BC	451	
2	BE	451	
2	BG	451	
2	BI	451	
2	BK	451	
2	BM	451	
2	C	451	
2	CB	451	
2	CD	451	
2	CF	451	
2	CH	451	
2	CJ	451	
2	CL	451	
2	D	451	
2	DB	451	
2	DD	451	
2	DF	451	
2	DH	451	
2	DJ	451	
2	DL	451	
2	EA	451	
2	EC	451	

*Continued on next page...*



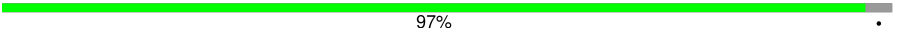
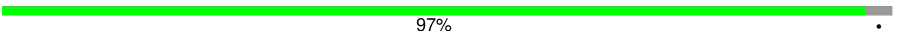
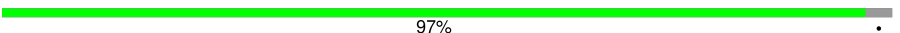
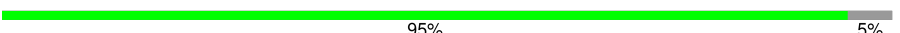

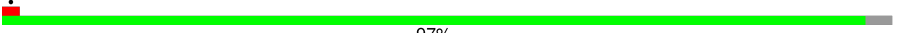









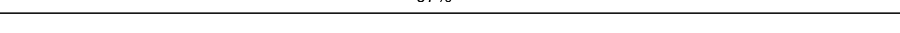
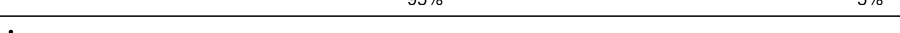
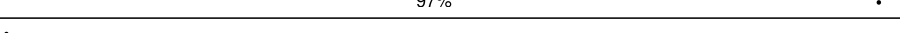
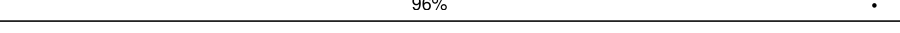
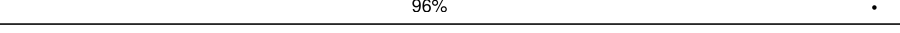
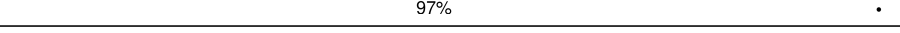
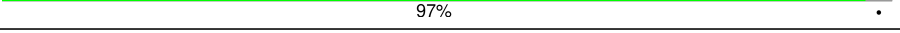
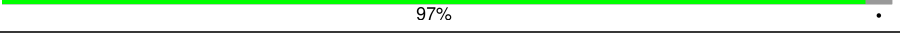
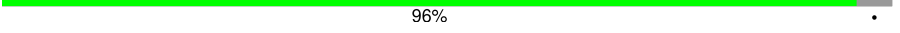
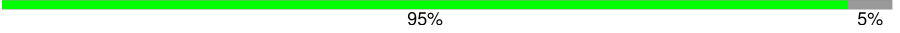
*Continued from previous page...*

Mol	Chain	Length	Quality of chain
2	EE	451	 96%.
2	EG	451	 96%.
2	EI	451	 96%.
2	EK	451	 96%.
2	FA	451	 97%.
2	FC	451	 96%.
2	FE	451	 96%.
2	FG	451	 96%.
2	FI	451	 95%5%
2	FK	451	 96%.
2	GA	451	 95%5%
2	GC	451	 95%5%
2	GE	451	 96%.
2	GG	451	 95%5%
2	GI	451	 95%5%
2	GK	451	 95%5%
2	HA	451	 95%5%
2	HC	451	 95%5%
2	HE	451	 97%.
2	HG	451	 96%.
2	HI	451	 95%.
2	HK	451	 96%.
2	HM	451	 95%5%
2	IA	451	 95%5%
2	IC	451	 96%.

*Continued on next page...*



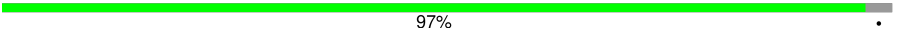
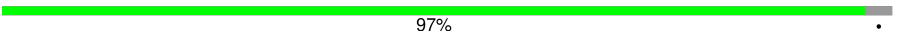
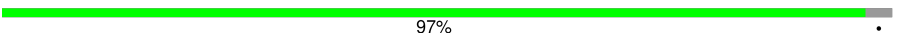
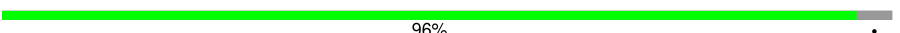

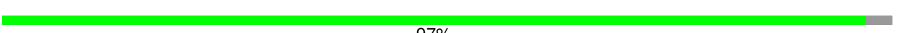









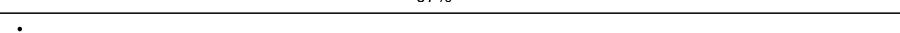
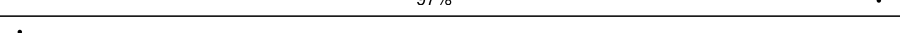
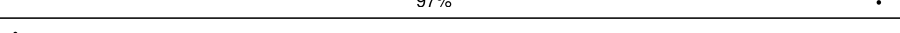
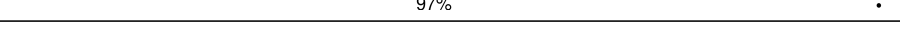
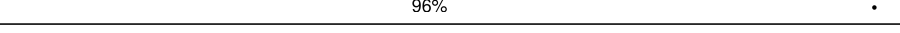
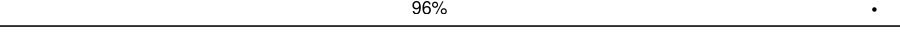
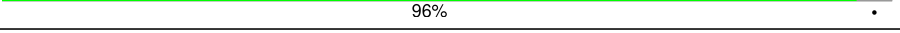
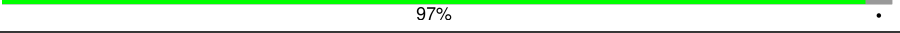
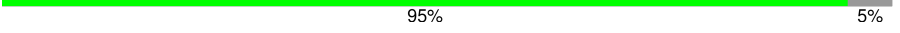
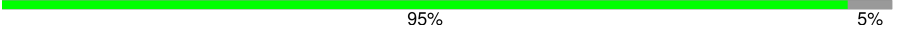
*Continued from previous page...*

Mol	Chain	Length	Quality of chain
2	IE	451	 97% .
2	IG	451	 97% .
2	II	451	 97% .
2	IK	451	 95% 5% .
2	IM	451	 95% 5% .
2	J	451	 97% .
2	JB	451	 97% .
2	JD	451	 95% 5% .
2	JF	451	 95% 5% .
2	JH	451	 96% .
2	JJ	451	 96% .
2	JL	451	 96% .
2	JN	451	 97% .
2	K	451	 96% .
2	KB	451	 97% .
2	KD	451	 95% 5% .
2	KF	451	 97% .
2	KH	451	 96% .
2	KJ	451	 96% .
2	KL	451	 97% .
2	KN	451	 97% .
2	L	451	 97% .
2	LB	451	 96% .
2	LD	451	 95% 5% .
2	LF	451	 97% .

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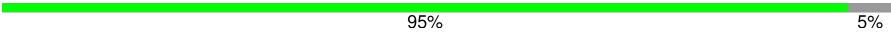
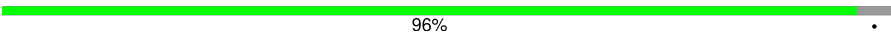
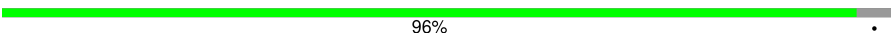
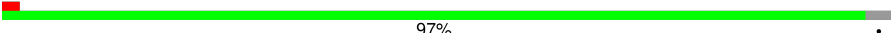
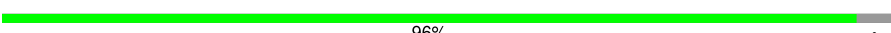
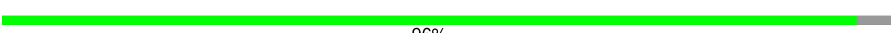









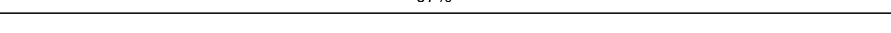
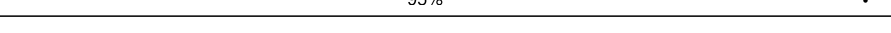
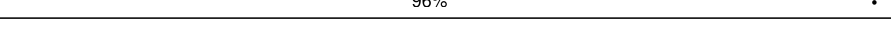
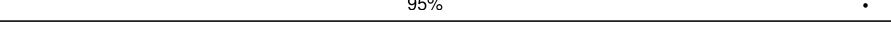
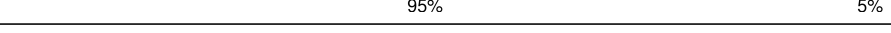
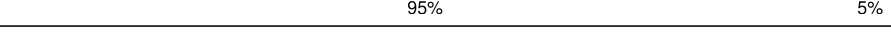
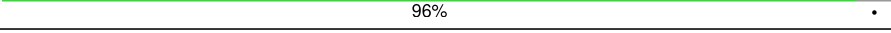
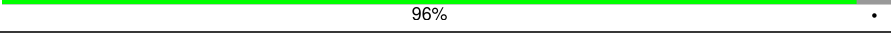
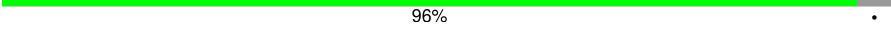
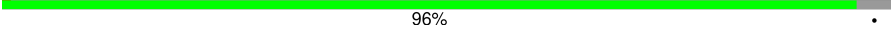
*Continued from previous page...*

Mol	Chain	Length	Quality of chain
2	LH	451	 97% .
2	LJ	451	 97% .
2	LL	451	 97% .
2	LN	451	 96% .
2	MA	451	 96% .
2	MC	451	 97% .
2	ME	451	 97% .
2	MG	451	 97% .
2	MI	451	 97% .
2	MK	451	 97% .
2	MM	451	 96% .
2	NA	451	 97% .
2	NC	451	 5% 97% .
2	NE	451	 97% .
2	NG	451	 97% .
2	NI	451	 97% .
2	NK	451	 97% .
2	NM	451	 97% .
2	OA	451	 96% .
2	OC	451	 96% .
2	OE	451	 96% .
2	OG	451	 97% .
2	OI	451	 95% 5% .
2	OK	451	 95% 5% .
2	OM	451	 96% .

*Continued on next page...*



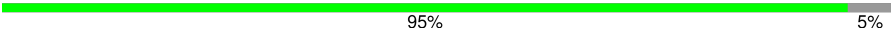
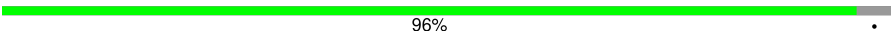
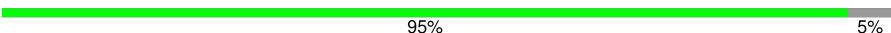
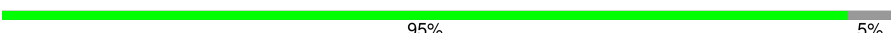

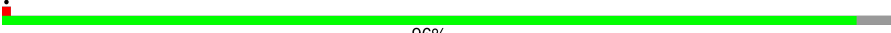









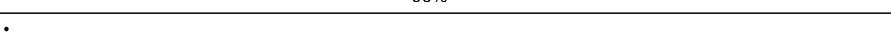
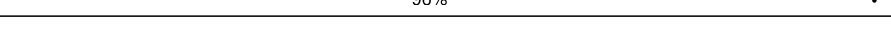
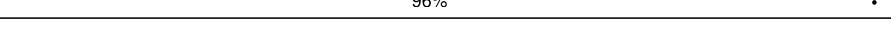
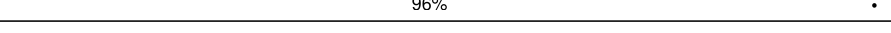
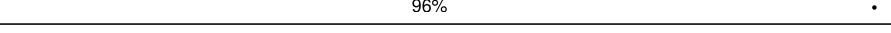
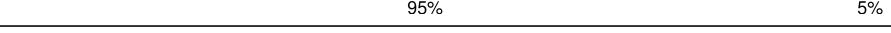
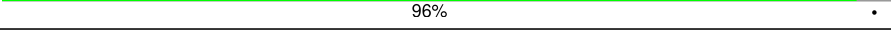
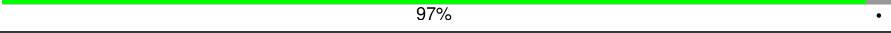
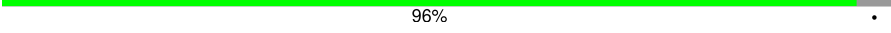
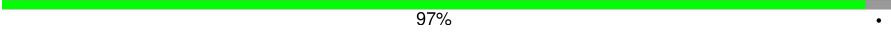
*Continued from previous page...*

Mol	Chain	Length	Quality of chain
2	PA	451	 95% 5%
2	PC	451	 96% .
2	PE	451	 96% .
2	PG	451	 97% .
2	PI	451	 96% .
2	PK	451	 96% .
2	PM	451	 96% .
2	Q	451	 97% .
2	QB	451	 95% 5%
2	QD	451	 95% 5%
2	QF	451	 95% 5%
2	QH	451	 97% .
2	QJ	451	 96% .
2	QL	451	 96% .
2	R	451	 97% .
2	RB	451	 95% .
2	RD	451	 96% .
2	RF	451	 95% .
2	RH	451	 95% 5%
2	RJ	451	 95% 5%
2	RL	451	 96% .
2	SA	451	 96% .
2	SC	451	 96% .
2	SE	451	 96% .
2	SG	451	 96% .

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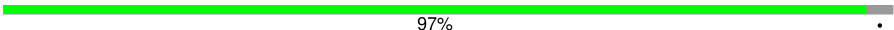
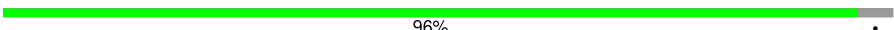
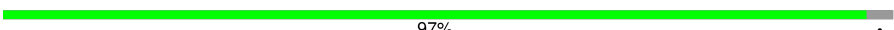







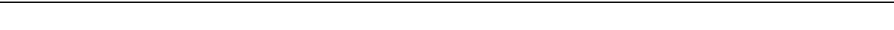

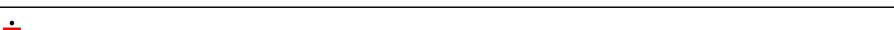
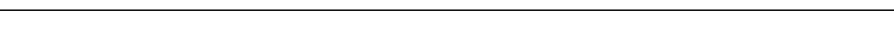



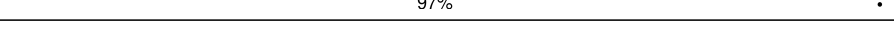
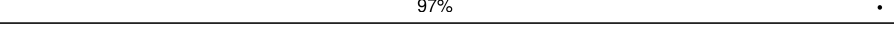






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Mol	Chain	Length	Quality of chain
2	SI	451	 95% 5%
2	SK	451	 96% .
2	TA	451	 95% 5%
2	TC	451	 95% 5%
2	TE	451	 95% 5%
2	TG	451	 96% .
2	TI	451	 95% 5%
2	TK	451	 96% .
2	UA	451	 95% 5%
2	UC	451	 95% 5%
2	UE	451	 95% 5%
2	UG	451	 96% .
2	UI	451	 95% 5%
2	UK	451	 95% 5%
2	VA	451	 96% .
2	VC	451	 96% .
2	VE	451	 96% .
2	VG	451	 96% .
2	VI	451	 96% .
2	VK	451	 95% 5%
2	VM	451	 96% .
2	WA	451	 97% .
2	WC	451	 96% .
2	WE	451	 97% .
2	WG	451	 95% .

*Continued on next page...*



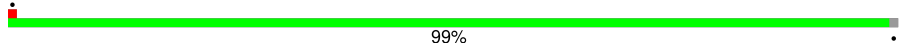
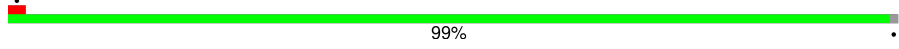
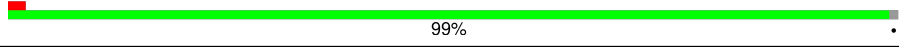
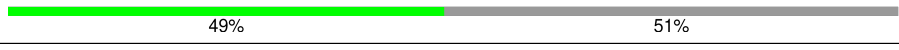

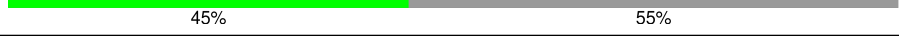
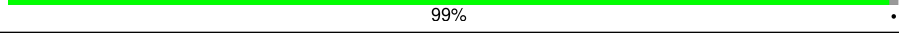
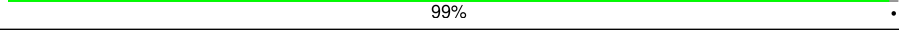
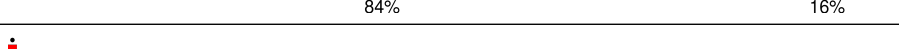
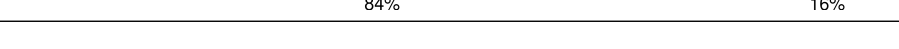
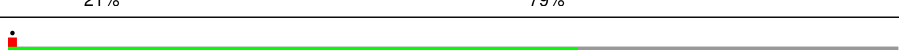

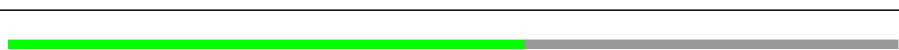

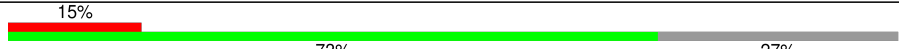



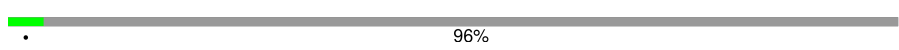

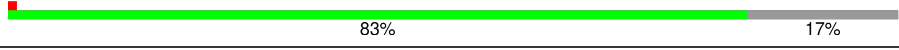
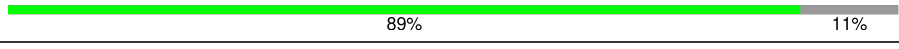



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Mol	Chain	Length	Quality of chain
2	WI	451	 97% .
2	WK	451	 96% .
2	WM	451	 97% .
3	X	214	 86% 14%
3	XA	214	 85% 14%
3	XB	214	 86% 14%
3	XC	214	 86% 14%
3	XD	214	 86% 14%
3	XE	214	 86% 14%
3	XF	214	 86% 14%
4	XM	310	 84% 16%
4	XO	310	 84% 16%
4	XQ	310	 84% 16%
4	XR	310	 84% 16%
5	XN	314	 86% 14%
5	XP	314	 86% 14%
6	0	264	 97% .
6	0A	264	 97% .
7	0C	408	 30% 70%
7	0D	408	 86% 13%
8	0F	480	 37% 63%
8	0G	480	 73% 27%
8	0H	480	 6% 94%
8	0I	480	 59% 41%
8	0J	480	 47% 53%

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Mol	Chain	Length	Quality of chain
9	0L	629	
9	0M	629	
9	0N	629	
9	0O	629	
10	0R	490	
10	0S	490	
11	0U	337	
12	0W	343	
13	0Y	279	
13	0Z	279	
13	0a	279	
14	0c	370	
14	0d	370	
15	0f	277	
15	0g	277	
16	0k	979	
16	0l	979	
17	0m	446	
17	0n	446	
17	0o	446	
18	0p	305	
19	0r	306	
20	0t	295	
20	0u	295	
21	0v	533	

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Mol	Chain	Length	Quality of chain
21	0w	533	
21	0x	533	
22	0z	282	
22	1w	282	
22	1x	282	
22	1y	282	
23	1A	397	
23	1B	397	
23	1D	397	
23	1E	397	
23	1F	397	
24	1H	756	
24	1I	756	
24	1J	756	
24	1K	756	
25	1O	774	
26	1Q	741	
27	1S	861	
27	1T	861	
28	1U	266	
28	1V	266	
28	1X	266	
28	1Y	266	
28	1a	266	
28	1b	266	

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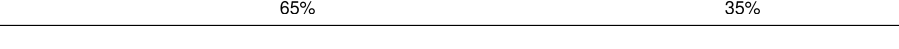
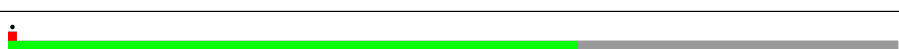



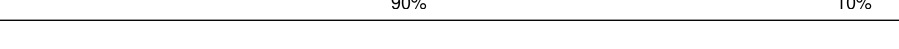



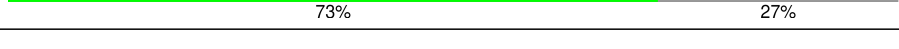




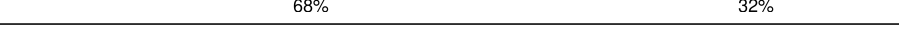


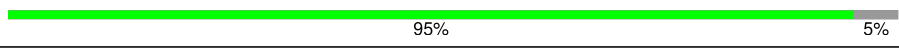




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Mol	Chain	Length	Quality of chain
28	1c	266	
28	1d	266	
28	1e	266	
28	1g	266	
28	1h	266	
28	4V	266	
28	4W	266	
29	1j	226	
29	1k	226	
29	1l	226	
29	1m	226	
30	1o	236	
31	1q	275	
31	1r	275	
31	1s	275	
31	1t	275	
32	2B	289	
32	2C	289	
33	2F	312	
33	2G	312	
33	2H	312	
33	2I	312	
34	2L	311	
35	2N	314	
35	2O	314	

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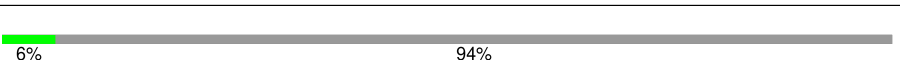
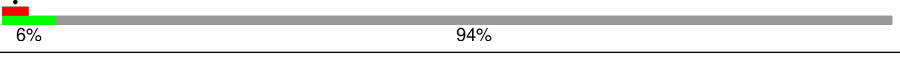

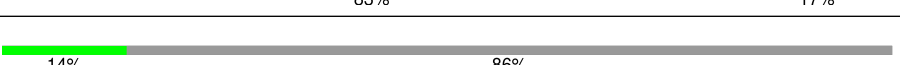



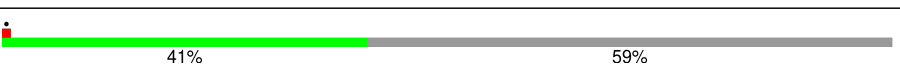
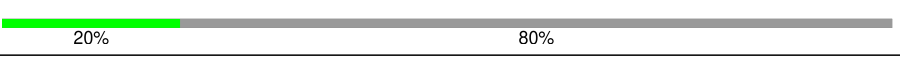
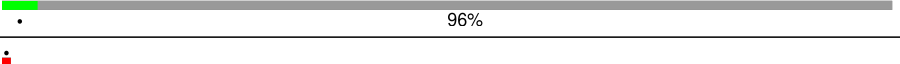
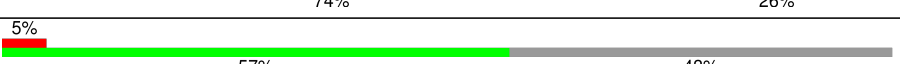

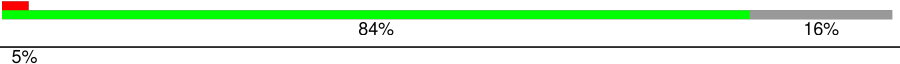

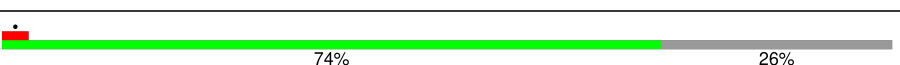

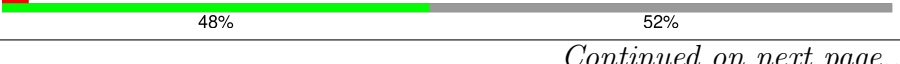



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Mol	Chain	Length	Quality of chain
36	2Q	338	
37	2S	358	
38	2U	352	
38	2V	352	
39	2X	352	
40	2Z	371	
41	2b	360	
41	2c	360	
41	2e	360	
41	2f	360	
41	2h	360	
41	2i	360	
41	2k	360	
41	2l	360	
41	2n	360	
41	2o	360	
41	2p	360	
42	2r	410	
43	2t	343	
44	2v	413	
44	2w	413	
45	2y	430	
45	2z	430	
46	3B	439	
47	3D	457	

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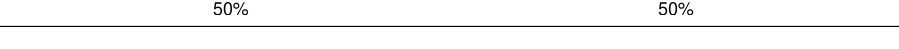




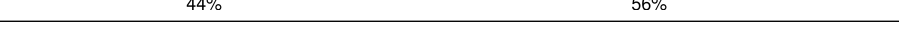




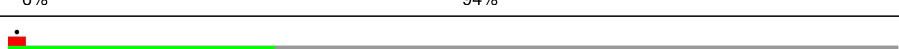



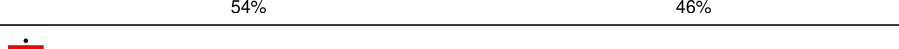


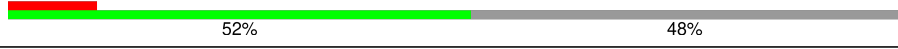




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Mol	Chain	Length	Quality of chain
48	3F	468	
48	3G	468	
48	3H	468	
48	3I	468	
48	3L	468	
48	3M	468	
49	3P	588	
49	3Q	588	
50	3S	176	
51	X1	308	
52	3U	409	
53	3W	373	
53	3X	373	
54	3Z	443	
54	3a	443	
54	4Y	443	
55	3b	183	
56	3d	261	
57	3f	197	
57	3g	197	
57	3h	197	
57	3i	197	
58	3m	195	
59	3o	306	
59	3p	306	

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Mol	Chain	Length	Quality of chain
59	4O	306	
59	4P	306	
59	4a	306	
59	4b	306	
60	3r	158	
60	3s	158	
60	3t	158	
61	3w	288	
61	3x	288	
62	4A	480	
62	4B	480	
63	4I	590	
64	5B	675	
64	5C	675	
64	5D	675	
65	5G	617	
65	5H	617	
65	5I	617	
66	5K	492	
66	5L	492	
67	5O	111	
67	5P	111	
68	5S	176	
68	5T	176	



## 2 Entry composition

There are 74 unique types of molecules in this entry. The entry contains 1371722 atoms, of which 0 are hydrogens and 0 are deuteriums.

In the tables below, the AltConf column contains the number of residues with at least one atom in alternate conformation and the Trace column contains the number of residues modelled with at most 2 atoms.

- Molecule 1 is a protein called Tubulin beta chain.

Mol	Chain	Residues	Atoms					AltConf	Trace
1	A	429	Total	C	N	O	S	0	0
			3362	2101	578	652	31		
1	AB	419	Total	C	N	O	S	0	0
			3283	2056	560	636	31		
1	AD	429	Total	C	N	O	S	0	0
			3362	2101	578	652	31		
1	AF	429	Total	C	N	O	S	0	0
			3362	2101	578	652	31		
1	AH	429	Total	C	N	O	S	0	0
			3362	2101	578	652	31		
1	AJ	429	Total	C	N	O	S	0	0
			3362	2101	578	652	31		
1	AL	429	Total	C	N	O	S	0	0
			3362	2101	578	652	31		
1	AN	419	Total	C	N	O	S	0	0
			3283	2056	560	636	31		
1	B	418	Total	C	N	O	S	0	0
			3270	2039	564	637	30		
1	BB	429	Total	C	N	O	S	0	0
			3362	2101	578	652	31		
1	BD	430	Total	C	N	O	S	0	0
			3370	2106	579	653	32		
1	BF	429	Total	C	N	O	S	0	0
			3362	2101	578	652	31		
1	BH	429	Total	C	N	O	S	0	0
			3362	2101	578	652	31		
1	BJ	429	Total	C	N	O	S	0	0
			3362	2101	578	652	31		
1	BL	429	Total	C	N	O	S	0	0
			3362	2101	578	652	31		
1	BN	429	Total	C	N	O	S	0	0
			3362	2101	578	652	31		
1	CA	424	Total	C	N	O	S	0	0
			3319	2076	568	643	32		

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Mol	Chain	Residues	Atoms					AltConf	Trace
1	CC	430	Total 3370	C 2106	N 579	O 653	S 32	0	0
1	CE	430	Total 3370	C 2106	N 579	O 653	S 32	0	0
1	CG	430	Total 3370	C 2106	N 579	O 653	S 32	0	0
1	CI	429	Total 3362	C 2101	N 578	O 652	S 31	0	0
1	CK	429	Total 3362	C 2101	N 578	O 652	S 31	0	0
1	CM	429	Total 3362	C 2101	N 578	O 652	S 31	0	0
1	DA	429	Total 3362	C 2101	N 578	O 652	S 31	0	0
1	DC	429	Total 3362	C 2101	N 578	O 652	S 31	0	0
1	DE	429	Total 3362	C 2101	N 578	O 652	S 31	0	0
1	DG	429	Total 3362	C 2101	N 578	O 652	S 31	0	0
1	DI	429	Total 3362	C 2101	N 578	O 652	S 31	0	0
1	DK	429	Total 3362	C 2101	N 578	O 652	S 31	0	0
1	DM	429	Total 3362	C 2101	N 578	O 652	S 31	0	0
1	E	430	Total 3370	C 2106	N 579	O 653	S 32	0	0
1	EB	430	Total 3370	C 2106	N 579	O 653	S 32	0	0
1	ED	430	Total 3370	C 2106	N 579	O 653	S 32	0	0
1	EF	430	Total 3370	C 2106	N 579	O 653	S 32	0	0
1	EH	430	Total 3370	C 2106	N 579	O 653	S 32	0	0
1	EJ	430	Total 3370	C 2106	N 579	O 653	S 32	0	0
1	EL	429	Total 3362	C 2101	N 578	O 652	S 31	0	0
1	F	429	Total 3362	C 2101	N 578	O 652	S 31	0	0

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Mol	Chain	Residues	Atoms					AltConf	Trace
1	FB	429	Total	C	N	O	S	0	0
			3362	2101	578	652	31		
1	FD	429	Total	C	N	O	S	0	0
			3362	2101	578	652	31		
1	FF	429	Total	C	N	O	S	0	0
			3362	2101	578	652	31		
1	FH	429	Total	C	N	O	S	0	0
			3362	2101	578	652	31		
1	FJ	429	Total	C	N	O	S	0	0
			3361	2100	578	652	31		
1	FL	426	Total	C	N	O	S	0	0
			3343	2089	575	648	31		
1	G	429	Total	C	N	O	S	0	0
			3362	2101	578	652	31		
1	GB	429	Total	C	N	O	S	0	0
			3362	2101	578	652	31		
1	GD	426	Total	C	N	O	S	0	0
			3343	2089	575	648	31		
1	GF	429	Total	C	N	O	S	0	0
			3362	2101	578	652	31		
1	GH	429	Total	C	N	O	S	0	0
			3362	2101	578	652	31		
1	GJ	425	Total	C	N	O	S	0	0
			3335	2085	574	645	31		
1	GL	429	Total	C	N	O	S	0	0
			3362	2101	578	652	31		
1	H	429	Total	C	N	O	S	0	0
			3362	2101	578	652	31		
1	HB	429	Total	C	N	O	S	0	0
			3362	2101	578	652	31		
1	HD	429	Total	C	N	O	S	0	0
			3362	2101	578	652	31		
1	HF	429	Total	C	N	O	S	0	0
			3362	2101	578	652	31		
1	HH	429	Total	C	N	O	S	0	0
			3362	2101	578	652	31		
1	HJ	429	Total	C	N	O	S	0	0
			3362	2101	578	652	31		
1	HL	429	Total	C	N	O	S	0	0
			3362	2101	578	652	31		
1	I	430	Total	C	N	O	S	0	0
			3370	2106	579	653	32		

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Mol	Chain	Residues	Atoms					AltConf	Trace
1	IB	429	Total	C	N	O	S	0	0
			3362	2101	578	652	31		
1	ID	429	Total	C	N	O	S	0	0
			3362	2101	578	652	31		
1	IF	429	Total	C	N	O	S	0	0
			3362	2101	578	652	31		
1	IH	429	Total	C	N	O	S	0	0
			3362	2101	578	652	31		
1	IJ	429	Total	C	N	O	S	0	0
			3362	2101	578	652	31		
1	IL	429	Total	C	N	O	S	0	0
			3362	2101	578	652	31		
1	JA	429	Total	C	N	O	S	0	0
			3362	2101	578	652	31		
1	JC	429	Total	C	N	O	S	0	0
			3362	2101	578	652	31		
1	JE	429	Total	C	N	O	S	0	0
			3362	2101	578	652	31		
1	JG	429	Total	C	N	O	S	0	0
			3362	2101	578	652	31		
1	JI	429	Total	C	N	O	S	0	0
			3362	2101	578	652	31		
1	JK	429	Total	C	N	O	S	0	0
			3362	2101	578	652	31		
1	JM	426	Total	C	N	O	S	0	0
			3343	2089	575	648	31		
1	KA	430	Total	C	N	O	S	0	0
			3370	2106	579	653	32		
1	KC	429	Total	C	N	O	S	0	0
			3362	2101	578	652	31		
1	KE	429	Total	C	N	O	S	0	0
			3362	2101	578	652	31		
1	KG	429	Total	C	N	O	S	0	0
			3362	2101	578	652	31		
1	KI	429	Total	C	N	O	S	0	0
			3362	2101	578	652	31		
1	KK	429	Total	C	N	O	S	0	0
			3362	2101	578	652	31		
1	KM	429	Total	C	N	O	S	0	0
			3362	2101	578	652	31		
1	LA	429	Total	C	N	O	S	0	0
			3362	2101	578	652	31		

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Mol	Chain	Residues	Atoms					AltConf	Trace
1	LC	429	Total 3362	C 2101	N 578	O 652	S 31	0	0
1	LE	429	Total 3362	C 2101	N 578	O 652	S 31	0	0
1	LG	429	Total 3362	C 2101	N 578	O 652	S 31	0	0
1	LI	429	Total 3362	C 2101	N 578	O 652	S 31	0	0
1	LK	429	Total 3362	C 2101	N 578	O 652	S 31	0	0
1	LM	429	Total 3362	C 2101	N 578	O 652	S 31	0	0
1	LO	429	Total 3362	C 2101	N 578	O 652	S 31	0	0
1	M	429	Total 3362	C 2101	N 578	O 652	S 31	0	0
1	MB	429	Total 3362	C 2101	N 578	O 652	S 31	0	0
1	MD	429	Total 3362	C 2101	N 578	O 652	S 31	0	0
1	MF	429	Total 3362	C 2101	N 578	O 652	S 31	0	0
1	MH	429	Total 3362	C 2101	N 578	O 652	S 31	0	0
1	MJ	429	Total 3362	C 2101	N 578	O 652	S 31	0	0
1	ML	429	Total 3362	C 2101	N 578	O 652	S 31	0	0
1	MN	429	Total 3362	C 2101	N 578	O 652	S 31	0	0
1	N	420	Total 3290	C 2060	N 561	O 638	S 31	0	0
1	NB	420	Total 3290	C 2060	N 561	O 638	S 31	0	0
1	ND	427	Total 3348	C 2092	N 576	O 649	S 31	0	0
1	NF	427	Total 3348	C 2092	N 576	O 649	S 31	0	0
1	NH	426	Total 3343	C 2089	N 575	O 648	S 31	0	0
1	NJ	429	Total 3362	C 2101	N 578	O 652	S 31	0	0

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Mol	Chain	Residues	Atoms					AltConf	Trace
1	NL	426	Total	C	N	O	S	0	0
			3343	2089	575	648	31		
1	O	426	Total	C	N	O	S	0	0
			3343	2089	575	648	31		
1	OB	425	Total	C	N	O	S	0	0
			3335	2085	574	645	31		
1	OD	426	Total	C	N	O	S	0	0
			3343	2089	575	648	31		
1	OF	426	Total	C	N	O	S	0	0
			3343	2089	575	648	31		
1	OH	426	Total	C	N	O	S	0	0
			3343	2089	575	648	31		
1	OJ	426	Total	C	N	O	S	0	0
			3343	2089	575	648	31		
1	OL	426	Total	C	N	O	S	0	0
			3343	2089	575	648	31		
1	P	401	Total	C	N	O	S	0	0
			3123	1946	540	609	28		
1	PB	429	Total	C	N	O	S	0	0
			3362	2101	578	652	31		
1	PD	429	Total	C	N	O	S	0	0
			3362	2101	578	652	31		
1	PF	429	Total	C	N	O	S	0	0
			3362	2101	578	652	31		
1	PH	426	Total	C	N	O	S	0	0
			3342	2089	575	647	31		
1	PJ	429	Total	C	N	O	S	0	0
			3362	2101	578	652	31		
1	PL	429	Total	C	N	O	S	0	0
			3362	2101	578	652	31		
1	QA	427	Total	C	N	O	S	0	0
			3348	2092	576	649	31		
1	QC	427	Total	C	N	O	S	0	0
			3348	2092	576	649	31		
1	QE	426	Total	C	N	O	S	0	0
			3343	2089	575	648	31		
1	QG	427	Total	C	N	O	S	0	0
			3348	2092	576	649	31		
1	QI	427	Total	C	N	O	S	0	0
			3348	2092	576	649	31		
1	QK	427	Total	C	N	O	S	0	0
			3348	2092	576	649	31		

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Mol	Chain	Residues	Atoms					AltConf	Trace
1	RA	426	Total	C	N	O	S	0	0
			3343	2089	575	648	31		
1	RC	429	Total	C	N	O	S	0	0
			3362	2101	578	652	31		
1	RE	426	Total	C	N	O	S	0	0
			3343	2089	575	648	31		
1	RG	426	Total	C	N	O	S	0	0
			3343	2089	575	648	31		
1	RI	426	Total	C	N	O	S	0	0
			3342	2088	575	648	31		
1	RK	428	Total	C	N	O	S	0	0
			3355	2096	577	651	31		
1	S	425	Total	C	N	O	S	0	0
			3335	2085	574	645	31		
1	SB	425	Total	C	N	O	S	0	0
			3335	2085	574	645	31		
1	SD	425	Total	C	N	O	S	0	0
			3335	2085	574	645	31		
1	SF	425	Total	C	N	O	S	0	0
			3335	2085	574	645	31		
1	SH	428	Total	C	N	O	S	0	0
			3355	2096	577	651	31		
1	SJ	427	Total	C	N	O	S	0	0
			3348	2092	576	649	31		
1	T	427	Total	C	N	O	S	0	0
			3348	2092	576	649	31		
1	TB	428	Total	C	N	O	S	0	0
			3355	2096	577	651	31		
1	TD	426	Total	C	N	O	S	0	0
			3343	2089	575	648	31		
1	TF	427	Total	C	N	O	S	0	0
			3348	2092	576	649	31		
1	TH	426	Total	C	N	O	S	0	0
			3343	2089	575	648	31		
1	TJ	429	Total	C	N	O	S	0	0
			3362	2101	578	652	31		
1	TL	427	Total	C	N	O	S	0	0
			3348	2092	576	649	31		
1	U	425	Total	C	N	O	S	0	0
			3335	2085	574	645	31		
1	UB	425	Total	C	N	O	S	0	0
			3335	2085	574	645	31		

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Mol	Chain	Residues	Atoms					AltConf	Trace
1	UD	425	Total 3335	C 2085	N 574	O 645	S 31	0	0
1	UF	425	Total 3335	C 2085	N 574	O 645	S 31	0	0
1	UH	425	Total 3335	C 2085	N 574	O 645	S 31	0	0
1	UJ	427	Total 3348	C 2092	N 576	O 649	S 31	0	0
1	UL	426	Total 3343	C 2089	N 575	O 648	S 31	0	0
1	V	428	Total 3355	C 2096	N 577	O 651	S 31	0	0
1	VB	426	Total 3343	C 2089	N 575	O 648	S 31	0	0
1	VD	427	Total 3348	C 2092	N 576	O 649	S 31	0	0
1	VF	428	Total 3355	C 2096	N 577	O 651	S 31	0	0
1	VH	425	Total 3335	C 2085	N 574	O 645	S 31	0	0
1	VJ	429	Total 3362	C 2101	N 578	O 652	S 31	0	0
1	VL	429	Total 3362	C 2101	N 578	O 652	S 31	0	0
1	W	425	Total 3335	C 2085	N 574	O 645	S 31	0	0
1	WB	425	Total 3335	C 2085	N 574	O 645	S 31	0	0
1	WD	425	Total 3335	C 2085	N 574	O 645	S 31	0	0
1	WF	427	Total 3348	C 2092	N 576	O 649	S 31	0	0
1	WH	425	Total 3335	C 2085	N 574	O 645	S 31	0	0
1	WJ	425	Total 3335	C 2085	N 574	O 645	S 31	0	0
1	WL	426	Total 3343	C 2089	N 575	O 648	S 31	0	0

- Molecule 2 is a protein called Tubulin alpha chain.



Mol	Chain	Residues	Atoms					AltConf	Trace
2	AA	430	Total	C	N	O	S	0	0
			3329	2103	567	636	23		
2	AC	433	Total	C	N	O	S	0	0
			3353	2117	570	643	23		
2	AE	439	Total	C	N	O	S	0	0
			3394	2141	577	652	24		
2	AG	433	Total	C	N	O	S	0	0
			3352	2116	571	642	23		
2	AI	439	Total	C	N	O	S	0	0
			3394	2141	577	652	24		
2	AK	439	Total	C	N	O	S	0	0
			3394	2141	577	652	24		
2	AM	430	Total	C	N	O	S	0	0
			3329	2103	567	636	23		
2	BA	429	Total	C	N	O	S	0	0
			3322	2098	566	635	23		
2	BC	430	Total	C	N	O	S	0	0
			3329	2103	567	636	23		
2	BE	429	Total	C	N	O	S	0	0
			3322	2098	566	635	23		
2	BG	430	Total	C	N	O	S	0	0
			3329	2103	567	636	23		
2	BI	439	Total	C	N	O	S	0	0
			3394	2141	577	652	24		
2	BK	429	Total	C	N	O	S	0	0
			3322	2098	566	635	23		
2	BM	430	Total	C	N	O	S	0	0
			3329	2103	567	636	23		
2	C	439	Total	C	N	O	S	0	0
			3394	2141	577	652	24		
2	CB	439	Total	C	N	O	S	0	0
			3394	2141	577	652	24		
2	CD	439	Total	C	N	O	S	0	0
			3394	2141	577	652	24		
2	CF	430	Total	C	N	O	S	0	0
			3329	2103	567	636	23		
2	CH	439	Total	C	N	O	S	0	0
			3394	2141	577	652	24		
2	CJ	439	Total	C	N	O	S	0	0
			3394	2141	577	652	24		
2	CL	439	Total	C	N	O	S	0	0
			3394	2141	577	652	24		
2	D	430	Total	C	N	O	S	0	0
			3329	2103	567	636	23		

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Mol	Chain	Residues	Atoms					AltConf	Trace
2	DB	430	Total	C	N	O	S	0	0
			3329	2103	567	636	23		
2	DD	430	Total	C	N	O	S	0	0
			3329	2103	567	636	23		
2	DF	431	Total	C	N	O	S	0	0
			3337	2107	568	639	23		
2	DH	430	Total	C	N	O	S	0	0
			3328	2102	567	636	23		
2	DJ	430	Total	C	N	O	S	0	0
			3329	2103	567	636	23		
2	DL	430	Total	C	N	O	S	0	0
			3329	2103	567	636	23		
2	EA	430	Total	C	N	O	S	0	0
			3329	2103	567	636	23		
2	EC	439	Total	C	N	O	S	0	0
			3394	2141	577	652	24		
2	EE	432	Total	C	N	O	S	0	0
			3346	2112	569	642	23		
2	EG	433	Total	C	N	O	S	0	0
			3351	2114	570	644	23		
2	EI	431	Total	C	N	O	S	0	0
			3337	2107	568	639	23		
2	EK	431	Total	C	N	O	S	0	0
			3337	2107	568	639	23		
2	FA	439	Total	C	N	O	S	0	0
			3394	2141	577	652	24		
2	FC	434	Total	C	N	O	S	0	0
			3360	2119	571	647	23		
2	FE	432	Total	C	N	O	S	0	0
			3343	2110	569	641	23		
2	FG	431	Total	C	N	O	S	0	0
			3337	2107	568	639	23		
2	FI	429	Total	C	N	O	S	0	0
			3322	2098	566	635	23		
2	FK	431	Total	C	N	O	S	0	0
			3337	2107	568	639	23		
2	GA	430	Total	C	N	O	S	0	0
			3329	2103	567	636	23		
2	GC	430	Total	C	N	O	S	0	0
			3329	2103	567	636	23		
2	GE	431	Total	C	N	O	S	0	0
			3337	2107	568	639	23		

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Mol	Chain	Residues	Atoms					AltConf	Trace
2	GG	430	Total 3329	C 2103	N 567	O 636	S 23	0	0
2	GI	430	Total 3329	C 2103	N 567	O 636	S 23	0	0
2	GK	430	Total 3329	C 2103	N 567	O 636	S 23	0	0
2	HA	430	Total 3329	C 2103	N 567	O 636	S 23	0	0
2	HC	430	Total 3329	C 2103	N 567	O 636	S 23	0	0
2	HE	439	Total 3394	C 2141	N 577	O 652	S 24	0	0
2	HG	432	Total 3343	C 2110	N 569	O 641	S 23	0	0
2	HI	431	Total 3336	C 2106	N 568	O 639	S 23	0	0
2	HK	432	Total 3343	C 2110	N 569	O 641	S 23	0	0
2	HM	430	Total 3329	C 2103	N 567	O 636	S 23	0	0
2	IA	430	Total 3329	C 2103	N 567	O 636	S 23	0	0
2	IC	432	Total 3343	C 2110	N 569	O 641	S 23	0	0
2	IE	439	Total 3394	C 2141	N 577	O 652	S 24	0	0
2	IG	439	Total 3394	C 2141	N 577	O 652	S 24	0	0
2	II	439	Total 3394	C 2141	N 577	O 652	S 24	0	0
2	IK	430	Total 3329	C 2103	N 567	O 636	S 23	0	0
2	IM	430	Total 3329	C 2103	N 567	O 636	S 23	0	0
2	J	439	Total 3394	C 2141	N 577	O 652	S 24	0	0
2	JB	439	Total 3394	C 2141	N 577	O 652	S 24	0	0
2	JD	430	Total 3329	C 2103	N 567	O 636	S 23	0	0
2	JF	430	Total 3329	C 2103	N 567	O 636	S 23	0	0

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Mol	Chain	Residues	Atoms					AltConf	Trace
2	JH	432	Total	C	N	O	S	0	0
			3342	2110	569	640	23		
2	JJ	432	Total	C	N	O	S	0	0
			3343	2110	569	641	23		
2	JL	432	Total	C	N	O	S	0	0
			3343	2110	569	641	23		
2	JN	439	Total	C	N	O	S	0	0
			3394	2141	577	652	24		
2	K	434	Total	C	N	O	S	0	0
			3358	2119	572	643	24		
2	KB	439	Total	C	N	O	S	0	0
			3394	2141	577	652	24		
2	KD	430	Total	C	N	O	S	0	0
			3329	2103	567	636	23		
2	KF	439	Total	C	N	O	S	0	0
			3394	2141	577	652	24		
2	KH	431	Total	C	N	O	S	0	0
			3335	2106	568	638	23		
2	KJ	432	Total	C	N	O	S	0	0
			3346	2112	569	642	23		
2	KL	439	Total	C	N	O	S	0	0
			3394	2141	577	652	24		
2	KN	439	Total	C	N	O	S	0	0
			3394	2141	577	652	24		
2	L	439	Total	C	N	O	S	0	0
			3394	2141	577	652	24		
2	LB	432	Total	C	N	O	S	0	0
			3346	2112	569	642	23		
2	LD	429	Total	C	N	O	S	0	0
			3322	2097	566	637	22		
2	LF	439	Total	C	N	O	S	0	0
			3394	2141	577	652	24		
2	LH	439	Total	C	N	O	S	0	0
			3394	2141	577	652	24		
2	LJ	439	Total	C	N	O	S	0	0
			3394	2141	577	652	24		
2	LL	439	Total	C	N	O	S	0	0
			3394	2141	577	652	24		
2	LN	432	Total	C	N	O	S	0	0
			3346	2112	569	642	23		
2	MA	431	Total	C	N	O	S	0	0
			3335	2106	568	638	23		

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Mol	Chain	Residues	Atoms					AltConf	Trace
2	MC	437	Total	C	N	O	S	0	0
			3379	2133	575	647	24		
2	ME	436	Total	C	N	O	S	0	0
			3368	2124	573	647	24		
2	MG	439	Total	C	N	O	S	0	0
			3394	2141	577	652	24		
2	MI	439	Total	C	N	O	S	0	0
			3394	2141	577	652	24		
2	MK	439	Total	C	N	O	S	0	0
			3394	2141	577	652	24		
2	MM	431	Total	C	N	O	S	0	0
			3335	2106	568	638	23		
2	NA	439	Total	C	N	O	S	0	0
			3394	2141	577	652	24		
2	NC	439	Total	C	N	O	S	0	0
			3394	2141	577	652	24		
2	NE	439	Total	C	N	O	S	0	0
			3394	2141	577	652	24		
2	NG	439	Total	C	N	O	S	0	0
			3394	2141	577	652	24		
2	NI	439	Total	C	N	O	S	0	0
			3394	2141	577	652	24		
2	NK	439	Total	C	N	O	S	0	0
			3394	2141	577	652	24		
2	NM	439	Total	C	N	O	S	0	0
			3394	2141	577	652	24		
2	OA	432	Total	C	N	O	S	0	0
			3343	2110	569	641	23		
2	OC	431	Total	C	N	O	S	0	0
			3337	2107	568	639	23		
2	OE	431	Total	C	N	O	S	0	0
			3337	2107	568	639	23		
2	OG	439	Total	C	N	O	S	0	0
			3394	2141	577	652	24		
2	OI	430	Total	C	N	O	S	0	0
			3329	2103	567	636	23		
2	OK	430	Total	C	N	O	S	0	0
			3329	2103	567	636	23		
2	OM	433	Total	C	N	O	S	0	0
			3352	2115	570	644	23		
2	PA	430	Total	C	N	O	S	0	0
			3329	2103	567	636	23		

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Mol	Chain	Residues	Atoms					AltConf	Trace
2	PC	431	Total 3337	C 2107	N 568	O 639	S 23	0	0
2	PE	431	Total 3337	C 2107	N 568	O 639	S 23	0	0
2	PG	439	Total 3394	C 2141	N 577	O 652	S 24	0	0
2	PI	431	Total 3337	C 2107	N 568	O 639	S 23	0	0
2	PK	432	Total 3343	C 2110	N 569	O 641	S 23	0	0
2	PM	432	Total 3343	C 2110	N 569	O 641	S 23	0	0
2	Q	439	Total 3394	C 2141	N 577	O 652	S 24	0	0
2	QB	429	Total 3323	C 2100	N 566	O 634	S 23	0	0
2	QD	430	Total 3329	C 2103	N 567	O 636	S 23	0	0
2	QF	430	Total 3329	C 2103	N 567	O 636	S 23	0	0
2	QH	439	Total 3394	C 2141	N 577	O 652	S 24	0	0
2	QJ	431	Total 3337	C 2107	N 568	O 639	S 23	0	0
2	QL	432	Total 3343	C 2110	N 569	O 641	S 23	0	0
2	R	439	Total 3394	C 2141	N 577	O 652	S 24	0	0
2	RB	431	Total 3337	C 2107	N 568	O 639	S 23	0	0
2	RD	431	Total 3337	C 2107	N 568	O 639	S 23	0	0
2	RF	431	Total 3337	C 2107	N 568	O 639	S 23	0	0
2	RH	430	Total 3329	C 2103	N 567	O 636	S 23	0	0
2	RJ	430	Total 3329	C 2103	N 567	O 636	S 23	0	0
2	RL	431	Total 3335	C 2106	N 568	O 638	S 23	0	0
2	SA	431	Total 3337	C 2107	N 568	O 639	S 23	0	0

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Mol	Chain	Residues	Atoms					AltConf	Trace
2	SC	431	Total 3335	C 2106	N 568	O 638	S 23	0	0
2	SE	431	Total 3335	C 2106	N 568	O 638	S 23	0	0
2	SG	431	Total 3337	C 2107	N 568	O 639	S 23	0	0
2	SI	430	Total 3329	C 2103	N 567	O 636	S 23	0	0
2	SK	432	Total 3343	C 2110	N 569	O 641	S 23	0	0
2	TA	430	Total 3329	C 2103	N 567	O 636	S 23	0	0
2	TC	428	Total 3314	C 2093	N 565	O 634	S 22	0	0
2	TE	430	Total 3329	C 2103	N 567	O 636	S 23	0	0
2	TG	431	Total 3337	C 2107	N 568	O 639	S 23	0	0
2	TI	430	Total 3329	C 2103	N 567	O 636	S 23	0	0
2	TK	433	Total 3353	C 2117	N 570	O 643	S 23	0	0
2	UA	430	Total 3329	C 2103	N 567	O 636	S 23	0	0
2	UC	429	Total 3322	C 2097	N 566	O 637	S 22	0	0
2	UE	430	Total 3329	C 2103	N 567	O 636	S 23	0	0
2	UG	431	Total 3337	C 2107	N 568	O 639	S 23	0	0
2	UI	430	Total 3329	C 2103	N 567	O 636	S 23	0	0
2	UK	430	Total 3329	C 2103	N 567	O 636	S 23	0	0
2	VA	431	Total 3337	C 2107	N 568	O 639	S 23	0	0
2	VC	431	Total 3337	C 2107	N 568	O 639	S 23	0	0
2	VE	431	Total 3337	C 2107	N 568	O 639	S 23	0	0
2	VG	431	Total 3337	C 2107	N 568	O 639	S 23	0	0

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Mol	Chain	Residues	Atoms					AltConf	Trace
2	VI	432	Total	C	N	O	S	0	0
			3342	2109	569	641	23		
2	VK	430	Total	C	N	O	S	0	0
			3329	2103	567	636	23		
2	VM	434	Total	C	N	O	S	0	0
			3360	2119	571	647	23		
2	WA	439	Total	C	N	O	S	0	0
			3394	2141	577	652	24		
2	WC	431	Total	C	N	O	S	0	0
			3337	2107	568	639	23		
2	WE	439	Total	C	N	O	S	0	0
			3394	2141	577	652	24		
2	WG	431	Total	C	N	O	S	0	0
			3337	2107	568	639	23		
2	WI	439	Total	C	N	O	S	0	0
			3394	2141	577	652	24		
2	WK	431	Total	C	N	O	S	0	0
			3337	2107	568	639	23		
2	WM	439	Total	C	N	O	S	0	0
			3394	2141	577	652	24		

- Molecule 3 is a protein called CFAP20.

Mol	Chain	Residues	Atoms					AltConf	Trace
3	X	183	Total	C	N	O	S	0	0
			1510	965	264	270	11		
3	XA	183	Total	C	N	O	S	0	0
			1510	965	264	270	11		
3	XB	183	Total	C	N	O	S	0	0
			1510	965	264	270	11		
3	XC	183	Total	C	N	O	S	0	0
			1510	965	264	270	11		
3	XD	183	Total	C	N	O	S	0	0
			1510	965	264	270	11		
3	XE	183	Total	C	N	O	S	0	0
			1510	965	264	270	11		
3	XF	183	Total	C	N	O	S	0	0
			1510	965	264	270	11		

- Molecule 4 is a protein called PACRGA.



Mol	Chain	Residues	Atoms					AltConf	Trace
4	XM	259	Total	C	N	O	S	0	0
			2045	1307	360	370	8		
4	XO	260	Total	C	N	O	S	0	0
			2053	1311	361	373	8		
4	XQ	260	Total	C	N	O	S	0	0
			2053	1311	361	373	8		
4	XR	260	Total	C	N	O	S	0	0
			2056	1313	364	371	8		

- Molecule 5 is a protein called PACRGB.

Mol	Chain	Residues	Atoms					AltConf	Trace
5	XN	269	Total	C	N	O	S	0	0
			2116	1359	366	384	7		
5	XP	269	Total	C	N	O	S	0	0
			2116	1359	366	384	7		

- Molecule 6 is a protein called CCDC81.

Mol	Chain	Residues	Atoms					AltConf	Trace
6	0A	257	Total	C	N	O	S	0	0
			2004	1261	359	371	13		
6	0	257	Total	C	N	O	S	0	0
			2004	1261	359	371	13		

- Molecule 7 is a protein called CFAP21.

Mol	Chain	Residues	Atoms					AltConf	Trace
7	0C	121	Total	C	N	O	S	0	0
			935	584	159	188	4		
7	0D	354	Total	C	N	O	S	0	0
			2723	1683	492	537	11		

- Molecule 8 is a protein called CFAP45.

Mol	Chain	Residues	Atoms					AltConf	Trace
8	0F	176	Total	C	N	O	S	0	0
			1439	859	288	280	12		
8	0G	349	Total	C	N	O	S	0	0
			2955	1772	596	570	17		
8	0H	28	Total	C	N	O		0	0
			229	146	41	42			

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Mol	Chain	Residues	Atoms					AltConf	Trace
8	0I	285	Total	C	N	O	S	0	0
			2369	1421	471	459	18		
8	0J	226	Total	C	N	O	S	0	0
			1906	1147	379	373	7		

- Molecule 9 is a protein called CFAP52.

Mol	Chain	Residues	Atoms					AltConf	Trace
9	0L	624	Total	C	N	O	S	0	0
			4757	2973	844	908	32		
9	0M	624	Total	C	N	O	S	0	0
			4757	2973	844	908	32		
9	0N	624	Total	C	N	O	S	0	0
			4757	2973	844	908	32		
9	0O	310	Total	C	N	O	S	0	0
			2357	1482	416	445	14		

- Molecule 10 is a protein called CFAP53.

Mol	Chain	Residues	Atoms					AltConf	Trace
10	0R	309	Total	C	N	O	S	0	0
			2628	1579	535	501	13		
10	0S	221	Total	C	N	O	S	0	0
			1874	1148	360	359	7		

- Molecule 11 is a protein called CFAP67A.

Mol	Chain	Residues	Atoms					AltConf	Trace
11	0U	333	Total	C	N	O	S	0	0
			2570	1621	437	495	17		

- Molecule 12 is a protein called CFAP67B.

Mol	Chain	Residues	Atoms					AltConf	Trace
12	0W	339	Total	C	N	O	S	0	0
			2595	1647	427	501	20		

- Molecule 13 is a protein called CFAP106A.

Mol	Chain	Residues	Atoms					AltConf	Trace
13	0Y	233	Total	C	N	O	S	0	0
			1836	1152	334	345	5		

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Mol	Chain	Residues	Atoms					AltConf	Trace
13	0Z	235	Total	C	N	O	S	0	0
			1849	1160	337	347	5		
13	0a	58	Total	C	N	O		0	0
			422	263	78	81			

- Molecule 14 is a protein called CFAP106B.

Mol	Chain	Residues	Atoms					AltConf	Trace
14	0c	237	Total	C	N	O	S	0	0
			1929	1221	337	362	9		
14	0d	265	Total	C	N	O	S	0	0
			2150	1359	378	404	9		

- Molecule 15 is a protein called CFAP107.

Mol	Chain	Residues	Atoms					AltConf	Trace
15	0f	160	Total	C	N	O	S	0	0
			1257	783	222	241	11		
15	0g	30	Total	C	N	O	S	0	0
			218	137	34	46	1		

- Molecule 16 is a protein called CFAP115.

Mol	Chain	Residues	Atoms					AltConf	Trace
16	0l	640	Total	C	N	O	S	0	0
			5045	3192	918	914	21		
16	0k	710	Total	C	N	O	S	0	0
			5599	3537	1026	1009	27		

- Molecule 17 is a protein called CFAP127.

Mol	Chain	Residues	Atoms					AltConf	Trace
17	0m	142	Total	C	N	O	S	0	0
			1155	704	220	227	4		
17	0n	406	Total	C	N	O	S	0	0
			3388	2054	668	654	12		
17	0o	20	Total	C	N	O		0	0
			171	107	35	29			

- Molecule 18 is a protein called CFAP141.



Mol	Chain	Residues	Atoms					AltConf	Trace
18	0p	108	Total	C	N	O	S	0	0
			906	557	177	169	3		

- Molecule 19 is a protein called CFAP143.

Mol	Chain	Residues	Atoms					AltConf	Trace
19	0r	254	Total	C	N	O	S	0	0
			2033	1246	376	396	15		

- Molecule 20 is a protein called CFAP161.

Mol	Chain	Residues	Atoms					AltConf	Trace
20	0t	262	Total	C	N	O	S	0	0
			2062	1298	358	388	18		
20	0u	227	Total	C	N	O	S	0	0
			1769	1117	306	330	16		

- Molecule 21 is a protein called CFAP210.

Mol	Chain	Residues	Atoms					AltConf	Trace
21	0w	449	Total	C	N	O	S	0	0
			3715	2242	741	724	8		
21	0x	111	Total	C	N	O	S	0	0
			906	556	175	172	3		
21	0v	73	Total	C	N	O		0	0
			582	351	115	116			

- Molecule 22 is a protein called DMIP5.

Mol	Chain	Residues	Atoms					AltConf	Trace
22	0z	143	Total	C	N	O	S	0	0
			1160	716	220	219	5		
22	1w	180	Total	C	N	O	S	0	0
			1481	915	278	281	7		
22	1x	206	Total	C	N	O	S	0	0
			1680	1031	322	315	12		
22	1y	91	Total	C	N	O	S	0	0
			722	449	130	141	2		

- Molecule 23 is a protein called RIB43.



Mol	Chain	Residues	Atoms					AltConf	Trace
23	1A	270	Total	C	N	O	S	0	0
			2286	1390	449	436	11		
23	1B	195	Total	C	N	O	S	0	0
			1667	1015	321	322	9		
23	1D	54	Total	C	N	O	S	0	0
			464	285	91	85	3		
23	1E	362	Total	C	N	O	S	0	0
			3050	1855	590	590	15		
23	1F	74	Total	C	N	O	S	0	0
			635	387	120	124	4		

- Molecule 24 is a protein called RIB72A.

Mol	Chain	Residues	Atoms					AltConf	Trace
24	1H	588	Total	C	N	O	S	0	0
			4698	2967	812	900	19		
24	1I	659	Total	C	N	O	S	0	0
			5276	3326	920	1003	27		
24	1J	670	Total	C	N	O	S	0	0
			5356	3372	940	1018	26		
24	1K	588	Total	C	N	O	S	0	0
			4697	2966	812	900	19		

- Molecule 25 is a protein called RIB72B.

Mol	Chain	Residues	Atoms					AltConf	Trace
25	1O	710	Total	C	N	O	S	0	0
			5751	3614	1021	1096	20		

- Molecule 26 is a protein called RIB72C.

Mol	Chain	Residues	Atoms					AltConf	Trace
26	1Q	655	Total	C	N	O	S	0	0
			5263	3323	927	988	25		

- Molecule 27 is a protein called RIB72D.

Mol	Chain	Residues	Atoms					AltConf	Trace
27	1S	726	Total	C	N	O	S	0	0
			5834	3696	1029	1076	33		
27	1T	222	Total	C	N	O	S	0	0
			1787	1125	315	335	12		



- Molecule 28 is a protein called DMIP1.

Mol	Chain	Residues	Atoms					AltConf	Trace
28	1U	120	Total	C	N	O	S	0	0
			942	594	162	181	5		
28	1V	48	Total	C	N	O	S	0	0
			371	229	68	69	5		
28	1X	120	Total	C	N	O	S	0	0
			942	594	162	181	5		
28	1Y	169	Total	C	N	O	S	0	0
			1325	829	237	252	7		
28	1a	57	Total	C	N	O	S	0	0
			446	279	80	84	3		
28	1b	168	Total	C	N	O	S	0	0
			1313	823	230	250	10		
28	1c	35	Total	C	N	O	S	0	0
			263	162	50	46	5		
28	1d	120	Total	C	N	O	S	0	0
			942	594	162	181	5		
28	1e	48	Total	C	N	O	S	0	0
			371	229	68	69	5		
28	1g	120	Total	C	N	O	S	0	0
			942	594	162	181	5		
28	1h	155	Total	C	N	O	S	0	0
			1218	767	214	230	7		
28	4V	62	Total	C	N	O	S	0	0
			486	305	86	91	4		
28	4W	188	Total	C	N	O	S	0	0
			1474	927	255	283	9		

- Molecule 29 is a protein called DMIP2.

Mol	Chain	Residues	Atoms					AltConf	Trace
29	1j	113	Total	C	N	O	S	0	0
			909	584	153	168	4		
29	1k	103	Total	C	N	O	S	0	0
			801	502	140	157	2		
29	1l	113	Total	C	N	O	S	0	0
			909	584	153	168	4		
29	1m	53	Total	C	N	O	S	0	0
			420	268	72	78	2		

- Molecule 30 is a protein called DMIP3.



Mol	Chain	Residues	Atoms					AltConf	Trace
30	1o	128	Total	C	N	O	S	0	0
			1035	645	193	192	5		

- Molecule 31 is a protein called DMIP4.

Mol	Chain	Residues	Atoms					AltConf	Trace
31	1q	214	Total	C	N	O	S	0	0
			1679	1025	322	321	11		
31	1r	106	Total	C	N	O	S	0	0
			868	532	166	165	5		
31	1s	183	Total	C	N	O	S	0	0
			1446	884	273	277	12		
31	1t	75	Total	C	N	O	S	0	0
			618	372	125	116	5		

- Molecule 32 is a protein called DMIP6.

Mol	Chain	Residues	Atoms					AltConf	Trace
32	2B	251	Total	C	N	O	S	0	0
			1977	1231	357	377	12		
32	2C	230	Total	C	N	O	S	0	0
			1814	1130	329	344	11		

- Molecule 33 is a protein called DMIP7.

Mol	Chain	Residues	Atoms					AltConf	Trace
33	2F	284	Total	C	N	O	S	0	0
			2253	1411	411	418	13		
33	2G	283	Total	C	N	O	S	0	0
			2245	1407	409	416	13		
33	2H	288	Total	C	N	O	S	0	0
			2281	1428	416	424	13		
33	2I	243	Total	C	N	O	S	0	0
			1937	1208	355	363	11		

- Molecule 34 is a protein called DMIP8.

Mol	Chain	Residues	Atoms					AltConf	Trace
34	2L	172	Total	C	N	O	S	0	0
			1433	904	254	269	6		

- Molecule 35 is a protein called DMIP9.



Mol	Chain	Residues	Atoms					AltConf	Trace
35	2N	135	Total	C	N	O	S	0	0
			1103	698	208	194	3		
35	2O	161	Total	C	N	O	S	0	0
			1324	827	251	240	6		

- Molecule 36 is a protein called DMIP10.

Mol	Chain	Residues	Atoms					AltConf	Trace
36	2Q	291	Total	C	N	O	S	0	0
			2320	1483	394	429	14		

- Molecule 37 is a protein called DMIP11.

Mol	Chain	Residues	Atoms					AltConf	Trace
37	2S	237	Total	C	N	O	S	0	0
			1800	1127	317	341	15		

- Molecule 38 is a protein called DMIP12.

Mol	Chain	Residues	Atoms					AltConf	Trace
38	2U	229	Total	C	N	O	S	0	0
			1807	1111	329	355	12		
38	2V	109	Total	C	N	O	S	0	0
			870	530	167	169	4		

- Molecule 39 is a protein called DMIP13.

Mol	Chain	Residues	Atoms					AltConf	Trace
39	2X	227	Total	C	N	O	S	0	0
			1774	1081	355	328	10		

- Molecule 40 is a protein called DMIP14.

Mol	Chain	Residues	Atoms					AltConf	Trace
40	2Z	283	Total	C	N	O	S	0	0
			2258	1427	412	414	5		

- Molecule 41 is a protein called DMIP15.

Mol	Chain	Residues	Atoms					AltConf	Trace
41	2b	121	Total	C	N	O	S	0	0
			1006	613	195	194	4		

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Mol	Chain	Residues	Atoms					AltConf	Trace
41	2c	245	Total	C	N	O	S	0	0
			2092	1254	418	408	12		
41	2e	325	Total	C	N	O	S	0	0
			2735	1649	546	526	14		
41	2f	52	Total	C	N	O	S	0	0
			454	275	89	88	2		
41	2h	237	Total	C	N	O	S	0	0
			1978	1187	396	385	10		
41	2i	149	Total	C	N	O	S	0	0
			1301	776	266	252	7		
41	2k	167	Total	C	N	O	S	0	0
			1369	834	266	262	7		
41	2l	264	Total	C	N	O	S	0	0
			2228	1338	445	432	13		
41	2n	42	Total	C	N	O		0	0
			361	219	72	70			
41	2o	287	Total	C	N	O	S	0	0
			2453	1473	490	478	12		
41	2p	49	Total	C	N	O	S	0	0
			425	257	86	80	2		

- Molecule 42 is a protein called DMIP16.

Mol	Chain	Residues	Atoms					AltConf	Trace
42	2r	315	Total	C	N	O	S	0	0
			2473	1564	439	460	10		

- Molecule 43 is a protein called DMIP17.

Mol	Chain	Residues	Atoms					AltConf	Trace
43	2t	214	Total	C	N	O	S	0	0
			1713	1075	302	324	12		

- Molecule 44 is a protein called DMIP18.

Mol	Chain	Residues	Atoms					AltConf	Trace
44	2v	280	Total	C	N	O	S	0	0
			2264	1438	391	425	10		
44	2w	412	Total	C	N	O	S	0	0
			3291	2082	565	629	15		

- Molecule 45 is a protein called DMIP19.



Mol	Chain	Residues	Atoms					AltConf	Trace
45	2y	287	Total	C	N	O	S	0	0
			2316	1424	424	460	8		
45	2z	187	Total	C	N	O	S	0	0
			1435	890	257	287	1		

- Molecule 46 is a protein called DMIP20.

Mol	Chain	Residues	Atoms					AltConf	Trace
46	3B	418	Total	C	N	O	S	0	0
			3308	2069	596	631	12		

- Molecule 47 is a protein called DMIP21.

Mol	Chain	Residues	Atoms					AltConf	Trace
47	3D	412	Total	C	N	O	S	0	0
			3212	1986	586	628	12		

- Molecule 48 is a protein called DMIP22.

Mol	Chain	Residues	Atoms					AltConf	Trace
48	3I	80	Total	C	N	O	S	0	0
			640	400	114	122	4		
48	3F	155	Total	C	N	O	S	0	0
			1254	777	240	230	7		
48	3G	90	Total	C	N	O	S	0	0
			733	456	139	134	4		
48	3H	103	Total	C	N	O	S	0	0
			832	516	161	151	4		
48	3M	29	Total	C	N	O	S	0	0
			247	155	44	45	3		
48	3L	29	Total	C	N	O	S	0	0
			247	155	44	45	3		

- Molecule 49 is a protein called DMIP23.

Mol	Chain	Residues	Atoms					AltConf	Trace
49	3P	256	Total	C	N	O	S	0	0
			2002	1260	351	380	11		
49	3Q	490	Total	C	N	O	S	0	0
			3825	2406	666	735	18		

- Molecule 50 is a protein called DMIP24.



Mol	Chain	Residues	Atoms					AltConf	Trace
50	3S	25	Total	C	N	O	S	0	0
			182	109	36	33	4		

- Molecule 51 is a protein called DMIP24.

Mol	Chain	Residues	Atoms					AltConf	Trace
51	X1	39	Total	C	N	O	S	0	0
			304	183	58	63			

- Molecule 52 is a protein called DMIP25.

Mol	Chain	Residues	Atoms					AltConf	Trace
52	3U	140	Total	C	N	O	S	0	0
			1074	681	186	203	4		

- Molecule 53 is a protein called DMIP26.

Mol	Chain	Residues	Atoms					AltConf	Trace
53	3X	49	Total	C	N	O	S	0	0
			386	239	74	70	3		
53	3W	153	Total	C	N	O	S	0	0
			1264	786	231	239	8		

- Molecule 54 is a protein called DMIP27.

Mol	Chain	Residues	Atoms					AltConf	Trace
54	3Z	181	Total	C	N	O	S	0	0
			1405	862	264	271	8		
54	3a	87	Total	C	N	O	S	0	0
			712	442	130	136	4		
54	4Y	16	Total	C	N	O	S	0	0
			122	75	18	28	1		

- Molecule 55 is a protein called ArcMAP2.

Mol	Chain	Residues	Atoms					AltConf	Trace
55	3b	136	Total	C	N	O	S	0	0
			1126	695	204	223	4		

- Molecule 56 is a protein called ArcMAP1.



Mol	Chain	Residues	Atoms					AltConf	Trace
56	3d	148	Total	C	N	O	S	0	0
			1240	765	229	240	6		

- Molecule 57 is a protein called ArcMAP4.

Mol	Chain	Residues	Atoms					AltConf	Trace
57	3f	165	Total	C	N	O	S	0	0
			1408	857	263	280	8		
57	3g	165	Total	C	N	O	S	0	0
			1408	857	263	280	8		
57	3h	165	Total	C	N	O	S	0	0
			1408	857	263	280	8		
57	3i	165	Total	C	N	O	S	0	0
			1408	857	263	280	8		

- Molecule 58 is a protein called ArcMAP3.

Mol	Chain	Residues	Atoms					AltConf	Trace
58	3m	144	Total	C	N	O	S	0	0
			1216	745	236	231	4		

- Molecule 59 is a protein called CFAP96.

Mol	Chain	Residues	Atoms					AltConf	Trace
59	3o	55	Total	C	N	O	S	0	0
			459	293	79	85	2		
59	3p	148	Total	C	N	O	S	0	0
			1159	744	201	212	2		
59	4O	175	Total	C	N	O	S	0	0
			1399	899	245	253	2		
59	4P	69	Total	C	N	O	S	0	0
			529	346	84	98	1		
59	4a	154	Total	C	N	O	S	0	0
			1233	796	213	223	1		
59	4b	69	Total	C	N	O	S	0	0
			529	346	84	98	1		

- Molecule 60 is a protein called CFAP97.

Mol	Chain	Residues	Atoms					AltConf	Trace
60	3r	130	Total	C	N	O	S	0	0
			1098	668	221	205	4		

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Mol	Chain	Residues	Atoms					AltConf	Trace
60	3s	130	Total	C	N	O	S	0	0
			1098	668	221	205	4		
60	3t	63	Total	C	N	O	S	0	0
			533	326	105	98	4		

- Molecule 61 is a protein called DMAP1.

Mol	Chain	Residues	Atoms					AltConf	Trace
61	3w	166	Total	C	N	O	S	0	0
			1362	872	235	249	6		
61	3x	126	Total	C	N	O	S	0	0
			987	626	178	182	1		

- Molecule 62 is a protein called DMAP2.

Mol	Chain	Residues	Atoms					AltConf	Trace
62	4A	29	Total	C	N	O	S	0	0
			229	142	43	43	1		
62	4B	201	Total	C	N	O	S	0	0
			1584	1003	275	302	4		

- Molecule 63 is a protein called DMAP7.

Mol	Chain	Residues	Atoms					AltConf	Trace
63	4I	77	Total	C	N	O	S	0	0
			620	385	128	106	1		

- Molecule 64 is a protein called distal DC1.

Mol	Chain	Residues	Atoms					AltConf	Trace
64	5B	168	Total	C	N	O	S	0	0
			1348	828	258	257	5		
64	5C	168	Total	C	N	O	S	0	0
			1348	828	258	257	5		
64	5D	40	Total	C	N	O	S	0	0
			321	196	61	61	3		

- Molecule 65 is a protein called distal DC2.

Mol	Chain	Residues	Atoms					AltConf	Trace
65	5G	185	Total	C	N	O	S	0	0
			1541	942	295	296	8		

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Mol	Chain	Residues	Atoms					AltConf	Trace
65	5H	185	Total	C	N	O	S	0	0
			1541	942	295	296	8		
65	5I	47	Total	C	N	O	S	0	0
			401	251	77	72	1		

- Molecule 66 is a protein called distal DC4.

Mol	Chain	Residues	Atoms					AltConf	Trace
66	5K	266	Total	C	N	O	S	0	0
			2155	1372	377	393	13		
66	5L	266	Total	C	N	O	S	0	0
			2155	1372	377	393	13		

- Molecule 67 is a protein called DC5.

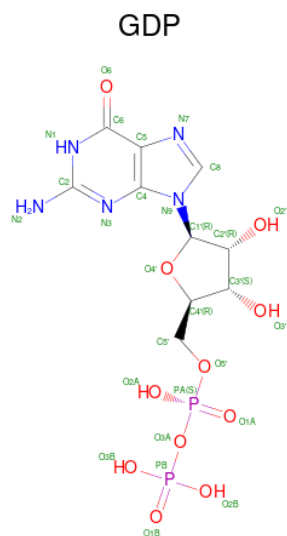
Mol	Chain	Residues	Atoms					AltConf	Trace
67	5O	107	Total	C	N	O	S	0	0
			809	523	130	152	4		
67	5P	107	Total	C	N	O	S	0	0
			809	523	130	152	4		

- Molecule 68 is a protein called DC6.

Mol	Chain	Residues	Atoms					AltConf	Trace
68	5S	92	Total	C	N	O	S	0	0
			749	470	137	133	9		
68	5T	92	Total	C	N	O	S	0	0
			749	470	137	133	9		

- Molecule 69 is GUANOSINE-5'-DIPHOSPHATE (three-letter code: GDP) (formula:  $C_{10}H_{15}N_5O_{11}P_2$ ).





Mol	Chain	Residues	Atoms					AltConf
69	A	1	Total 28	C 10	N 5	O 11	P 2	0
69	AB	1	Total 28	C 10	N 5	O 11	P 2	0
69	AD	1	Total 28	C 10	N 5	O 11	P 2	0
69	AF	1	Total 28	C 10	N 5	O 11	P 2	0
69	AH	1	Total 28	C 10	N 5	O 11	P 2	0
69	AJ	1	Total 28	C 10	N 5	O 11	P 2	0
69	AL	1	Total 28	C 10	N 5	O 11	P 2	0
69	AN	1	Total 28	C 10	N 5	O 11	P 2	0
69	BB	1	Total 28	C 10	N 5	O 11	P 2	0
69	BD	1	Total 28	C 10	N 5	O 11	P 2	0
69	BF	1	Total 28	C 10	N 5	O 11	P 2	0
69	BH	1	Total 28	C 10	N 5	O 11	P 2	0
69	BJ	1	Total 28	C 10	N 5	O 11	P 2	0
69	BL	1	Total 28	C 10	N 5	O 11	P 2	0

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Mol	Chain	Residues	Atoms					AltConf
69	BN	1	Total	C	N	O	P	0
			28	10	5	11	2	
69	CA	1	Total	C	N	O	P	0
			28	10	5	11	2	
69	CC	1	Total	C	N	O	P	0
			28	10	5	11	2	
69	CE	1	Total	C	N	O	P	0
			28	10	5	11	2	
69	CG	1	Total	C	N	O	P	0
			28	10	5	11	2	
69	CI	1	Total	C	N	O	P	0
			28	10	5	11	2	
69	CK	1	Total	C	N	O	P	0
			28	10	5	11	2	
69	CM	1	Total	C	N	O	P	0
			28	10	5	11	2	
69	DA	1	Total	C	N	O	P	0
			28	10	5	11	2	
69	DC	1	Total	C	N	O	P	0
			28	10	5	11	2	
69	DE	1	Total	C	N	O	P	0
			28	10	5	11	2	
69	DG	1	Total	C	N	O	P	0
			28	10	5	11	2	
69	DI	1	Total	C	N	O	P	0
			28	10	5	11	2	
69	DK	1	Total	C	N	O	P	0
			28	10	5	11	2	
69	DM	1	Total	C	N	O	P	0
			28	10	5	11	2	
69	E	1	Total	C	N	O	P	0
			28	10	5	11	2	
69	EB	1	Total	C	N	O	P	0
			28	10	5	11	2	
69	ED	1	Total	C	N	O	P	0
			28	10	5	11	2	
69	EF	1	Total	C	N	O	P	0
			28	10	5	11	2	
69	EH	1	Total	C	N	O	P	0
			28	10	5	11	2	
69	EJ	1	Total	C	N	O	P	0
			28	10	5	11	2	

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Mol	Chain	Residues	Atoms					AltConf
69	EL	1	Total 28	C 10	N 5	O 11	P 2	0
69	F	1	Total 28	C 10	N 5	O 11	P 2	0
69	FB	1	Total 28	C 10	N 5	O 11	P 2	0
69	FD	1	Total 28	C 10	N 5	O 11	P 2	0
69	FF	1	Total 28	C 10	N 5	O 11	P 2	0
69	FH	1	Total 28	C 10	N 5	O 11	P 2	0
69	FJ	1	Total 28	C 10	N 5	O 11	P 2	0
69	FL	1	Total 28	C 10	N 5	O 11	P 2	0
69	G	1	Total 28	C 10	N 5	O 11	P 2	0
69	GB	1	Total 28	C 10	N 5	O 11	P 2	0
69	GD	1	Total 28	C 10	N 5	O 11	P 2	0
69	GF	1	Total 28	C 10	N 5	O 11	P 2	0
69	GH	1	Total 28	C 10	N 5	O 11	P 2	0
69	GJ	1	Total 28	C 10	N 5	O 11	P 2	0
69	GL	1	Total 28	C 10	N 5	O 11	P 2	0
69	H	1	Total 28	C 10	N 5	O 11	P 2	0
69	HB	1	Total 28	C 10	N 5	O 11	P 2	0
69	HD	1	Total 28	C 10	N 5	O 11	P 2	0
69	HF	1	Total 28	C 10	N 5	O 11	P 2	0
69	HH	1	Total 28	C 10	N 5	O 11	P 2	0
69	HJ	1	Total 28	C 10	N 5	O 11	P 2	0

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Mol	Chain	Residues	Atoms					AltConf
69	HL	1	Total	C	N	O	P	0
			28	10	5	11	2	
69	I	1	Total	C	N	O	P	0
			28	10	5	11	2	
69	IB	1	Total	C	N	O	P	0
			28	10	5	11	2	
69	ID	1	Total	C	N	O	P	0
			28	10	5	11	2	
69	IF	1	Total	C	N	O	P	0
			28	10	5	11	2	
69	IH	1	Total	C	N	O	P	0
			28	10	5	11	2	
69	IJ	1	Total	C	N	O	P	0
			28	10	5	11	2	
69	IL	1	Total	C	N	O	P	0
			28	10	5	11	2	
69	JA	1	Total	C	N	O	P	0
			28	10	5	11	2	
69	JC	1	Total	C	N	O	P	0
			28	10	5	11	2	
69	JE	1	Total	C	N	O	P	0
			28	10	5	11	2	
69	JG	1	Total	C	N	O	P	0
			28	10	5	11	2	
69	JI	1	Total	C	N	O	P	0
			28	10	5	11	2	
69	JK	1	Total	C	N	O	P	0
			28	10	5	11	2	
69	JM	1	Total	C	N	O	P	0
			28	10	5	11	2	
69	KA	1	Total	C	N	O	P	0
			28	10	5	11	2	
69	KC	1	Total	C	N	O	P	0
			28	10	5	11	2	
69	KE	1	Total	C	N	O	P	0
			28	10	5	11	2	
69	KG	1	Total	C	N	O	P	0
			28	10	5	11	2	
69	KI	1	Total	C	N	O	P	0
			28	10	5	11	2	
69	KK	1	Total	C	N	O	P	0
			28	10	5	11	2	

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Mol	Chain	Residues	Atoms					AltConf
69	KM	1	Total	C	N	O	P	0
			28	10	5	11	2	
69	LA	1	Total	C	N	O	P	0
			28	10	5	11	2	
69	LC	1	Total	C	N	O	P	0
			28	10	5	11	2	
69	LE	1	Total	C	N	O	P	0
			28	10	5	11	2	
69	LG	1	Total	C	N	O	P	0
			28	10	5	11	2	
69	LI	1	Total	C	N	O	P	0
			28	10	5	11	2	
69	LK	1	Total	C	N	O	P	0
			28	10	5	11	2	
69	LM	1	Total	C	N	O	P	0
			28	10	5	11	2	
69	LO	1	Total	C	N	O	P	0
			28	10	5	11	2	
69	M	1	Total	C	N	O	P	0
			28	10	5	11	2	
69	MB	1	Total	C	N	O	P	0
			28	10	5	11	2	
69	MD	1	Total	C	N	O	P	0
			28	10	5	11	2	
69	MF	1	Total	C	N	O	P	0
			28	10	5	11	2	
69	MH	1	Total	C	N	O	P	0
			28	10	5	11	2	
69	MJ	1	Total	C	N	O	P	0
			28	10	5	11	2	
69	ML	1	Total	C	N	O	P	0
			28	10	5	11	2	
69	MN	1	Total	C	N	O	P	0
			28	10	5	11	2	
69	N	1	Total	C	N	O	P	0
			28	10	5	11	2	
69	NB	1	Total	C	N	O	P	0
			28	10	5	11	2	
69	ND	1	Total	C	N	O	P	0
			28	10	5	11	2	
69	NF	1	Total	C	N	O	P	0
			28	10	5	11	2	

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Mol	Chain	Residues	Atoms					AltConf
69	NH	1	Total 28	C 10	N 5	O 11	P 2	0
69	NJ	1	Total 28	C 10	N 5	O 11	P 2	0
69	NL	1	Total 28	C 10	N 5	O 11	P 2	0
69	O	1	Total 28	C 10	N 5	O 11	P 2	0
69	OB	1	Total 28	C 10	N 5	O 11	P 2	0
69	OD	1	Total 28	C 10	N 5	O 11	P 2	0
69	OF	1	Total 28	C 10	N 5	O 11	P 2	0
69	OH	1	Total 28	C 10	N 5	O 11	P 2	0
69	OJ	1	Total 28	C 10	N 5	O 11	P 2	0
69	OL	1	Total 28	C 10	N 5	O 11	P 2	0
69	P	1	Total 28	C 10	N 5	O 11	P 2	0
69	PB	1	Total 28	C 10	N 5	O 11	P 2	0
69	PD	1	Total 28	C 10	N 5	O 11	P 2	0
69	PF	1	Total 28	C 10	N 5	O 11	P 2	0
69	PH	1	Total 28	C 10	N 5	O 11	P 2	0
69	PJ	1	Total 28	C 10	N 5	O 11	P 2	0
69	PL	1	Total 28	C 10	N 5	O 11	P 2	0
69	QA	1	Total 28	C 10	N 5	O 11	P 2	0
69	QC	1	Total 28	C 10	N 5	O 11	P 2	0
69	QE	1	Total 28	C 10	N 5	O 11	P 2	0
69	QG	1	Total 28	C 10	N 5	O 11	P 2	0

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Mol	Chain	Residues	Atoms					AltConf
69	QI	1	Total 28	C 10	N 5	O 11	P 2	0
69	QK	1	Total 28	C 10	N 5	O 11	P 2	0
69	RA	1	Total 28	C 10	N 5	O 11	P 2	0
69	RC	1	Total 28	C 10	N 5	O 11	P 2	0
69	RE	1	Total 28	C 10	N 5	O 11	P 2	0
69	RG	1	Total 28	C 10	N 5	O 11	P 2	0
69	RI	1	Total 28	C 10	N 5	O 11	P 2	0
69	RK	1	Total 28	C 10	N 5	O 11	P 2	0
69	S	1	Total 28	C 10	N 5	O 11	P 2	0
69	SB	1	Total 28	C 10	N 5	O 11	P 2	0
69	SD	1	Total 28	C 10	N 5	O 11	P 2	0
69	SF	1	Total 28	C 10	N 5	O 11	P 2	0
69	SH	1	Total 28	C 10	N 5	O 11	P 2	0
69	SJ	1	Total 28	C 10	N 5	O 11	P 2	0
69	T	1	Total 28	C 10	N 5	O 11	P 2	0
69	TB	1	Total 28	C 10	N 5	O 11	P 2	0
69	TD	1	Total 28	C 10	N 5	O 11	P 2	0
69	TF	1	Total 28	C 10	N 5	O 11	P 2	0
69	TH	1	Total 28	C 10	N 5	O 11	P 2	0
69	TJ	1	Total 28	C 10	N 5	O 11	P 2	0
69	TL	1	Total 28	C 10	N 5	O 11	P 2	0

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Mol	Chain	Residues	Atoms					AltConf
69	U	1	Total 28	C 10	N 5	O 11	P 2	0
69	UB	1	Total 28	C 10	N 5	O 11	P 2	0
69	UD	1	Total 28	C 10	N 5	O 11	P 2	0
69	UF	1	Total 28	C 10	N 5	O 11	P 2	0
69	UH	1	Total 28	C 10	N 5	O 11	P 2	0
69	UJ	1	Total 28	C 10	N 5	O 11	P 2	0
69	UL	1	Total 28	C 10	N 5	O 11	P 2	0
69	V	1	Total 28	C 10	N 5	O 11	P 2	0
69	VB	1	Total 28	C 10	N 5	O 11	P 2	0
69	VD	1	Total 28	C 10	N 5	O 11	P 2	0
69	VF	1	Total 28	C 10	N 5	O 11	P 2	0
69	VH	1	Total 28	C 10	N 5	O 11	P 2	0
69	VJ	1	Total 28	C 10	N 5	O 11	P 2	0
69	VL	1	Total 28	C 10	N 5	O 11	P 2	0
69	W	1	Total 28	C 10	N 5	O 11	P 2	0
69	WB	1	Total 28	C 10	N 5	O 11	P 2	0
69	WD	1	Total 28	C 10	N 5	O 11	P 2	0
69	WF	1	Total 28	C 10	N 5	O 11	P 2	0
69	WH	1	Total 28	C 10	N 5	O 11	P 2	0
69	WJ	1	Total 28	C 10	N 5	O 11	P 2	0
69	WL	1	Total 28	C 10	N 5	O 11	P 2	0



- Molecule 70 is MAGNESIUM ION (three-letter code: MG) (formula: Mg).

Mol	Chain	Residues	Atoms		AltConf
70	AA	1	Total 1	Mg 1	0
70	AC	1	Total 1	Mg 1	0
70	AE	1	Total 1	Mg 1	0
70	AG	1	Total 1	Mg 1	0
70	AI	1	Total 1	Mg 1	0
70	AK	1	Total 1	Mg 1	0
70	AM	1	Total 1	Mg 1	0
70	BA	1	Total 1	Mg 1	0
70	BC	1	Total 1	Mg 1	0
70	BE	1	Total 1	Mg 1	0
70	BG	1	Total 1	Mg 1	0
70	BI	1	Total 1	Mg 1	0
70	BK	1	Total 1	Mg 1	0
70	BM	1	Total 1	Mg 1	0
70	C	1	Total 1	Mg 1	0
70	CB	1	Total 1	Mg 1	0
70	CD	1	Total 1	Mg 1	0
70	CF	1	Total 1	Mg 1	0
70	CH	1	Total 1	Mg 1	0
70	CJ	1	Total 1	Mg 1	0
70	CL	1	Total 1	Mg 1	0

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Mol	Chain	Residues	Atoms		AltConf
70	D	1	Total 1	Mg 1	0
70	DB	1	Total 1	Mg 1	0
70	DD	1	Total 1	Mg 1	0
70	DF	1	Total 1	Mg 1	0
70	DH	1	Total 1	Mg 1	0
70	DJ	1	Total 1	Mg 1	0
70	DL	1	Total 1	Mg 1	0
70	EA	1	Total 1	Mg 1	0
70	EC	1	Total 1	Mg 1	0
70	EE	1	Total 1	Mg 1	0
70	EG	1	Total 1	Mg 1	0
70	EI	1	Total 1	Mg 1	0
70	EK	1	Total 1	Mg 1	0
70	FA	1	Total 1	Mg 1	0
70	FC	1	Total 1	Mg 1	0
70	FE	1	Total 1	Mg 1	0
70	FG	1	Total 1	Mg 1	0
70	FI	1	Total 1	Mg 1	0
70	FK	1	Total 1	Mg 1	0
70	GA	1	Total 1	Mg 1	0
70	GC	1	Total 1	Mg 1	0

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Mol	Chain	Residues	Atoms		AltConf
70	GE	1	Total 1	Mg 1	0
70	GG	1	Total 1	Mg 1	0
70	GI	1	Total 1	Mg 1	0
70	GK	1	Total 1	Mg 1	0
70	HA	1	Total 1	Mg 1	0
70	HC	1	Total 1	Mg 1	0
70	HE	1	Total 1	Mg 1	0
70	HG	1	Total 1	Mg 1	0
70	HI	1	Total 1	Mg 1	0
70	HK	1	Total 1	Mg 1	0
70	HM	1	Total 1	Mg 1	0
70	IA	1	Total 1	Mg 1	0
70	IC	1	Total 1	Mg 1	0
70	IE	1	Total 1	Mg 1	0
70	IG	1	Total 1	Mg 1	0
70	II	1	Total 1	Mg 1	0
70	IK	1	Total 1	Mg 1	0
70	IM	1	Total 1	Mg 1	0
70	J	1	Total 1	Mg 1	0
70	JB	1	Total 1	Mg 1	0
70	JD	1	Total 1	Mg 1	0

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Mol	Chain	Residues	Atoms		AltConf
70	JF	1	Total 1	Mg 1	0
70	JH	1	Total 1	Mg 1	0
70	JJ	1	Total 1	Mg 1	0
70	JL	1	Total 1	Mg 1	0
70	JN	1	Total 1	Mg 1	0
70	K	1	Total 1	Mg 1	0
70	KB	1	Total 1	Mg 1	0
70	KD	1	Total 1	Mg 1	0
70	KF	1	Total 1	Mg 1	0
70	KH	1	Total 1	Mg 1	0
70	KJ	1	Total 1	Mg 1	0
70	KL	1	Total 1	Mg 1	0
70	KN	1	Total 1	Mg 1	0
70	L	1	Total 1	Mg 1	0
70	LB	1	Total 1	Mg 1	0
70	LD	1	Total 1	Mg 1	0
70	LF	1	Total 1	Mg 1	0
70	LH	1	Total 1	Mg 1	0
70	LJ	1	Total 1	Mg 1	0
70	LL	1	Total 1	Mg 1	0
70	LN	1	Total 1	Mg 1	0

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Mol	Chain	Residues	Atoms		AltConf
			Total	Mg	
70	MA	1	1	1	0
70	MC	1	1	1	0
70	ME	1	1	1	0
70	MG	1	1	1	0
70	MI	1	1	1	0
70	MK	1	1	1	0
70	MM	1	1	1	0
70	NA	1	1	1	0
70	NC	1	1	1	0
70	NE	1	1	1	0
70	NG	1	1	1	0
70	NI	1	1	1	0
70	NK	1	1	1	0
70	NM	1	1	1	0
70	OA	1	1	1	0
70	OC	1	1	1	0
70	OE	1	1	1	0
70	OG	1	1	1	0
70	OI	1	1	1	0
70	OK	1	1	1	0
70	OM	1	1	1	0

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Mol	Chain	Residues	Atoms		AltConf
			Total	Mg	
70	PA	1	1	1	0
70	PC	1	1	1	0
70	PE	1	1	1	0
70	PG	1	1	1	0
70	PI	1	1	1	0
70	PK	1	1	1	0
70	PM	1	1	1	0
70	Q	1	1	1	0
70	QB	1	1	1	0
70	QD	1	1	1	0
70	QF	1	1	1	0
70	QH	1	1	1	0
70	QJ	1	1	1	0
70	QL	1	1	1	0
70	R	1	1	1	0
70	RB	1	1	1	0
70	RD	1	1	1	0
70	RF	1	1	1	0
70	RH	1	1	1	0
70	RJ	1	1	1	0
70	RL	1	1	1	0

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Mol	Chain	Residues	Atoms		AltConf
70	SA	1	Total 1	Mg 1	0
70	SC	1	Total 1	Mg 1	0
70	SE	1	Total 1	Mg 1	0
70	SG	1	Total 1	Mg 1	0
70	SI	1	Total 1	Mg 1	0
70	SK	1	Total 1	Mg 1	0
70	TA	1	Total 1	Mg 1	0
70	TC	1	Total 1	Mg 1	0
70	TE	1	Total 1	Mg 1	0
70	TG	1	Total 1	Mg 1	0
70	TI	1	Total 1	Mg 1	0
70	TK	1	Total 1	Mg 1	0
70	UA	1	Total 1	Mg 1	0
70	UC	1	Total 1	Mg 1	0
70	UE	1	Total 1	Mg 1	0
70	UG	1	Total 1	Mg 1	0
70	UI	1	Total 1	Mg 1	0
70	UK	1	Total 1	Mg 1	0
70	VA	1	Total 1	Mg 1	0
70	VC	1	Total 1	Mg 1	0
70	VE	1	Total 1	Mg 1	0

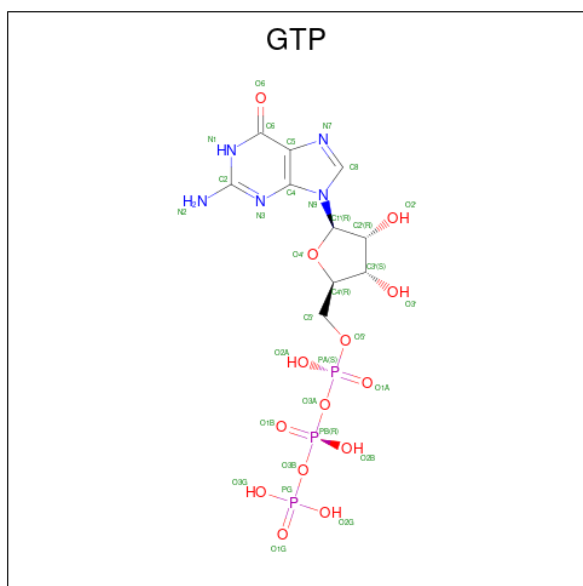
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Mol	Chain	Residues	Atoms		AltConf
70	VG	1	Total	Mg	0
			1	1	
70	VI	1	Total	Mg	0
			1	1	
70	VK	1	Total	Mg	0
			1	1	
70	VM	1	Total	Mg	0
			1	1	
70	WA	1	Total	Mg	0
			1	1	
70	WC	1	Total	Mg	0
			1	1	
70	WE	1	Total	Mg	0
			1	1	
70	WG	1	Total	Mg	0
			1	1	
70	WI	1	Total	Mg	0
			1	1	
70	WK	1	Total	Mg	0
			1	1	
70	WM	1	Total	Mg	0
			1	1	

- Molecule 71 is GUANOSINE-5'-TRIPHOSPHATE (three-letter code: GTP) (formula:  $C_{10}H_{16}N_5O_{14}P_3$ ).





Mol	Chain	Residues	Atoms					AltConf
71	AA	1	Total 32	C 10	N 5	O 14	P 3	0
71	AC	1	Total 32	C 10	N 5	O 14	P 3	0
71	AE	1	Total 32	C 10	N 5	O 14	P 3	0
71	AG	1	Total 32	C 10	N 5	O 14	P 3	0
71	AI	1	Total 32	C 10	N 5	O 14	P 3	0
71	AK	1	Total 32	C 10	N 5	O 14	P 3	0
71	AM	1	Total 32	C 10	N 5	O 14	P 3	0
71	BA	1	Total 32	C 10	N 5	O 14	P 3	0
71	BC	1	Total 32	C 10	N 5	O 14	P 3	0
71	BE	1	Total 32	C 10	N 5	O 14	P 3	0
71	BG	1	Total 32	C 10	N 5	O 14	P 3	0
71	BI	1	Total 32	C 10	N 5	O 14	P 3	0
71	BK	1	Total 32	C 10	N 5	O 14	P 3	0
71	BM	1	Total 32	C 10	N 5	O 14	P 3	0
71	C	1	Total 32	C 10	N 5	O 14	P 3	0
71	CB	1	Total 32	C 10	N 5	O 14	P 3	0
71	CD	1	Total 32	C 10	N 5	O 14	P 3	0
71	CF	1	Total 32	C 10	N 5	O 14	P 3	0
71	CH	1	Total 32	C 10	N 5	O 14	P 3	0
71	CJ	1	Total 32	C 10	N 5	O 14	P 3	0
71	CL	1	Total 32	C 10	N 5	O 14	P 3	0
71	D	1	Total 32	C 10	N 5	O 14	P 3	0

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Mol	Chain	Residues	Atoms					AltConf
71	DB	1	Total 32	C 10	N 5	O 14	P 3	0
71	DD	1	Total 32	C 10	N 5	O 14	P 3	0
71	DF	1	Total 32	C 10	N 5	O 14	P 3	0
71	DH	1	Total 32	C 10	N 5	O 14	P 3	0
71	DJ	1	Total 32	C 10	N 5	O 14	P 3	0
71	DL	1	Total 32	C 10	N 5	O 14	P 3	0
71	EA	1	Total 32	C 10	N 5	O 14	P 3	0
71	EC	1	Total 32	C 10	N 5	O 14	P 3	0
71	EE	1	Total 32	C 10	N 5	O 14	P 3	0
71	EG	1	Total 32	C 10	N 5	O 14	P 3	0
71	EI	1	Total 32	C 10	N 5	O 14	P 3	0
71	EK	1	Total 32	C 10	N 5	O 14	P 3	0
71	FA	1	Total 32	C 10	N 5	O 14	P 3	0
71	FC	1	Total 32	C 10	N 5	O 14	P 3	0
71	FE	1	Total 32	C 10	N 5	O 14	P 3	0
71	FG	1	Total 32	C 10	N 5	O 14	P 3	0
71	FI	1	Total 32	C 10	N 5	O 14	P 3	0
71	FK	1	Total 32	C 10	N 5	O 14	P 3	0
71	GA	1	Total 32	C 10	N 5	O 14	P 3	0
71	GC	1	Total 32	C 10	N 5	O 14	P 3	0
71	GE	1	Total 32	C 10	N 5	O 14	P 3	0

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Mol	Chain	Residues	Atoms					AltConf
71	GG	1	Total 32	C 10	N 5	O 14	P 3	0
71	GI	1	Total 32	C 10	N 5	O 14	P 3	0
71	GK	1	Total 32	C 10	N 5	O 14	P 3	0
71	HA	1	Total 32	C 10	N 5	O 14	P 3	0
71	HC	1	Total 32	C 10	N 5	O 14	P 3	0
71	HE	1	Total 32	C 10	N 5	O 14	P 3	0
71	HG	1	Total 32	C 10	N 5	O 14	P 3	0
71	HI	1	Total 32	C 10	N 5	O 14	P 3	0
71	HK	1	Total 32	C 10	N 5	O 14	P 3	0
71	HM	1	Total 32	C 10	N 5	O 14	P 3	0
71	IA	1	Total 32	C 10	N 5	O 14	P 3	0
71	IC	1	Total 32	C 10	N 5	O 14	P 3	0
71	IE	1	Total 32	C 10	N 5	O 14	P 3	0
71	IG	1	Total 32	C 10	N 5	O 14	P 3	0
71	II	1	Total 32	C 10	N 5	O 14	P 3	0
71	IK	1	Total 32	C 10	N 5	O 14	P 3	0
71	IM	1	Total 32	C 10	N 5	O 14	P 3	0
71	J	1	Total 32	C 10	N 5	O 14	P 3	0
71	JB	1	Total 32	C 10	N 5	O 14	P 3	0
71	JD	1	Total 32	C 10	N 5	O 14	P 3	0
71	JF	1	Total 32	C 10	N 5	O 14	P 3	0

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Mol	Chain	Residues	Atoms					AltConf
71	JH	1	Total 32	C 10	N 5	O 14	P 3	0
71	JJ	1	Total 32	C 10	N 5	O 14	P 3	0
71	JL	1	Total 32	C 10	N 5	O 14	P 3	0
71	JN	1	Total 32	C 10	N 5	O 14	P 3	0
71	K	1	Total 32	C 10	N 5	O 14	P 3	0
71	KB	1	Total 32	C 10	N 5	O 14	P 3	0
71	KD	1	Total 32	C 10	N 5	O 14	P 3	0
71	KF	1	Total 32	C 10	N 5	O 14	P 3	0
71	KH	1	Total 32	C 10	N 5	O 14	P 3	0
71	KJ	1	Total 32	C 10	N 5	O 14	P 3	0
71	KL	1	Total 32	C 10	N 5	O 14	P 3	0
71	KN	1	Total 32	C 10	N 5	O 14	P 3	0
71	L	1	Total 32	C 10	N 5	O 14	P 3	0
71	LB	1	Total 32	C 10	N 5	O 14	P 3	0
71	LD	1	Total 32	C 10	N 5	O 14	P 3	0
71	LF	1	Total 32	C 10	N 5	O 14	P 3	0
71	LH	1	Total 32	C 10	N 5	O 14	P 3	0
71	LJ	1	Total 32	C 10	N 5	O 14	P 3	0
71	LL	1	Total 32	C 10	N 5	O 14	P 3	0
71	LN	1	Total 32	C 10	N 5	O 14	P 3	0
71	MA	1	Total 32	C 10	N 5	O 14	P 3	0

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Mol	Chain	Residues	Atoms					AltConf
71	MC	1	Total 32	C 10	N 5	O 14	P 3	0
71	ME	1	Total 32	C 10	N 5	O 14	P 3	0
71	MG	1	Total 32	C 10	N 5	O 14	P 3	0
71	MI	1	Total 32	C 10	N 5	O 14	P 3	0
71	MK	1	Total 32	C 10	N 5	O 14	P 3	0
71	MM	1	Total 32	C 10	N 5	O 14	P 3	0
71	NA	1	Total 32	C 10	N 5	O 14	P 3	0
71	NC	1	Total 32	C 10	N 5	O 14	P 3	0
71	NE	1	Total 32	C 10	N 5	O 14	P 3	0
71	NG	1	Total 32	C 10	N 5	O 14	P 3	0
71	NI	1	Total 32	C 10	N 5	O 14	P 3	0
71	NK	1	Total 32	C 10	N 5	O 14	P 3	0
71	NM	1	Total 32	C 10	N 5	O 14	P 3	0
71	OA	1	Total 32	C 10	N 5	O 14	P 3	0
71	OC	1	Total 32	C 10	N 5	O 14	P 3	0
71	OE	1	Total 32	C 10	N 5	O 14	P 3	0
71	OG	1	Total 32	C 10	N 5	O 14	P 3	0
71	OI	1	Total 32	C 10	N 5	O 14	P 3	0
71	OK	1	Total 32	C 10	N 5	O 14	P 3	0
71	OM	1	Total 32	C 10	N 5	O 14	P 3	0
71	PA	1	Total 32	C 10	N 5	O 14	P 3	0

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Mol	Chain	Residues	Atoms					AltConf
71	PC	1	Total 32	C 10	N 5	O 14	P 3	0
71	PE	1	Total 32	C 10	N 5	O 14	P 3	0
71	PG	1	Total 32	C 10	N 5	O 14	P 3	0
71	PI	1	Total 32	C 10	N 5	O 14	P 3	0
71	PK	1	Total 32	C 10	N 5	O 14	P 3	0
71	PM	1	Total 32	C 10	N 5	O 14	P 3	0
71	Q	1	Total 32	C 10	N 5	O 14	P 3	0
71	QB	1	Total 32	C 10	N 5	O 14	P 3	0
71	QD	1	Total 32	C 10	N 5	O 14	P 3	0
71	QF	1	Total 32	C 10	N 5	O 14	P 3	0
71	QH	1	Total 32	C 10	N 5	O 14	P 3	0
71	QJ	1	Total 32	C 10	N 5	O 14	P 3	0
71	QL	1	Total 32	C 10	N 5	O 14	P 3	0
71	R	1	Total 32	C 10	N 5	O 14	P 3	0
71	RB	1	Total 32	C 10	N 5	O 14	P 3	0
71	RD	1	Total 32	C 10	N 5	O 14	P 3	0
71	RF	1	Total 32	C 10	N 5	O 14	P 3	0
71	RH	1	Total 32	C 10	N 5	O 14	P 3	0
71	RJ	1	Total 32	C 10	N 5	O 14	P 3	0
71	RL	1	Total 32	C 10	N 5	O 14	P 3	0
71	SA	1	Total 32	C 10	N 5	O 14	P 3	0

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Mol	Chain	Residues	Atoms					AltConf
71	SC	1	Total 32	C 10	N 5	O 14	P 3	0
71	SE	1	Total 32	C 10	N 5	O 14	P 3	0
71	SG	1	Total 32	C 10	N 5	O 14	P 3	0
71	SI	1	Total 32	C 10	N 5	O 14	P 3	0
71	SK	1	Total 32	C 10	N 5	O 14	P 3	0
71	TA	1	Total 32	C 10	N 5	O 14	P 3	0
71	TC	1	Total 32	C 10	N 5	O 14	P 3	0
71	TE	1	Total 32	C 10	N 5	O 14	P 3	0
71	TG	1	Total 32	C 10	N 5	O 14	P 3	0
71	TI	1	Total 32	C 10	N 5	O 14	P 3	0
71	TK	1	Total 32	C 10	N 5	O 14	P 3	0
71	UA	1	Total 32	C 10	N 5	O 14	P 3	0
71	UC	1	Total 32	C 10	N 5	O 14	P 3	0
71	UE	1	Total 32	C 10	N 5	O 14	P 3	0
71	UG	1	Total 32	C 10	N 5	O 14	P 3	0
71	UI	1	Total 32	C 10	N 5	O 14	P 3	0
71	UK	1	Total 32	C 10	N 5	O 14	P 3	0
71	VA	1	Total 32	C 10	N 5	O 14	P 3	0
71	VC	1	Total 32	C 10	N 5	O 14	P 3	0
71	VE	1	Total 32	C 10	N 5	O 14	P 3	0
71	VG	1	Total 32	C 10	N 5	O 14	P 3	0

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Mol	Chain	Residues	Atoms					AltConf
71	VI	1	Total	C	N	O	P	0
			32	10	5	14	3	
71	VK	1	Total	C	N	O	P	0
			32	10	5	14	3	
71	VM	1	Total	C	N	O	P	0
			32	10	5	14	3	
71	WA	1	Total	C	N	O	P	0
			32	10	5	14	3	
71	WC	1	Total	C	N	O	P	0
			32	10	5	14	3	
71	WE	1	Total	C	N	O	P	0
			32	10	5	14	3	
71	WG	1	Total	C	N	O	P	0
			32	10	5	14	3	
71	WI	1	Total	C	N	O	P	0
			32	10	5	14	3	
71	WK	1	Total	C	N	O	P	0
			32	10	5	14	3	
71	WM	1	Total	C	N	O	P	0
			32	10	5	14	3	

- Molecule 72 is ZINC ION (three-letter code: ZN) (formula: Zn).

Mol	Chain	Residues	Atoms		AltConf
72	0A	1	Total	Zn	0
			1	1	
72	0	1	Total	Zn	0
			1	1	
72	0z	1	Total	Zn	0
			1	1	
72	1V	2	Total	Zn	0
			2	2	
72	1Y	2	Total	Zn	0
			2	2	
72	1b	2	Total	Zn	0
			2	2	
72	1c	2	Total	Zn	0
			2	2	
72	1e	2	Total	Zn	0
			2	2	
72	1h	2	Total	Zn	0
			2	2	

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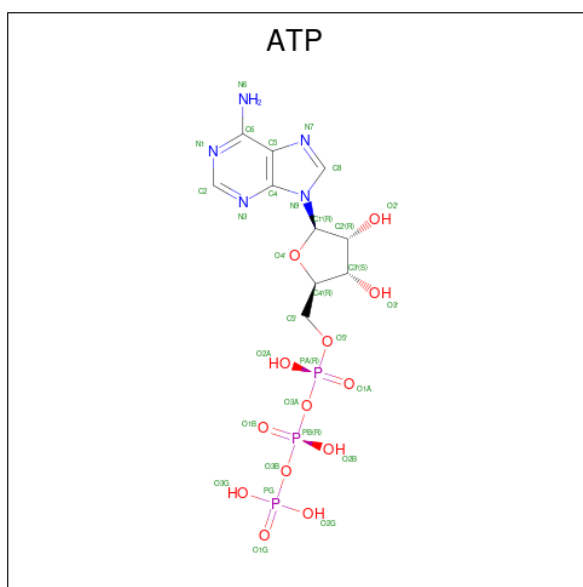
Mol	Chain	Residues	Atoms		AltConf
72	1q	3	Total 3	Zn 3	0
72	1s	1	Total 1	Zn 1	0
72	1t	1	Total 1	Zn 1	0
72	1w	2	Total 2	Zn 2	0
72	1x	2	Total 2	Zn 2	0
72	3S	1	Total 1	Zn 1	0
72	4W	2	Total 2	Zn 2	0
72	5S	1	Total 1	Zn 1	0
72	5T	1	Total 1	Zn 1	0

- Molecule 73 is CALCIUM ION (three-letter code: CA) (formula: Ca).

Mol	Chain	Residues	Atoms		AltConf
73	1S	1	Total 1	Ca 1	0
73	2v	1	Total 1	Ca 1	0
73	2w	1	Total 1	Ca 1	0

- Molecule 74 is ADENOSINE-5'-TRIPHOSPHATE (three-letter code: ATP) (formula: C<sub>10</sub>H<sub>16</sub>N<sub>5</sub>O<sub>13</sub>P<sub>3</sub>).





Mol	Chain	Residues	Atoms					AltConf
74	2v	1	Total 31	C 10	N 5	O 13	P 3	0
74	2w	1	Total 31	C 10	N 5	O 13	P 3	0

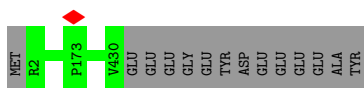


### 3 Residue-property plots [i](#)

These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and atom inclusion in map density. Residues are color-coded according to the number of geometric quality criteria for which they contain at least one outlier: green = 0, yellow = 1, orange = 2 and red = 3 or more. A red diamond above a residue indicates a poor fit to the EM map for this residue (all-atom inclusion < 40%). Stretches of 2 or more consecutive residues without any outlier are shown as a green connector. Residues present in the sample, but not in the model, are shown in grey.

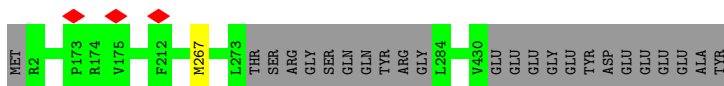
- Molecule 1: Tubulin beta chain

Chain A:  97% .



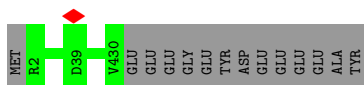
- Molecule 1: Tubulin beta chain

Chain AB:  94% 5% .



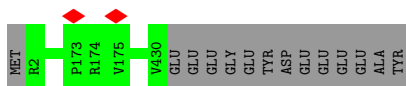
- Molecule 1: Tubulin beta chain

Chain AD:  97% .



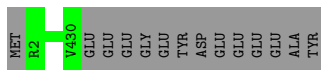
- Molecule 1: Tubulin beta chain

Chain AF:  97% .



- Molecule 1: Tubulin beta chain

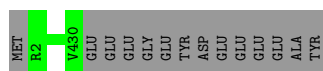
Chain AH:  97% .



- Molecule 1: Tubulin beta chain

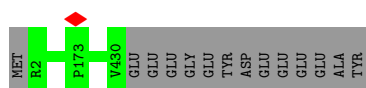


Chain AJ:  97% .



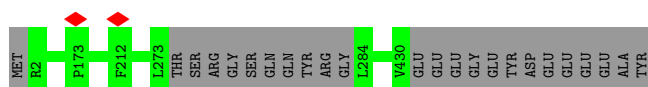
- Molecule 1: Tubulin beta chain

Chain AL:  97% .



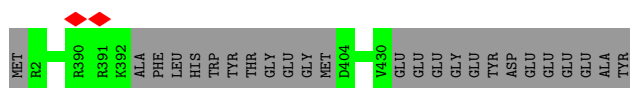
- Molecule 1: Tubulin beta chain

Chain AN:  95% 5%



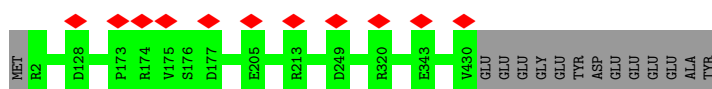
- Molecule 1: Tubulin beta chain

Chain B:  94% 6%



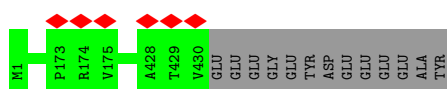
- Molecule 1: Tubulin beta chain

Chain BB:  97% .



- Molecule 1: Tubulin beta chain

Chain BD:  97% .



- Molecule 1: Tubulin beta chain

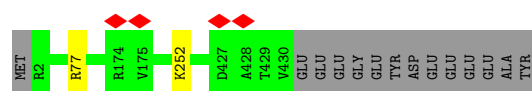
Chain BF:  97% .



- Molecule 1: Tubulin beta chain

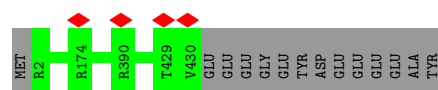


Chain BH:  96%



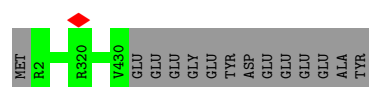
- Molecule 1: Tubulin beta chain

Chain BJ:  97%



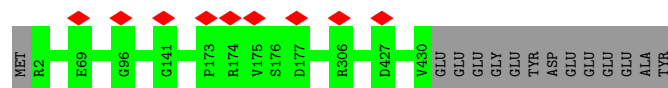
- Molecule 1: Tubulin beta chain

Chain BL:  97%



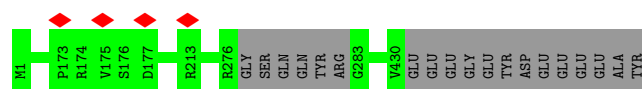
- Molecule 1: Tubulin beta chain

Chain BN:  97%



- Molecule 1: Tubulin beta chain

Chain CA:  96%



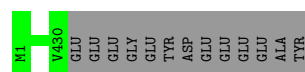
- Molecule 1: Tubulin beta chain

Chain CC:  97%



- Molecule 1: Tubulin beta chain

Chain CE:  97%



- Molecule 1: Tubulin beta chain

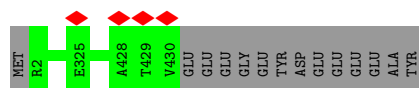


Chain CG:  97%



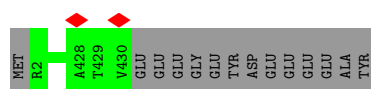
- Molecule 1: Tubulin beta chain

Chain CI:  97%



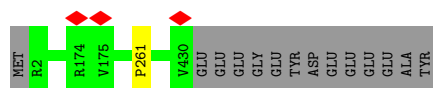
- Molecule 1: Tubulin beta chain

Chain CK:  97%



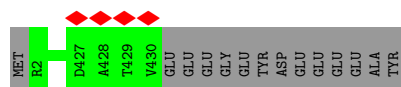
- Molecule 1: Tubulin beta chain

Chain CM:  97%



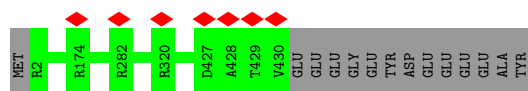
- Molecule 1: Tubulin beta chain

Chain DA:  97%



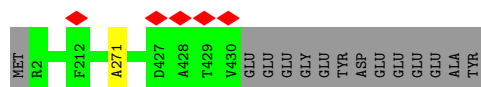
- Molecule 1: Tubulin beta chain

Chain DC:  97%



- Molecule 1: Tubulin beta chain

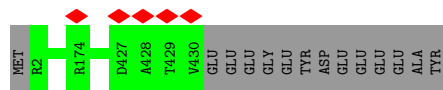
Chain DE:  97%





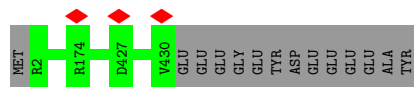
- Molecule 1: Tubulin beta chain

Chain DG:  97%



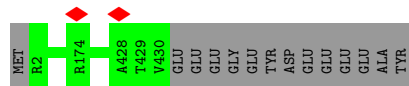
- Molecule 1: Tubulin beta chain

Chain DI:  97%



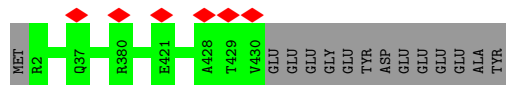
- Molecule 1: Tubulin beta chain

Chain DK:  97%



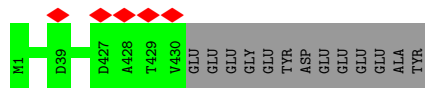
- Molecule 1: Tubulin beta chain

Chain DM:  97%



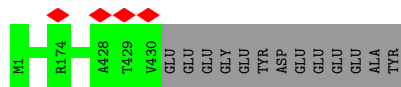
- Molecule 1: Tubulin beta chain

Chain E:  97%



- Molecule 1: Tubulin beta chain

Chain EB:  97%



- Molecule 1: Tubulin beta chain

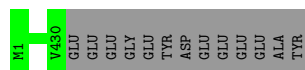
Chain ED:  97%





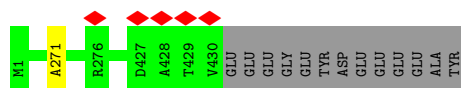
- Molecule 1: Tubulin beta chain

Chain EF:  97%



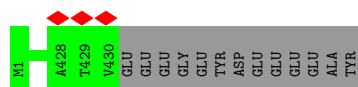
- Molecule 1: Tubulin beta chain

Chain EH:  97%



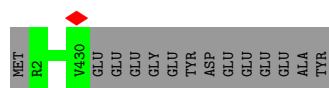
- Molecule 1: Tubulin beta chain

Chain EJ:  97%



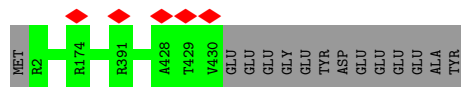
- Molecule 1: Tubulin beta chain

Chain EL:  97%



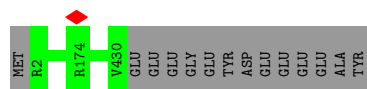
- Molecule 1: Tubulin beta chain

Chain F:  97%



- Molecule 1: Tubulin beta chain

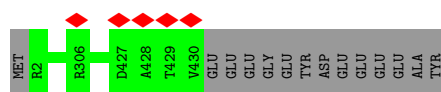
Chain FB:  97%



- Molecule 1: Tubulin beta chain

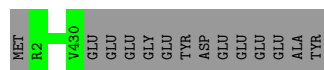
Chain FD:  97%





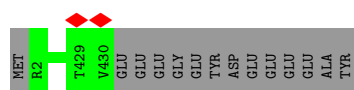
- Molecule 1: Tubulin beta chain

Chain FF: 97%



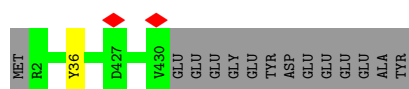
- Molecule 1: Tubulin beta chain

Chain FH: 97%



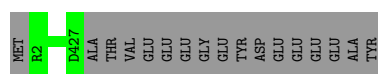
- Molecule 1: Tubulin beta chain

Chain FJ: 97%



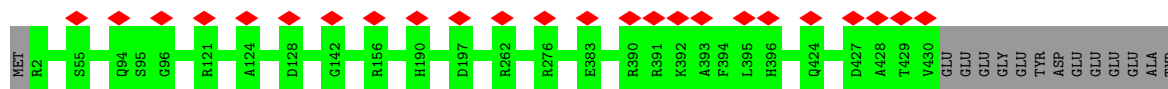
- Molecule 1: Tubulin beta chain

Chain FL: 96%



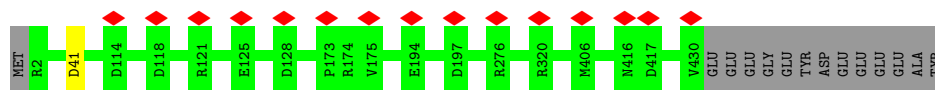
- Molecule 1: Tubulin beta chain

Chain G: 5% 97%



- Molecule 1: Tubulin beta chain

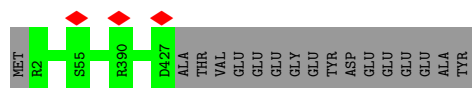
Chain GB: 97%



- Molecule 1: Tubulin beta chain

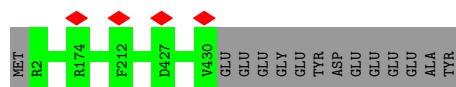
Chain GD: 96%





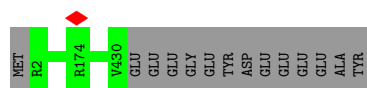
- Molecule 1: Tubulin beta chain

Chain GF: 97%



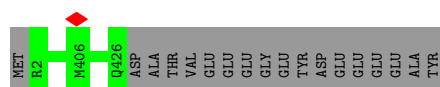
- Molecule 1: Tubulin beta chain

Chain GH: 97%



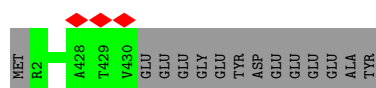
- Molecule 1: Tubulin beta chain

Chain GJ: 96%



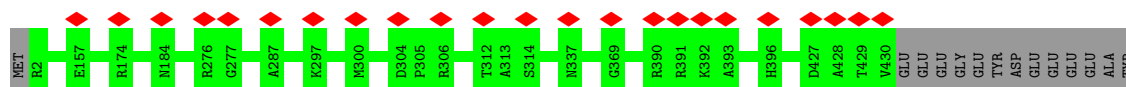
- Molecule 1: Tubulin beta chain

Chain GL: 97%



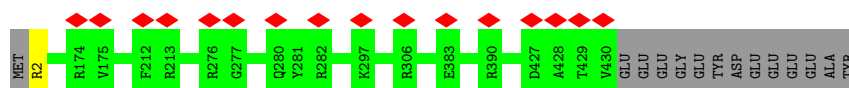
- Molecule 1: Tubulin beta chain

Chain H: 5% 97%



- Molecule 1: Tubulin beta chain

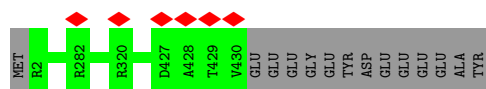
Chain HB: 97%



- Molecule 1: Tubulin beta chain

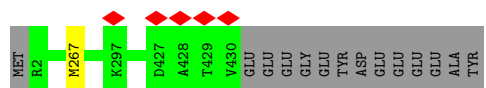


Chain HD:  97%



- Molecule 1: Tubulin beta chain

Chain HF:  97%



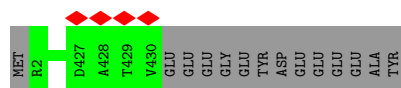
- Molecule 1: Tubulin beta chain

Chain HH:  97%



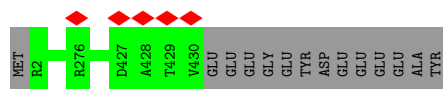
- Molecule 1: Tubulin beta chain

Chain HJ:  97%




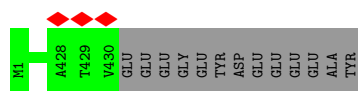
- Molecule 1: Tubulin beta chain

Chain HL:  97%



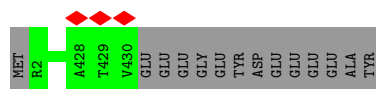
- Molecule 1: Tubulin beta chain

Chain I:  97%



- Molecule 1: Tubulin beta chain

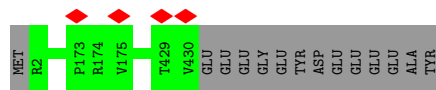
Chain IB:  97%





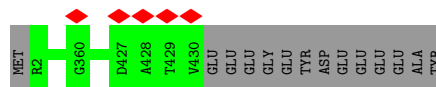
- Molecule 1: Tubulin beta chain

Chain ID:  97%



- Molecule 1: Tubulin beta chain

Chain IF:  97%



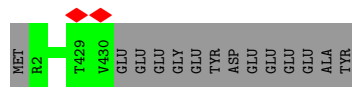
- Molecule 1: Tubulin beta chain

Chain IH:  97%



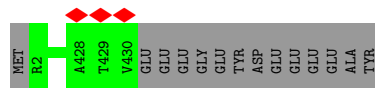
- Molecule 1: Tubulin beta chain

Chain IJ:  97%



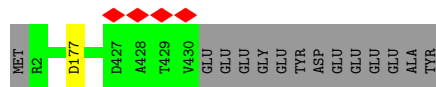
- Molecule 1: Tubulin beta chain

Chain IL:  97%



- Molecule 1: Tubulin beta chain

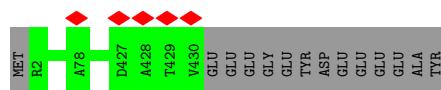
Chain JA:  97%



- Molecule 1: Tubulin beta chain

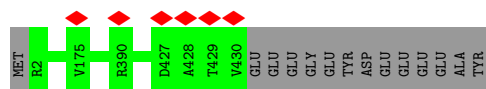
Chain JC:  97%





- Molecule 1: Tubulin beta chain

Chain JE: 97%



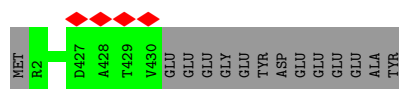
- Molecule 1: Tubulin beta chain

Chain JG: 97%



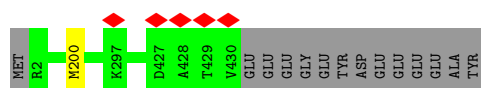
- Molecule 1: Tubulin beta chain

Chain JI: 97%



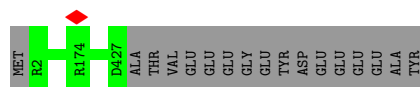
- Molecule 1: Tubulin beta chain

Chain JK: 97%



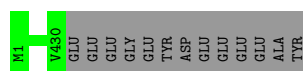
- Molecule 1: Tubulin beta chain

Chain JM: 96%



- Molecule 1: Tubulin beta chain

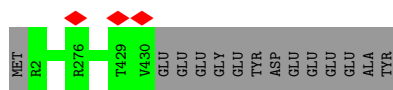
Chain KA: 97%



- Molecule 1: Tubulin beta chain

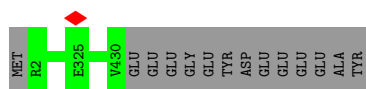
Chain KC: 97%





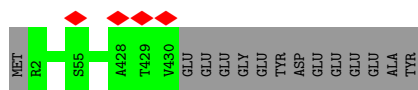
- Molecule 1: Tubulin beta chain

Chain KE: 97%



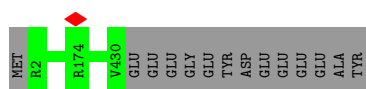
- Molecule 1: Tubulin beta chain

Chain KG: 97%



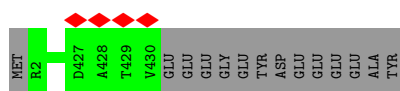
- Molecule 1: Tubulin beta chain

Chain KI: 97%



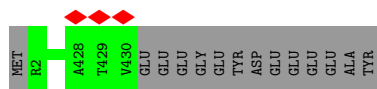
- Molecule 1: Tubulin beta chain

Chain KK: 97%



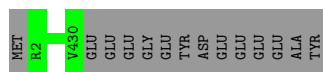
- Molecule 1: Tubulin beta chain

Chain KM: 97%



- Molecule 1: Tubulin beta chain

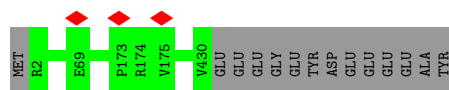
Chain LA: 97%



- Molecule 1: Tubulin beta chain

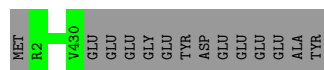
Chain LC: 97%





- Molecule 1: Tubulin beta chain

Chain LE: 97%



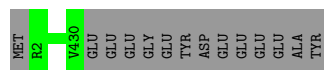
- Molecule 1: Tubulin beta chain

Chain LG: 97%



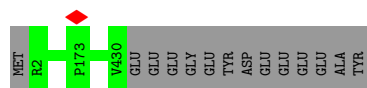
- Molecule 1: Tubulin beta chain

Chain LI: 97%



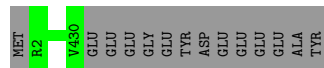
- Molecule 1: Tubulin beta chain

Chain LK: 97%



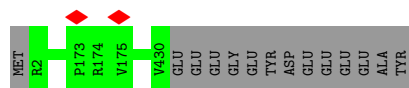
- Molecule 1: Tubulin beta chain

Chain LM: 97%



- Molecule 1: Tubulin beta chain

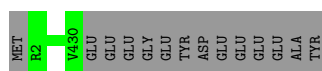
Chain LO: 97%



- Molecule 1: Tubulin beta chain

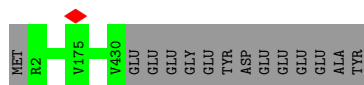
Chain M: 97%





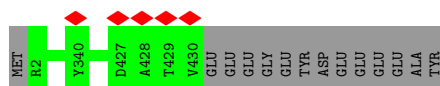
- Molecule 1: Tubulin beta chain

Chain MB: 97%



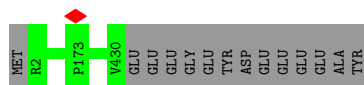
- Molecule 1: Tubulin beta chain

Chain MD: 97%



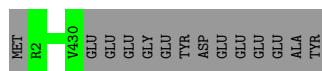
- Molecule 1: Tubulin beta chain

Chain MF: 97%



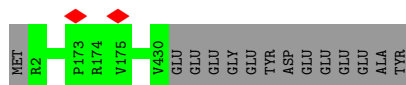
- Molecule 1: Tubulin beta chain

Chain MH: 97%



- Molecule 1: Tubulin beta chain

Chain MJ: 97%



- Molecule 1: Tubulin beta chain

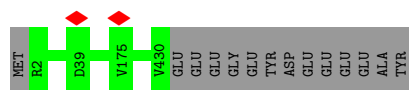
Chain ML: 97%



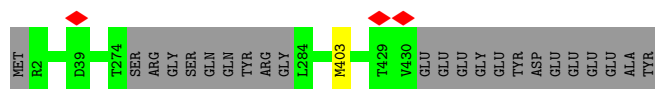
- Molecule 1: Tubulin beta chain

Chain MN: 97%

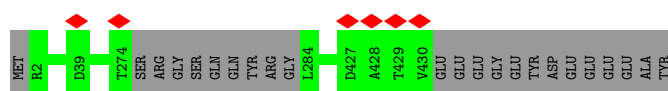




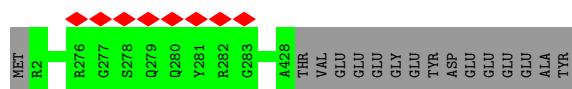
- Molecule 1: Tubulin beta chain



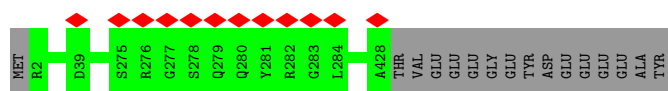
- Molecule 1: Tubulin beta chain



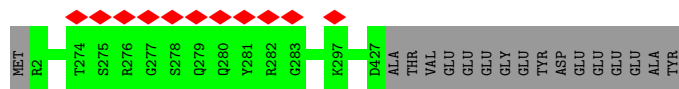
- Molecule 1: Tubulin beta chain



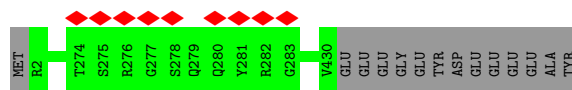
- Molecule 1: Tubulin beta chain



- Molecule 1: Tubulin beta chain



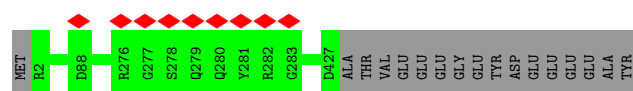
- Molecule 1: Tubulin beta chain



- Molecule 1: Tubulin beta chain

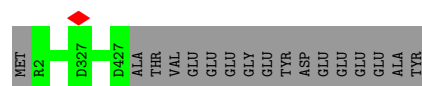


Chain NL:  96%



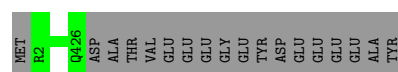
- Molecule 1: Tubulin beta chain

Chain O:  96%



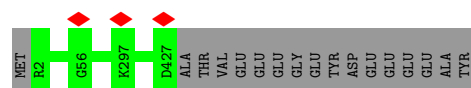
- Molecule 1: Tubulin beta chain

Chain OB:  96%



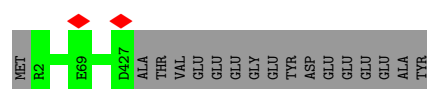
- Molecule 1: Tubulin beta chain

Chain OD:  96%



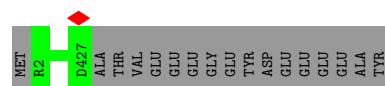
- Molecule 1: Tubulin beta chain

Chain OF:  96%



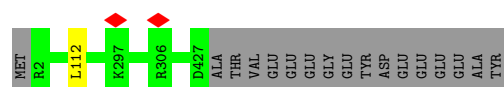
- Molecule 1: Tubulin beta chain

Chain OH:  96%



- Molecule 1: Tubulin beta chain

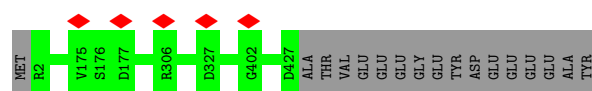
Chain OJ:  96%




- Molecule 1: Tubulin beta chain

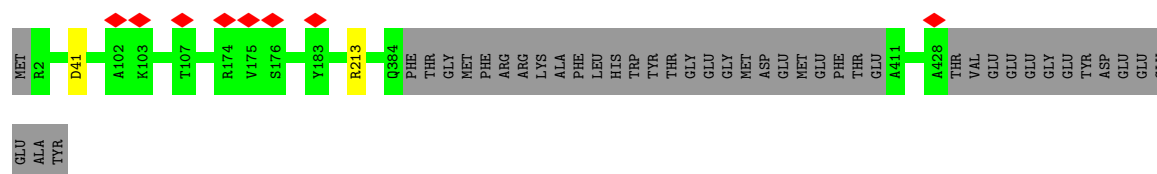


Chain OL:  96%



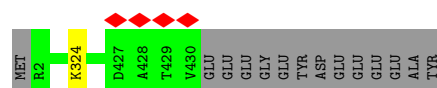
- Molecule 1: Tubulin beta chain

Chain P:  90%



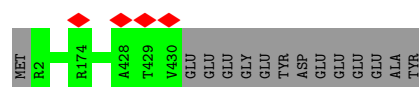
- Molecule 1: Tubulin beta chain

Chain PB:  97%



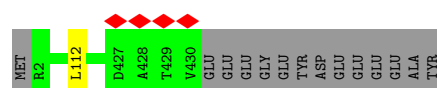
- Molecule 1: Tubulin beta chain

Chain PD:  97%



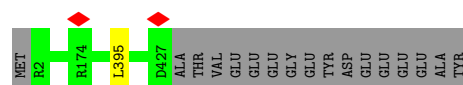
- Molecule 1: Tubulin beta chain

Chain PF:  97%



- Molecule 1: Tubulin beta chain

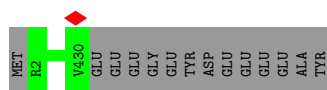
Chain PH:  96%



- Molecule 1: Tubulin beta chain

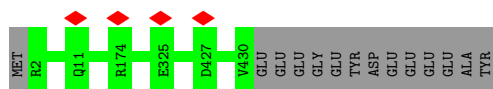
Chain PJ:  97%





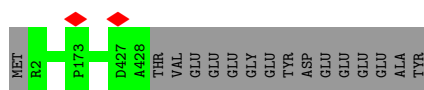
- Molecule 1: Tubulin beta chain

Chain PL: 97%



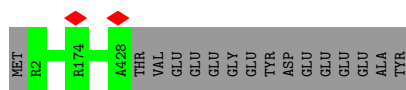
- Molecule 1: Tubulin beta chain

Chain QA: 96%



- Molecule 1: Tubulin beta chain

Chain QC: 96%



- Molecule 1: Tubulin beta chain

Chain QE: 96%



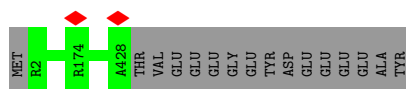
- Molecule 1: Tubulin beta chain

Chain QG: 96%



- Molecule 1: Tubulin beta chain

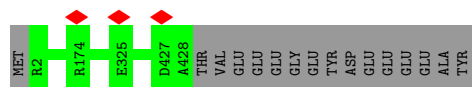
Chain QI: 96%



- Molecule 1: Tubulin beta chain

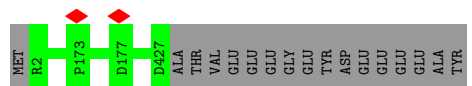


Chain QK:  96%



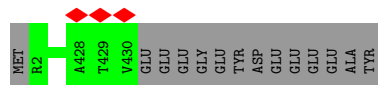
- Molecule 1: Tubulin beta chain

Chain RA:  96%



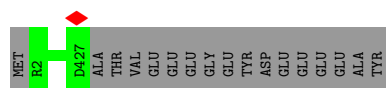
- Molecule 1: Tubulin beta chain

Chain RC:  97%



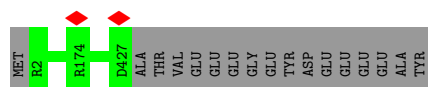
- Molecule 1: Tubulin beta chain

Chain RE:  96%

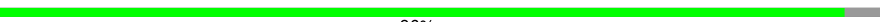


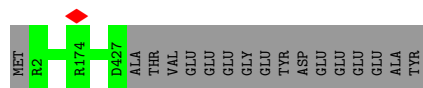
- Molecule 1: Tubulin beta chain

Chain RG:  96%



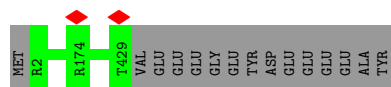
- Molecule 1: Tubulin beta chain

Chain RI:  96%



- Molecule 1: Tubulin beta chain

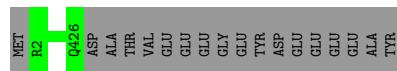
Chain RK:  97%





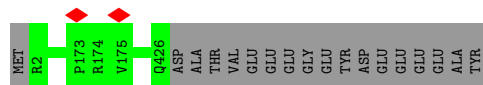
- Molecule 1: Tubulin beta chain

Chain S:  96%



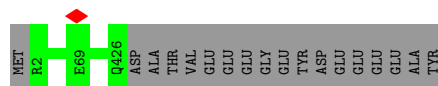
- Molecule 1: Tubulin beta chain

Chain SB:  96%



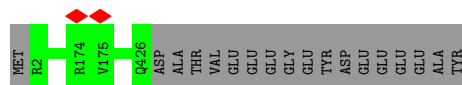
- Molecule 1: Tubulin beta chain

Chain SD:  96%



- Molecule 1: Tubulin beta chain

Chain SF:  96%



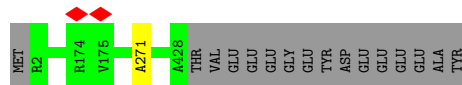
- Molecule 1: Tubulin beta chain

Chain SH:  96%



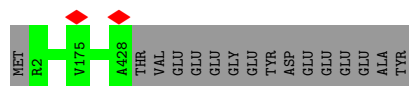
- Molecule 1: Tubulin beta chain

Chain SJ:  96%



- Molecule 1: Tubulin beta chain

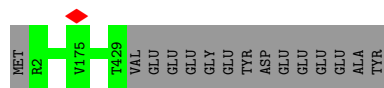
Chain T:  96%





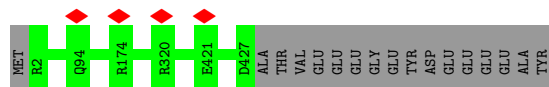
- Molecule 1: Tubulin beta chain

Chain TB:  97%



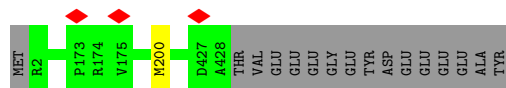
- Molecule 1: Tubulin beta chain

Chain TD:  96%



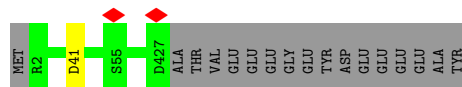
- Molecule 1: Tubulin beta chain

Chain TF:  96%



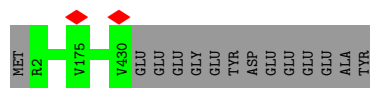
- Molecule 1: Tubulin beta chain

Chain TH:  96%



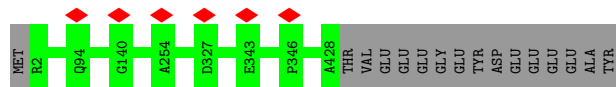
- Molecule 1: Tubulin beta chain

Chain TJ:  97%



- Molecule 1: Tubulin beta chain

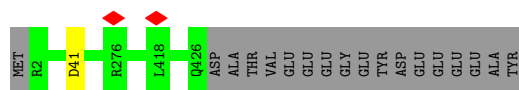
Chain TL:  96%



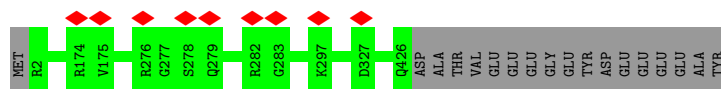
- Molecule 1: Tubulin beta chain

Chain U:  96%

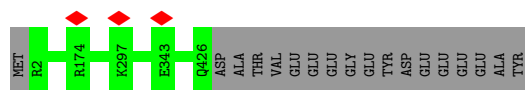




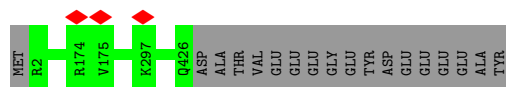
- Molecule 1: Tubulin beta chain



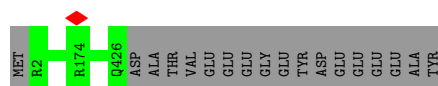
- Molecule 1: Tubulin beta chain



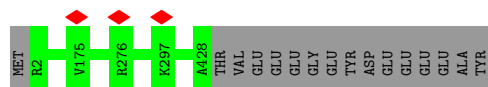
- Molecule 1: Tubulin beta chain



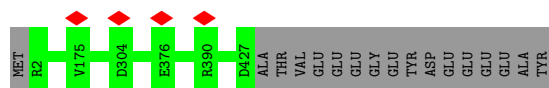
- Molecule 1: Tubulin beta chain



- Molecule 1: Tubulin beta chain



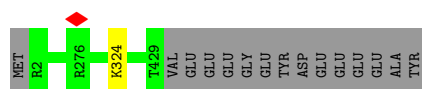
- Molecule 1: Tubulin beta chain



- Molecule 1: Tubulin beta chain

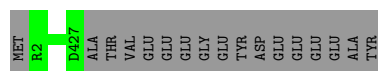


Chain V:  96%



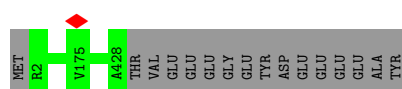
- Molecule 1: Tubulin beta chain

Chain VB:  96%



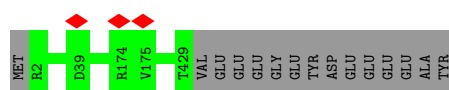
- Molecule 1: Tubulin beta chain

Chain VD:  96%



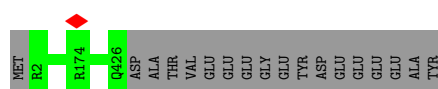
- Molecule 1: Tubulin beta chain

Chain VF:  97%



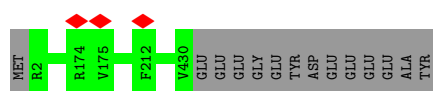
- Molecule 1: Tubulin beta chain

Chain VH:  96%



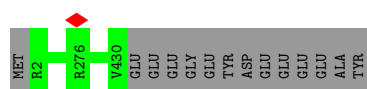
- Molecule 1: Tubulin beta chain

Chain VJ:  97%



- Molecule 1: Tubulin beta chain

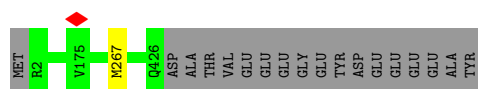
Chain VL:  97%



- Molecule 1: Tubulin beta chain

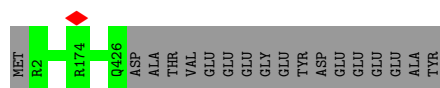


Chain W:  96%



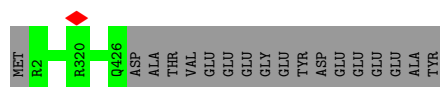
- Molecule 1: Tubulin beta chain

Chain WB:  96%



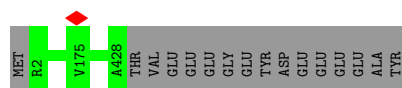
- Molecule 1: Tubulin beta chain

Chain WD:  96%



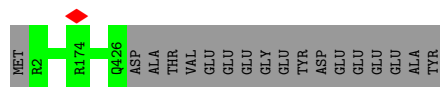
- Molecule 1: Tubulin beta chain

Chain WF:  96%



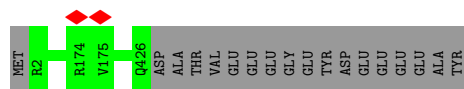
- Molecule 1: Tubulin beta chain

Chain WH:  96%



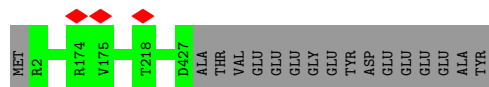
- Molecule 1: Tubulin beta chain

Chain WJ:  96%



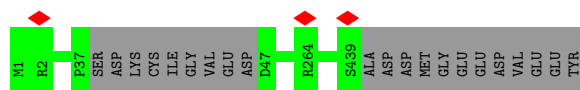
- Molecule 1: Tubulin beta chain

Chain WL:  96%

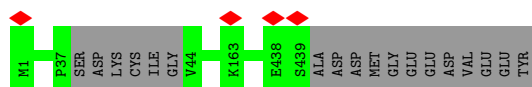




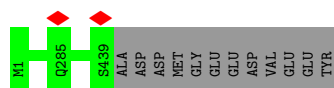
## • Molecule 2: Tubulin alpha chain

Chain AA:  95% 5%

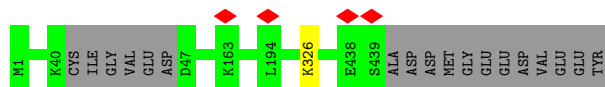
## • Molecule 2: Tubulin alpha chain

Chain AC:  96% .

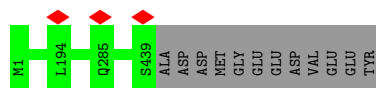
## • Molecule 2: Tubulin alpha chain

Chain AE:  97% .

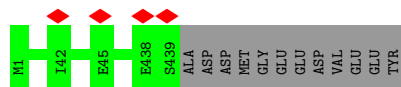
## • Molecule 2: Tubulin alpha chain

Chain AG:  96% .

## • Molecule 2: Tubulin alpha chain

Chain AI:  97% .

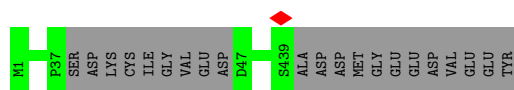
## • Molecule 2: Tubulin alpha chain

Chain AK:  97% .

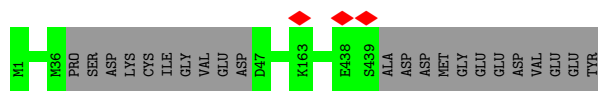
## • Molecule 2: Tubulin alpha chain

Chain AM:  95% 5%

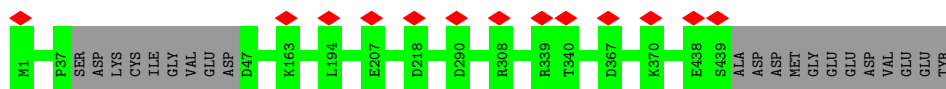




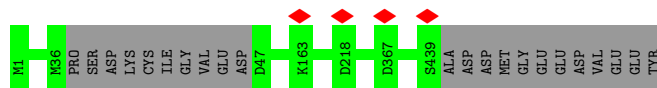
- Molecule 2: Tubulin alpha chain



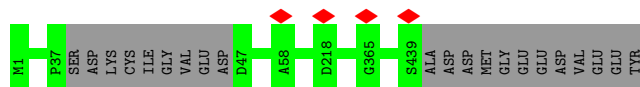
- Molecule 2: Tubulin alpha chain



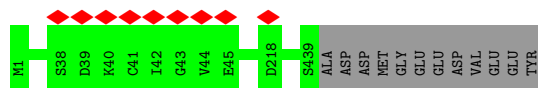
- Molecule 2: Tubulin alpha chain



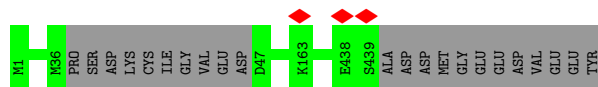
- Molecule 2: Tubulin alpha chain



- Molecule 2: Tubulin alpha chain



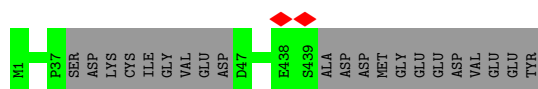
- Molecule 2: Tubulin alpha chain



- Molecule 2: Tubulin alpha chain

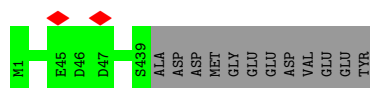


Chain BM:  95% 5%



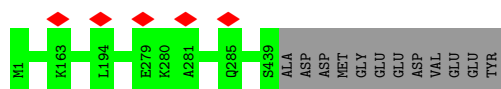
- Molecule 2: Tubulin alpha chain

Chain C:  97% .



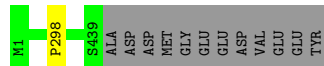
- Molecule 2: Tubulin alpha chain

Chain CB:  97% .

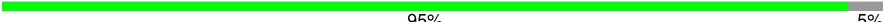


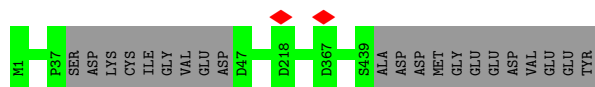
- Molecule 2: Tubulin alpha chain

Chain CD:  97% .



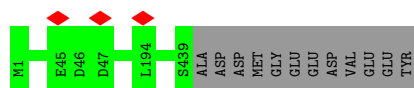
- Molecule 2: Tubulin alpha chain

Chain CF:  95% 5%



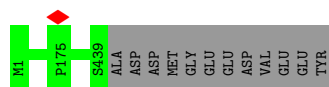
- Molecule 2: Tubulin alpha chain

Chain CH:  97% .



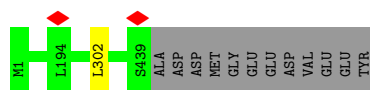
- Molecule 2: Tubulin alpha chain

Chain CJ:  97% .

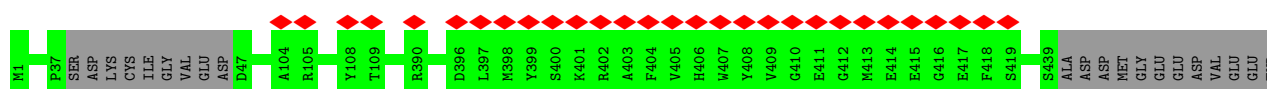




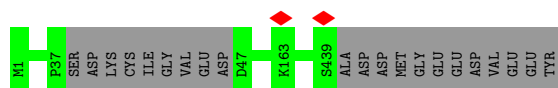
## ● Molecule 2: Tubulin alpha chain

Chain CL:  97% .

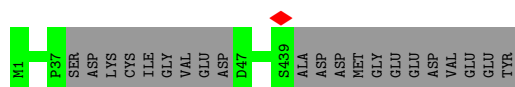
## ● Molecule 2: Tubulin alpha chain

Chain D:  95% 5% .

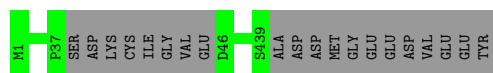
## ● Molecule 2: Tubulin alpha chain

Chain DB:  95% 5% .

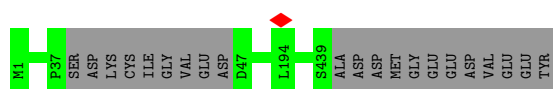
## ● Molecule 2: Tubulin alpha chain

Chain DD:  95% 5% .

## ● Molecule 2: Tubulin alpha chain

Chain DF:  96% .

## ● Molecule 2: Tubulin alpha chain

Chain DH:  95% 5% .

## ● Molecule 2: Tubulin alpha chain

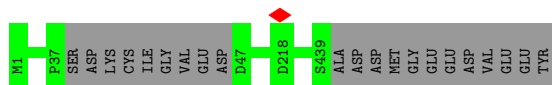
Chain DJ:  95% 5% .





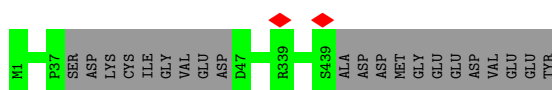
- Molecule 2: Tubulin alpha chain

Chain DL:   
95% 5%



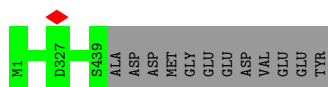
- Molecule 2: Tubulin alpha chain

Chain EA:   
95% 5%



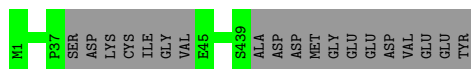
- Molecule 2: Tubulin alpha chain

Chain EC:   
97% .



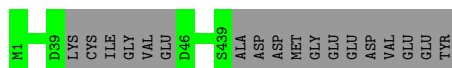
- Molecule 2: Tubulin alpha chain

Chain EE:   
96% .



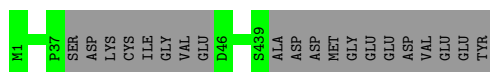
- Molecule 2: Tubulin alpha chain

Chain EG:   
96% .



- Molecule 2: Tubulin alpha chain

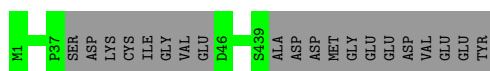
Chain EI:   
96% .



- Molecule 2: Tubulin alpha chain

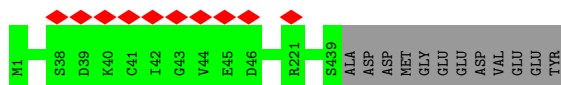
Chain EK:   
96% .





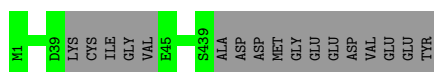
- Molecule 2: Tubulin alpha chain

Chain FA: 97%



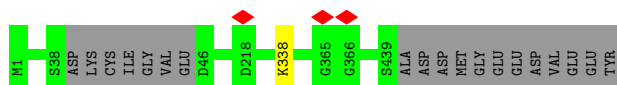
- Molecule 2: Tubulin alpha chain

Chain FC: 96%



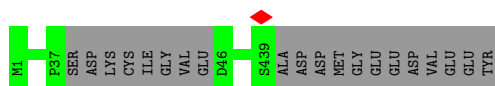
- Molecule 2: Tubulin alpha chain

Chain FE: 96%



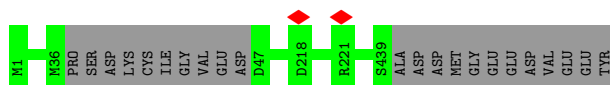
- Molecule 2: Tubulin alpha chain

Chain FG: 96%



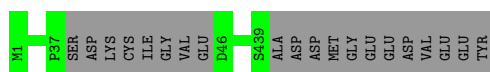
- Molecule 2: Tubulin alpha chain

Chain FI: 95%



- Molecule 2: Tubulin alpha chain

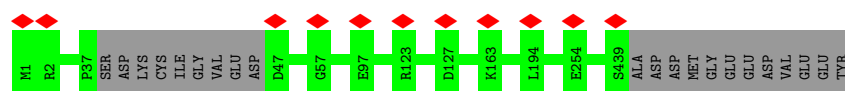
Chain FK: 96%



- Molecule 2: Tubulin alpha chain

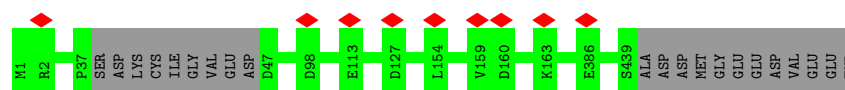


Chain GA:  95% 5%



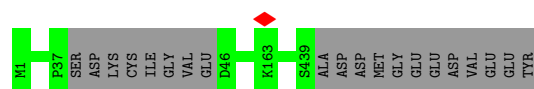
- Molecule 2: Tubulin alpha chain

Chain GC:  95% 5%



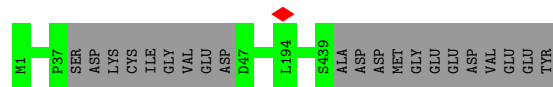
- Molecule 2: Tubulin alpha chain

Chain GE:  96% 4%



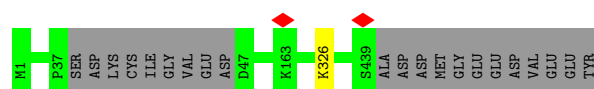
- Molecule 2: Tubulin alpha chain

Chain GG:  95% 5%



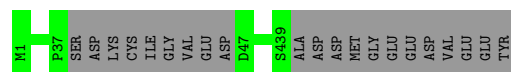
- Molecule 2: Tubulin alpha chain

Chain GI:  95% 5%



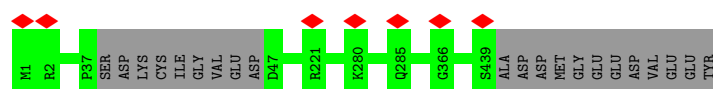
- Molecule 2: Tubulin alpha chain

Chain GK:  95% 5%



- Molecule 2: Tubulin alpha chain

Chain HA:  95% 5%

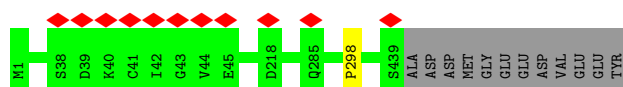




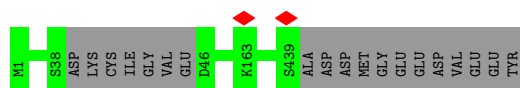
## ● Molecule 2: Tubulin alpha chain

Chain HC:  95% 5%

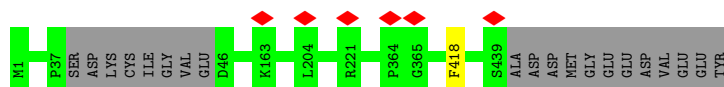
## ● Molecule 2: Tubulin alpha chain

Chain HE:  97% .

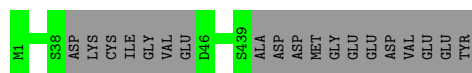
## ● Molecule 2: Tubulin alpha chain

Chain HG:  96% .

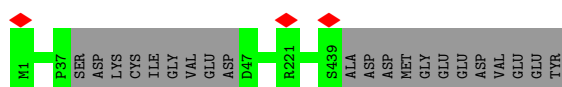
## ● Molecule 2: Tubulin alpha chain

Chain HI:  95% .

## ● Molecule 2: Tubulin alpha chain

Chain HK:  96% .

## ● Molecule 2: Tubulin alpha chain

Chain HM:  95% 5%

## ● Molecule 2: Tubulin alpha chain

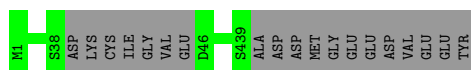
Chain IA:  95% 5%





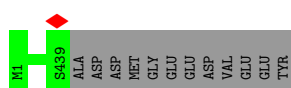
- Molecule 2: Tubulin alpha chain

Chain IC: 96%



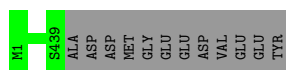
- Molecule 2: Tubulin alpha chain

Chain IE: 97%



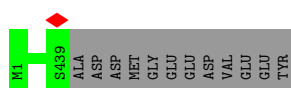
- Molecule 2: Tubulin alpha chain

Chain IG: 97%



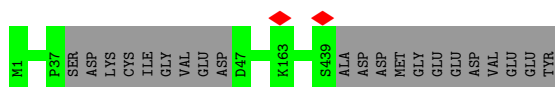
- Molecule 2: Tubulin alpha chain

Chain II: 97%



- Molecule 2: Tubulin alpha chain

Chain IK: 95%



- Molecule 2: Tubulin alpha chain

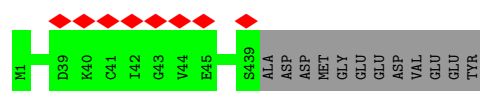
Chain IM: 95%



- Molecule 2: Tubulin alpha chain

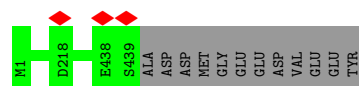


Chain J:  97%



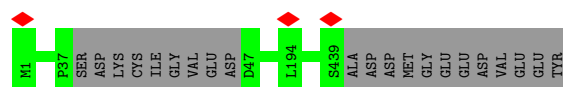
- Molecule 2: Tubulin alpha chain

Chain JB:  97%



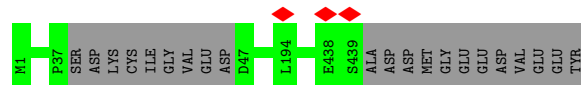
- Molecule 2: Tubulin alpha chain

Chain JD:  95% 5%



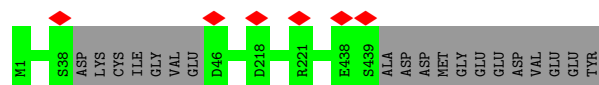
- Molecule 2: Tubulin alpha chain

Chain JF:  95% 5%



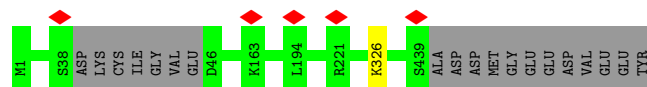
- Molecule 2: Tubulin alpha chain

Chain JH:  96%



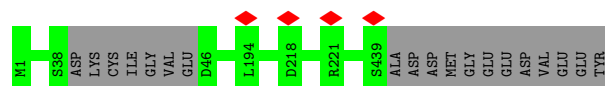
- Molecule 2: Tubulin alpha chain

Chain JJ:  96%



- Molecule 2: Tubulin alpha chain

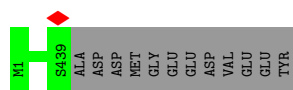
Chain JL:  96%





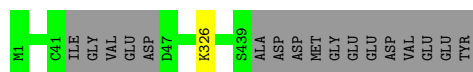
- Molecule 2: Tubulin alpha chain

Chain JN:  97%



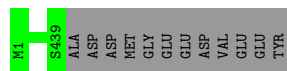
- Molecule 2: Tubulin alpha chain

Chain K:  96%



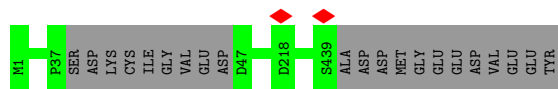
- Molecule 2: Tubulin alpha chain

Chain KB:  97%



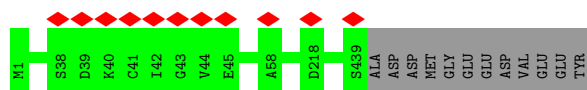
- Molecule 2: Tubulin alpha chain

Chain KD:  95%



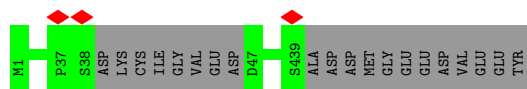
- Molecule 2: Tubulin alpha chain

Chain KF:  97%



- Molecule 2: Tubulin alpha chain

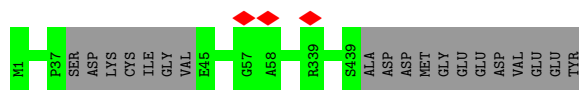
Chain KH:  96%



- Molecule 2: Tubulin alpha chain

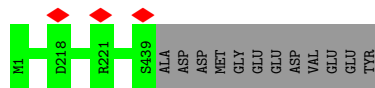
Chain KJ:  96%





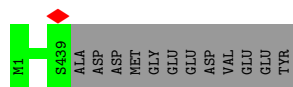
- Molecule 2: Tubulin alpha chain

Chain KL: 97%



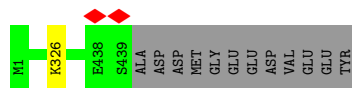
- Molecule 2: Tubulin alpha chain

Chain KN: 97%



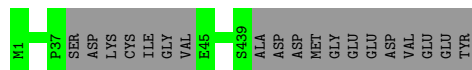
- Molecule 2: Tubulin alpha chain

Chain L: 97%



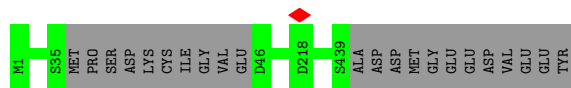
- Molecule 2: Tubulin alpha chain

Chain LB: 96%



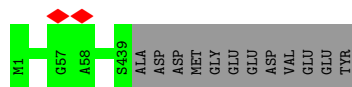
- Molecule 2: Tubulin alpha chain

Chain LD: 95% 5%



- Molecule 2: Tubulin alpha chain

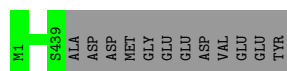
Chain LF: 97%



- Molecule 2: Tubulin alpha chain

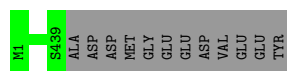


Chain LH:  97%



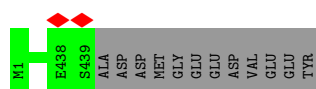
- Molecule 2: Tubulin alpha chain

Chain LJ:  97%



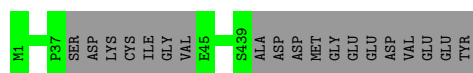
- Molecule 2: Tubulin alpha chain

Chain LL:  97%



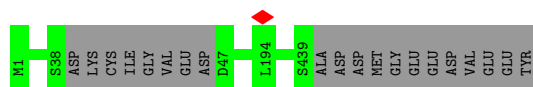
- Molecule 2: Tubulin alpha chain

Chain LN:  96%



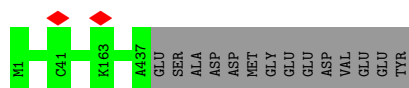
- Molecule 2: Tubulin alpha chain

Chain MA:  96%



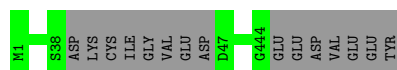
- Molecule 2: Tubulin alpha chain

Chain MC:  97%



- Molecule 2: Tubulin alpha chain

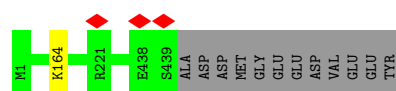
Chain ME:  97%



- Molecule 2: Tubulin alpha chain

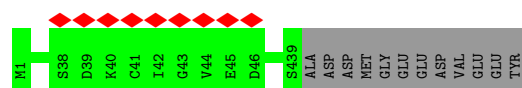


Chain MG:  97%



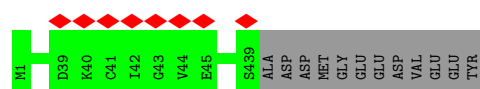
- Molecule 2: Tubulin alpha chain

Chain MI:  97%



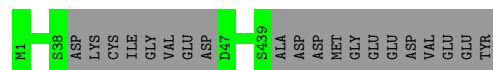
- Molecule 2: Tubulin alpha chain

Chain MK:  97%



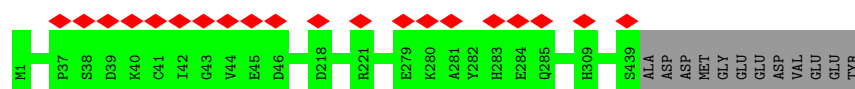
- Molecule 2: Tubulin alpha chain

Chain MM:  96%



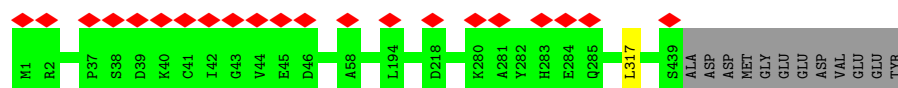
- Molecule 2: Tubulin alpha chain

Chain NA:  97%



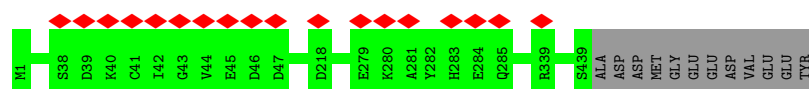
- Molecule 2: Tubulin alpha chain

Chain NC:  5% 97%



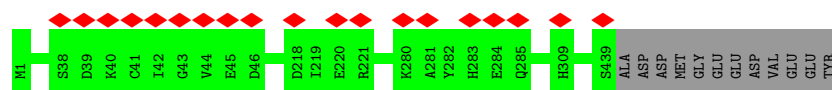
- Molecule 2: Tubulin alpha chain

Chain NE:  97%

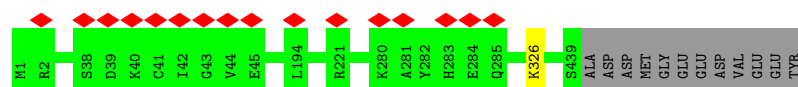




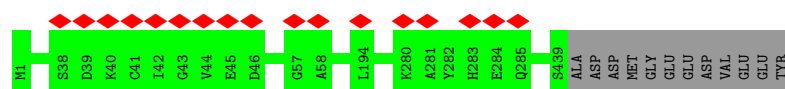
## ● Molecule 2: Tubulin alpha chain

Chain NG:  97%

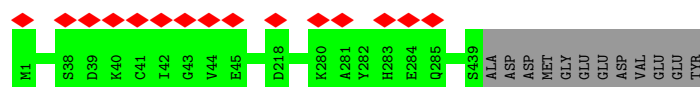
## ● Molecule 2: Tubulin alpha chain

Chain NI:  97%

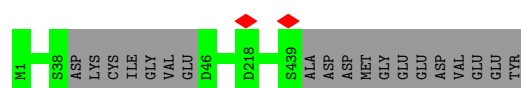
## ● Molecule 2: Tubulin alpha chain

Chain NK:  97%

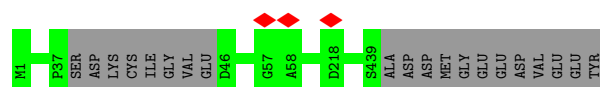
## ● Molecule 2: Tubulin alpha chain

Chain NM:  97%

## ● Molecule 2: Tubulin alpha chain

Chain OA:  96%

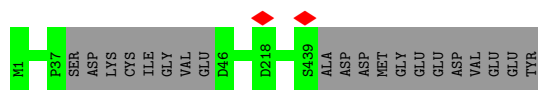
## ● Molecule 2: Tubulin alpha chain

Chain OC:  96%

## ● Molecule 2: Tubulin alpha chain

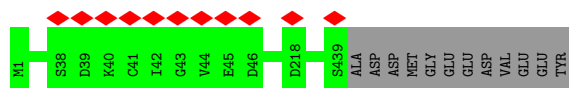
Chain OE:  96%





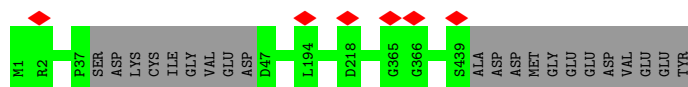
- Molecule 2: Tubulin alpha chain

Chain OG: 97%



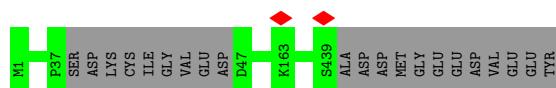
- Molecule 2: Tubulin alpha chain

Chain OI: 95%



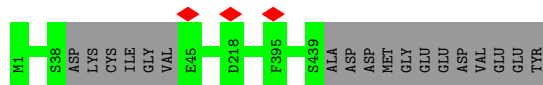
- Molecule 2: Tubulin alpha chain

Chain OK: 95%



- Molecule 2: Tubulin alpha chain

Chain OM: 96%



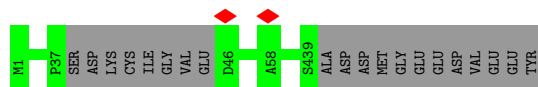
- Molecule 2: Tubulin alpha chain

Chain PA: 95%



- Molecule 2: Tubulin alpha chain

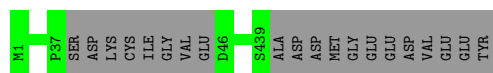
Chain PC: 96%



- Molecule 2: Tubulin alpha chain

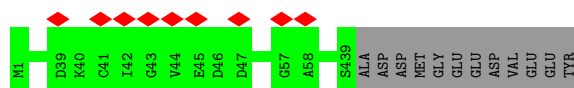


Chain PE:  96%



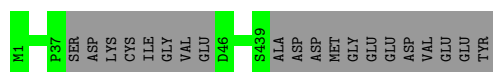
• Molecule 2: Tubulin alpha chain

Chain PG:  97%



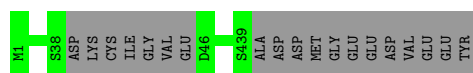
• Molecule 2: Tubulin alpha chain

Chain PI:  96%



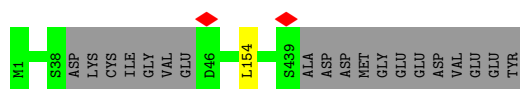
• Molecule 2: Tubulin alpha chain

Chain PK:  96%



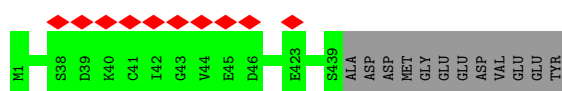
• Molecule 2: Tubulin alpha chain

Chain PM:  96%



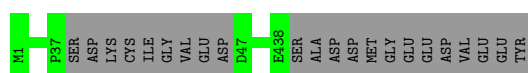
• Molecule 2: Tubulin alpha chain

Chain Q:  97%



• Molecule 2: Tubulin alpha chain

Chain QB:  95%



• Molecule 2: Tubulin alpha chain

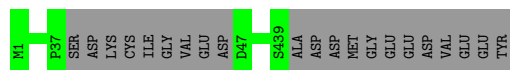


Chain QD:  95% 5%



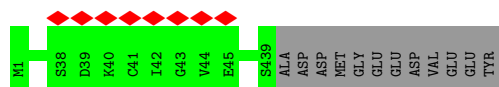
- Molecule 2: Tubulin alpha chain

Chain QF:  95% 5%



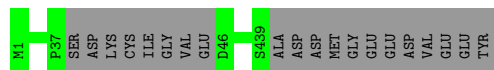
- Molecule 2: Tubulin alpha chain

Chain QH:  97% .



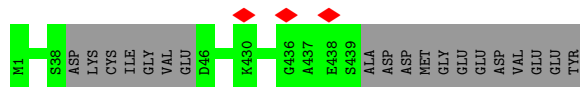
- Molecule 2: Tubulin alpha chain

Chain QJ:  96% .



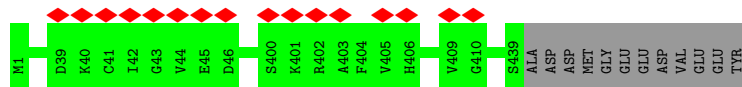
- Molecule 2: Tubulin alpha chain

Chain QL:  96% .



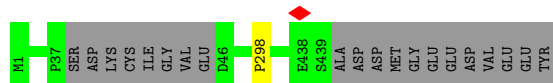
- Molecule 2: Tubulin alpha chain

Chain R:  97% .



- Molecule 2: Tubulin alpha chain

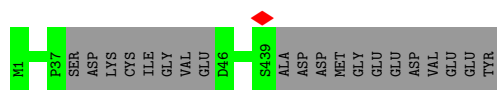
Chain RB:  95% .





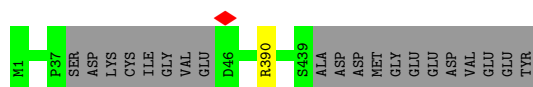
- Molecule 2: Tubulin alpha chain

Chain RD:  96%



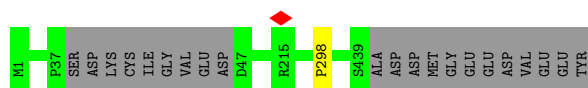
- Molecule 2: Tubulin alpha chain

Chain RF:  95%



- Molecule 2: Tubulin alpha chain

Chain RH:  95% 5%



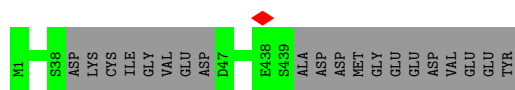
- Molecule 2: Tubulin alpha chain

Chain RJ:  95% 5%



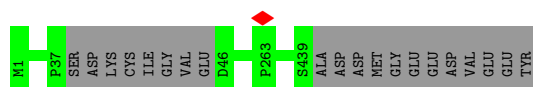
- Molecule 2: Tubulin alpha chain

Chain RL:  96%



- Molecule 2: Tubulin alpha chain

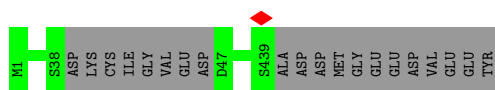
Chain SA:  96%



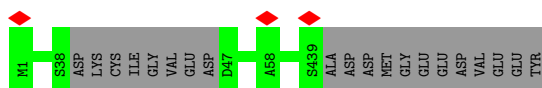
- Molecule 2: Tubulin alpha chain

Chain SC:  96%

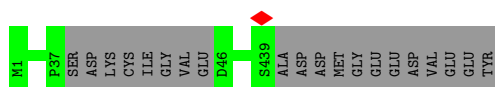




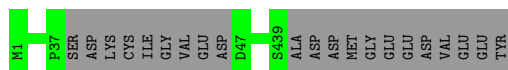
- Molecule 2: Tubulin alpha chain



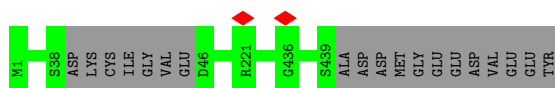
- Molecule 2: Tubulin alpha chain



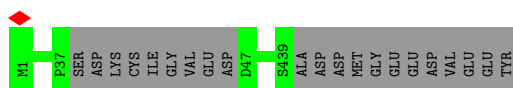
- Molecule 2: Tubulin alpha chain



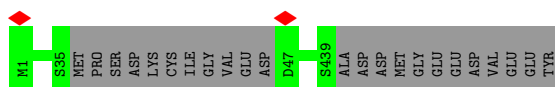
- Molecule 2: Tubulin alpha chain



- Molecule 2: Tubulin alpha chain



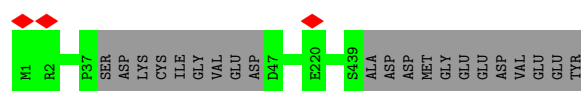
- Molecule 2: Tubulin alpha chain



- Molecule 2: Tubulin alpha chain



Chain TE:  95% 5%



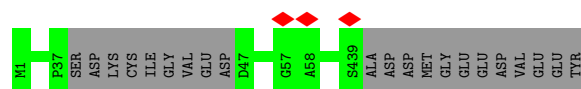
- Molecule 2: Tubulin alpha chain

Chain TG:  96% 4%



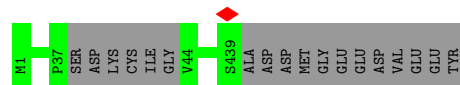
- Molecule 2: Tubulin alpha chain

Chain TI:  95% 5%



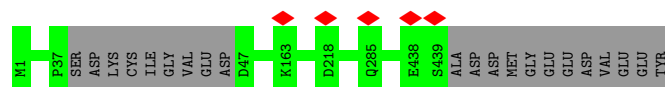
- Molecule 2: Tubulin alpha chain

Chain TK:  96% 4%



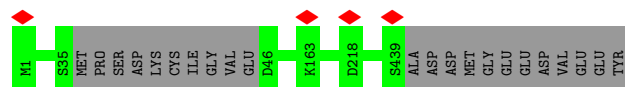
- Molecule 2: Tubulin alpha chain

Chain UA:  95% 5%



- Molecule 2: Tubulin alpha chain

Chain UC:  95% 5%



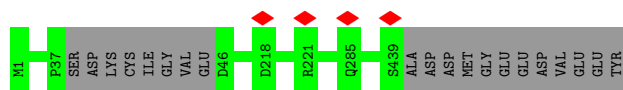
- Molecule 2: Tubulin alpha chain

Chain UE:  95% 5%

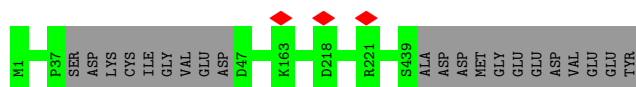




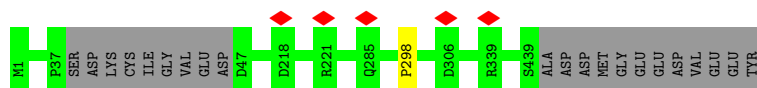
## • Molecule 2: Tubulin alpha chain

Chain UG:  96%

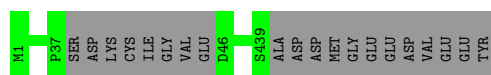
## • Molecule 2: Tubulin alpha chain

Chain UI:  95% 5%

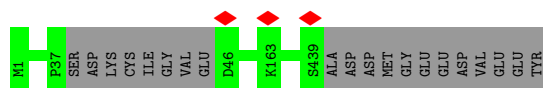
## • Molecule 2: Tubulin alpha chain

Chain UK:  95% 5%

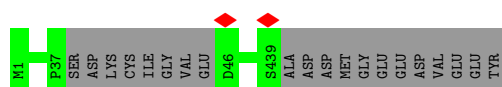
## • Molecule 2: Tubulin alpha chain

Chain VA:  96%

## • Molecule 2: Tubulin alpha chain

Chain VC:  96%

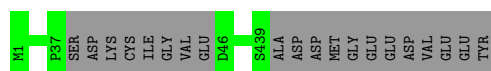
## • Molecule 2: Tubulin alpha chain

Chain VE:  96%

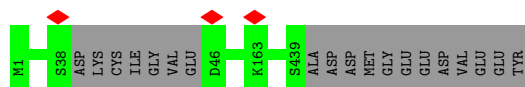
## • Molecule 2: Tubulin alpha chain

Chain VG:  96%

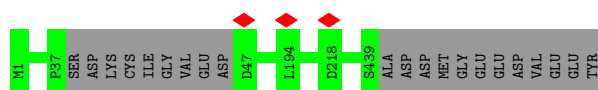




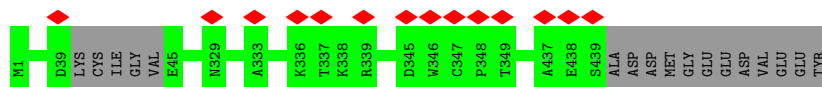
- Molecule 2: Tubulin alpha chain



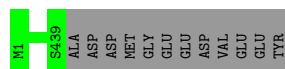
- Molecule 2: Tubulin alpha chain



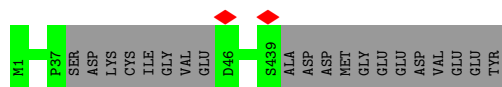
- Molecule 2: Tubulin alpha chain



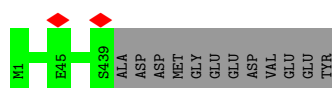
- Molecule 2: Tubulin alpha chain



- Molecule 2: Tubulin alpha chain



- Molecule 2: Tubulin alpha chain



- Molecule 2: Tubulin alpha chain

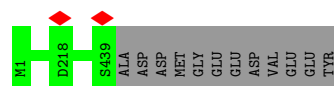


Chain WG:  95%



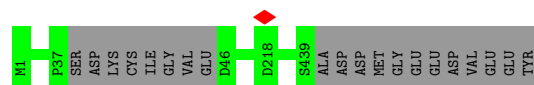
- Molecule 2: Tubulin alpha chain

Chain WI:  97%



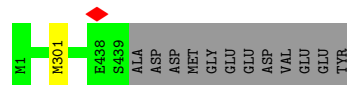
- Molecule 2: Tubulin alpha chain

Chain WK:  96%





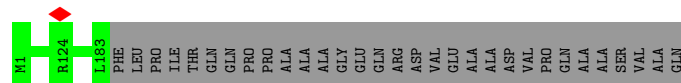
- Molecule 2: Tubulin alpha chain

Chain WM:  97%





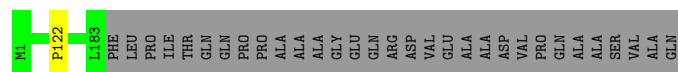
- Molecule 3: CFAP20

Chain X:  86%  14%


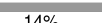


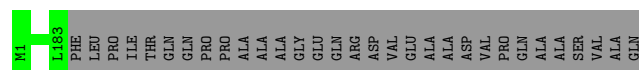
- Molecule 3: CFAP20

Chain XA:  85%  14%



- Molecule 3: CFAP20

Chain XB:  86%  14%



- Molecule 3: CFAP20









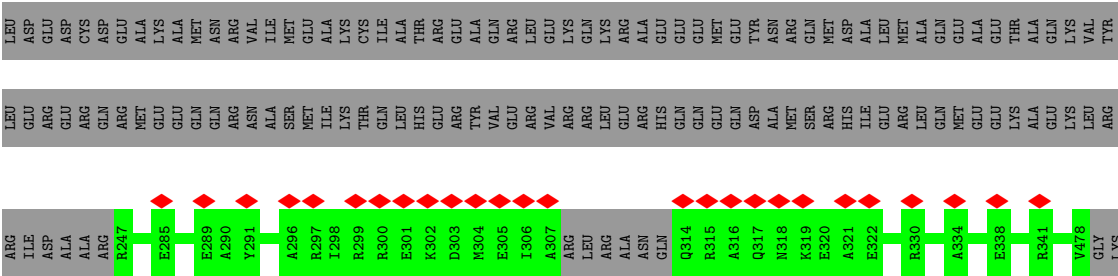












• Molecule 9: CFAP52



• Molecule 9: CFAP52



• Molecule 9: CFAP52



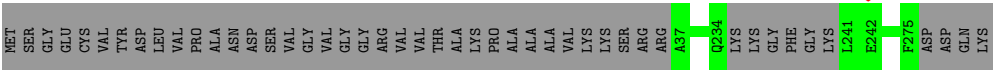
• Molecule 9: CFAP52



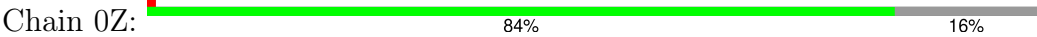








• Molecule 13: CFAP106A



• Molecule 13: CFAP106A



• Molecule 14: CFAP106B



• Molecule 14: CFAP106B





S370

• Molecule 15: CFAP107

Chain 0f: 

58%

42%

MET	ALA	THR	ASN	LEU	ALA	THR	GLY	GLU	GLN	SER	VAL	LYS	SER	ALA	TYR	HIS	CYS	ALA	THR	LEU	LEU	ASP	ASN	TRP	ALA	GLU	ASP	ARG	HIS	GLN	PHE	GLY	GLN	PRO	VAL	THR	ASN	PRO	THR	THR	SER	HIS	ALA	ASP	THR	ARG	GLY	PHE	ASP	P46	M135	GLY	PHE	SER	THR	THR	SER	GLY	SER	GLY	HIS	ALA	GLY	THR
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SER	THR	GLY	LEU	ALA	ASP	GLU	SER	VAL	LYS	ALA	VAL	GLN	TYR	HIS	ARG	GLU	ALA	ALA	TYR	LEU	GLN	ASP	ASN	MET	ALA	SER	THR	ASP	MET	ARG	HIS	GLN	THR	GLY	HIS	ALA	VAL	THR	ASN	GLY	THR	GLN	SER	ALA	THR	ASP	THR	ASP	PRO	GLY	SER	GLU	THR	THR	GLU	THR	LYS	THR	GLY	SER	GLY	TYR	ALA	GLY	THR	A206
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D275  
ASP  
TYR

• Molecule 15: CFAP107

Chain 0g: 

11%

89%

MET	ALA	THR	LEU	ALA	THR	GLY	GLU	GLN	SER	VAL	LYS	SER	ALA	TYR	HIS	CYS	ALA	THR	LEU	LEU	ASP	ASN	TRP	ALA	GLU	ASP	ARG	HIS	GLN	PHE	GLY	GLN	PRO	VAL	THR	ASN	PRO	THR	THR	SER	HIS	ALA	ASP	THR	ARG	GLY	PHE	ASP	P46	A76	PRO	ARG	MET	LEU	LEU	PHE	HIS	GLY	ASP	ILE	GLY
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ASN	ILE	GLU	THR	TYR	GLY	TYR	ALA	THR	SER	VAL	LYS	ALA	HIS	THR	ASP	ARG	GLU	LYS	LYS	GLN	VAL	TYR	THR	ASN	ASP	GLU	VAL	LEU	MET	THR	GLY	GLN	THR	ASN	ARG	THR	ASN	LYS	THR	ALA	SER	THR	ALA	LEU	GLN	ARG	THR	GLY	THR	GLY	THR	THR	THR	GLY	HIS	ALA	GLY	THR
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SER	THR	ASN	GLY	LEU	PRO	GLY	ARG	ASP	VAL	GLU	SER	ALA	VAL	GLN	ARG	GLU	ALA	TYR	GLN	LEU	VAL	THR	SER	MET	ALA	SER	THR	THR	ARG	THR	GLN	HIS	TRP	ASN	GLY	THR	GLN	ASP	SER	THR	ALA	THR	ARG	ASP	PRO	GLY	GLY	SER	THR	THR	GLY	THR	LYS	THR	GLY	SER	GLY	TYR	ALA	PRO
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PRO	ARG	LEU	LEU	PRO	MET	GLY	ARG	VAL	GLU	GLU	ARG	LEU	THR	THR	LYS	ASN	VAL	SER	ILE	THR	ASP	ALA	SER	GLY	THR	TYR	PHE	ASP	ASN	GLU	LEU	ALA	TYR	PRO	LEU	THR	SER	SER	GLN	CYS	VAL	GLY	LYS	MET	THR	LYS	THR	CYS	ASP	ASN	PRO	MET	HIS	LYS	THR	ASN
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LEU	ARG	ILE	HIS	TYR	MET	GLU	ASP	ASP	TYR
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• Molecule 16: CFAP115

Chain 0l: 

19%

65%

35%

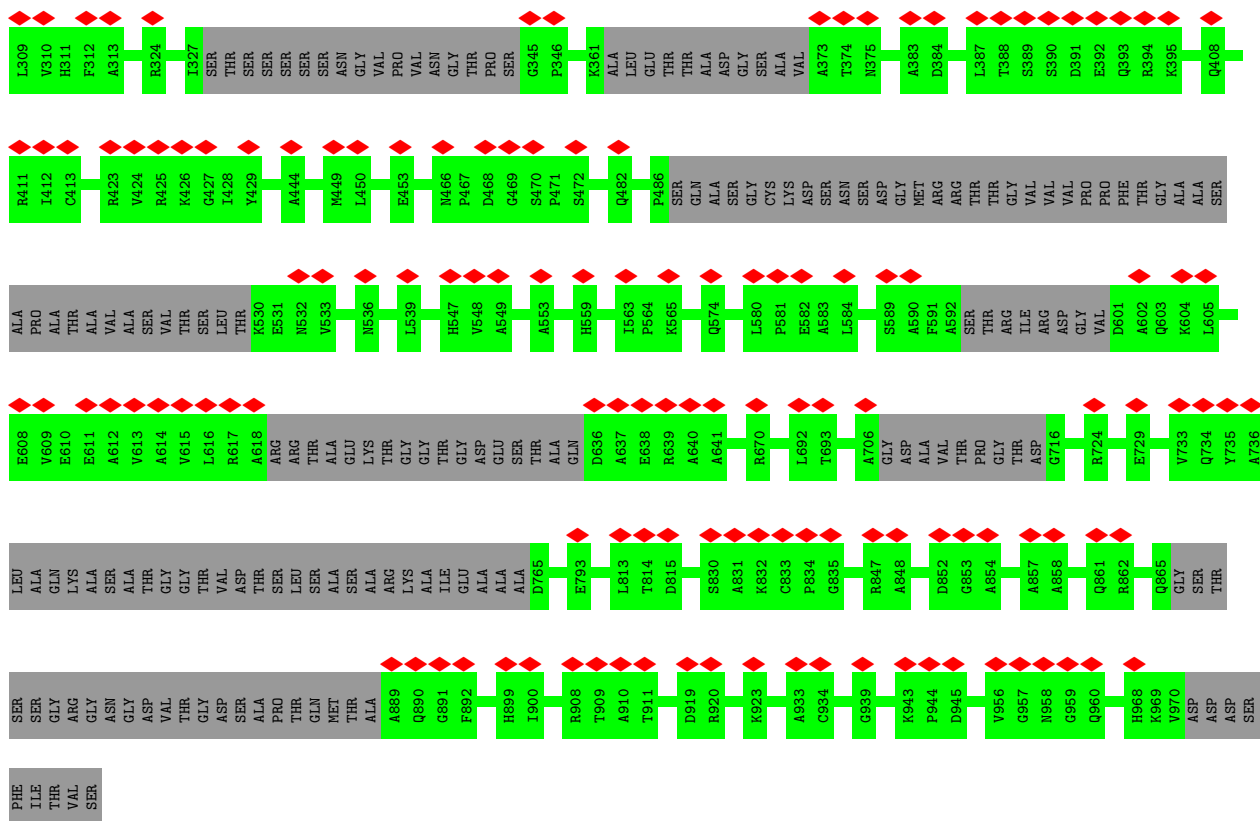
MET	SER	SER	VAL	PRO	S7	F8	D9	R13	R16	A17	Q18	V19	G20	K21	R22	R23	I24	F25	L26	A31	D32	D34	R35	L36	R37	C38	G39	R40	T51	N52	N53	D54	V55	H56	M62	R63	R67	R68	F69	A70	F71	A72	VAL	ALA	ALA	GLY	THR	SER	ALA	ALA
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ALA	ARG	ALA	ALA	ASN	ALA	SER	LYS	ASP	A94	E95	E99	D100	F101	L102	A103	A104	L105	E106	ALA	GLU	LYS	GLY	SER	ALA	SER	VAL	ARG	SER	THR	PRO	SER	VAL	LEU	THR	PRO	ALA	GLU	ALA	ARG	LEU	LYS	PRO	PHE	GLN	THR	MET	LEU	ARG	GLN	ALA	ILE
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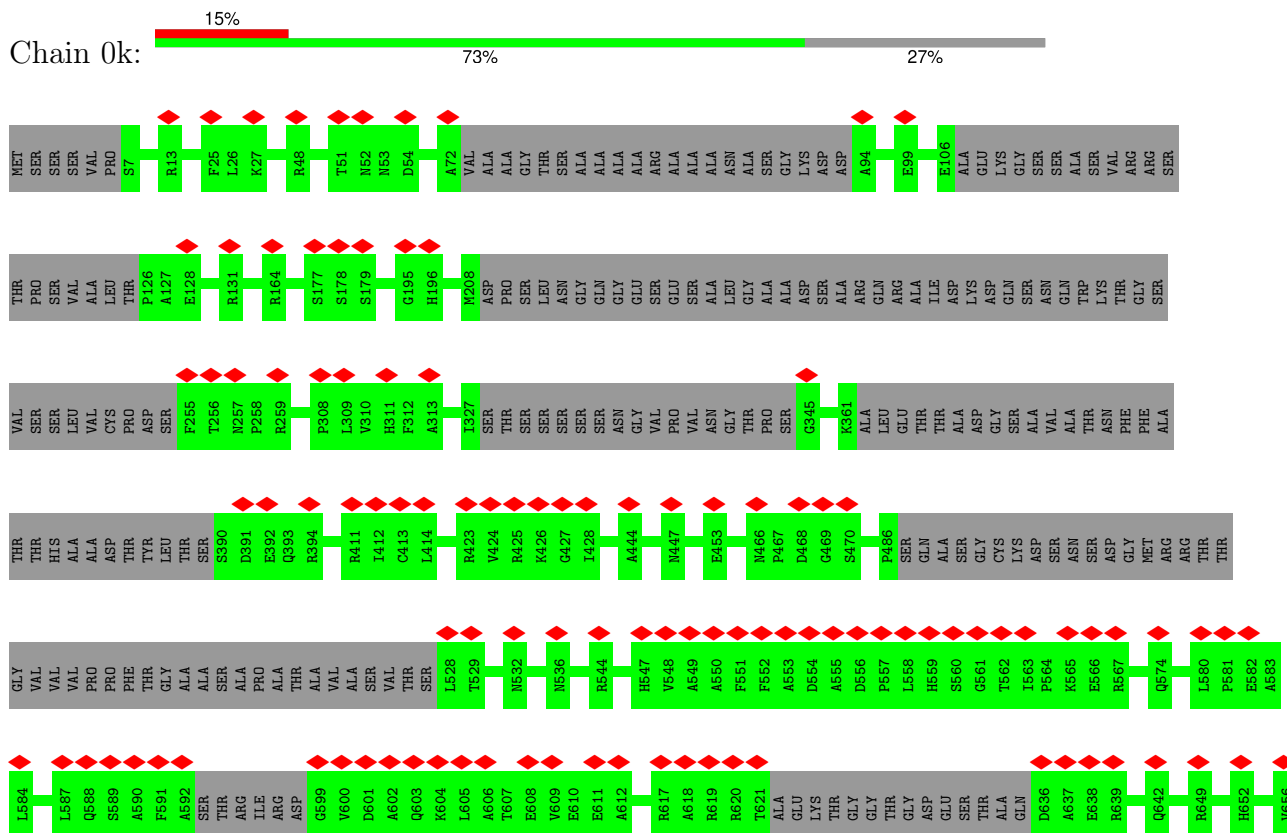
GLN	ALA	HIS	GLY	THR	SER	LEU	THR	ALA	PRO	ASN	GLY	ARG	ASP	LEU	ASP	PRO	ARG	THR	GLY	VAL	THR	ASP	ALA	GLN	PHE	ARG	ALA	CYS	LEU	PRO	PHE	SER	GLN	SER	ASN	LEU	THR	GLU	ASP	ALA	MET	ASP	LEU	LEU	ALA	LYS	VAL	GLN	ASP	GLY	HIS	GLY	GLY	VAL	TYR	TYR	MET	ARG	GLN	ALA	ILE
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TRP	CYS	ARG	ALA	MET	ASP	PRO	SER	LEU	ASN	GLY	GLY	GLU	SER	ALA	GLY	ALA	ASP	SER	ALA	ARG	GLN	PHE	ARG	ALA	ILE	ASP	LYS	ASP	GLN	SER	ASN	GLN	TRP	LYS	THR	GLY	VAL	SER	SER	LEU	VAL	VAL	CYS	PRO	ASP	S254	F255	T256	R259	R279	F287
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	------	------	------	------	------	------

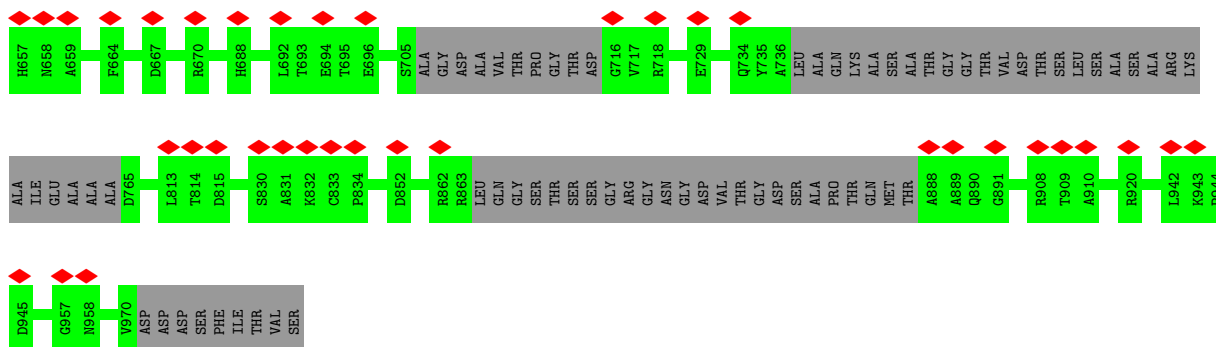




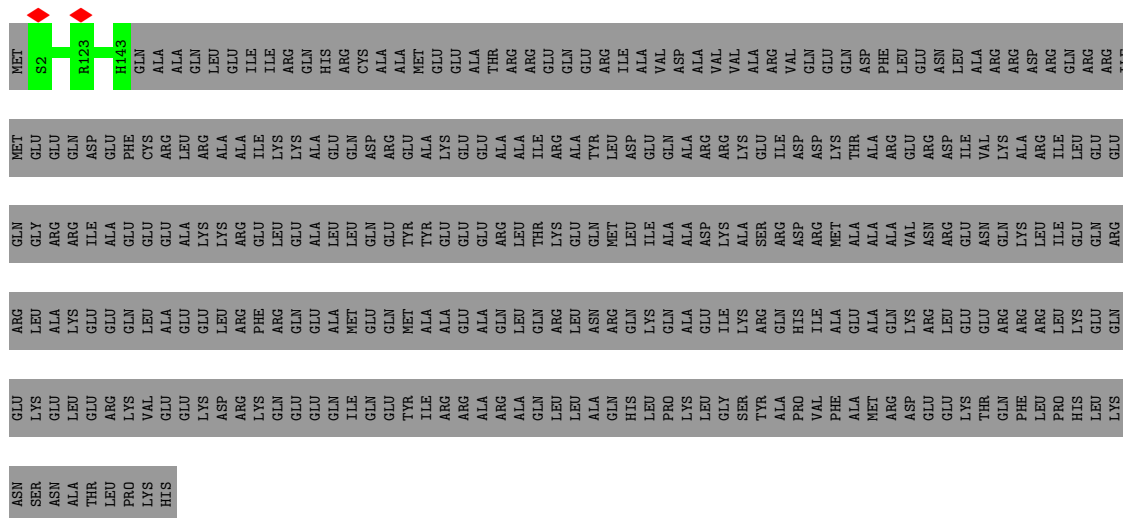
- Molecule 16: CFAP115



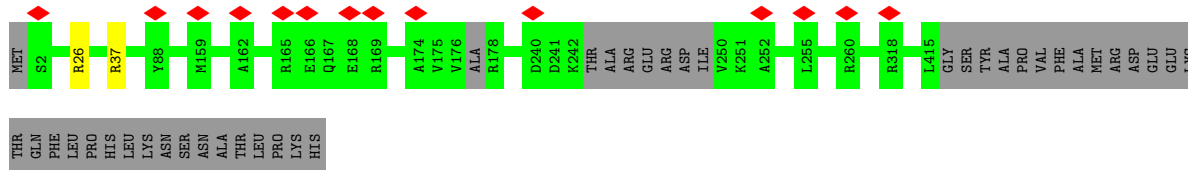




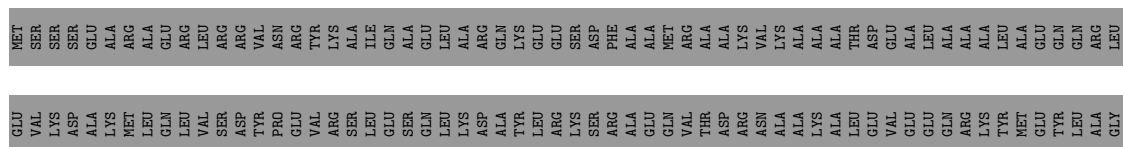
- Molecule 17: CFAP127



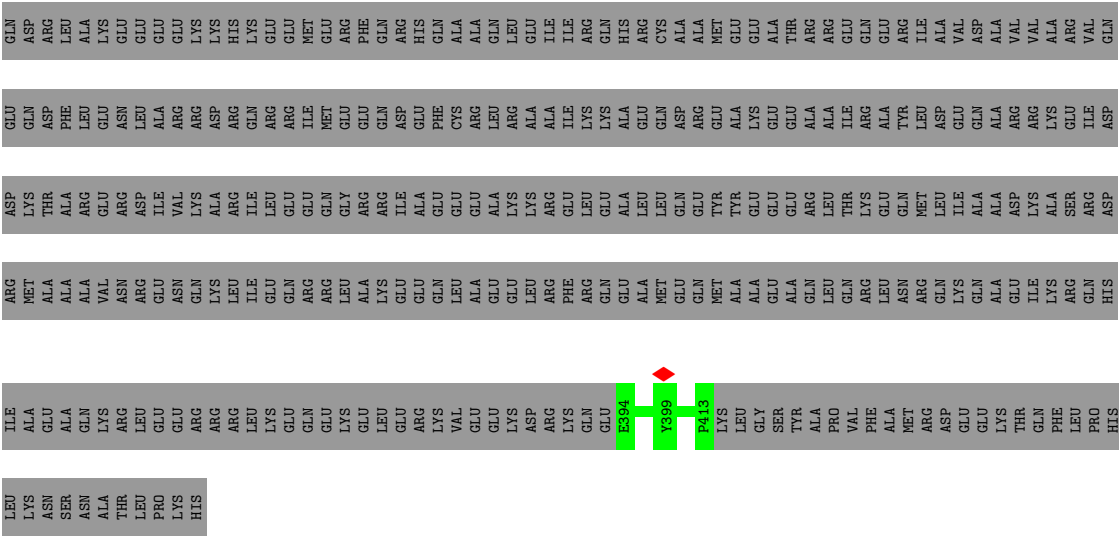
- Molecule 17: CFAP127



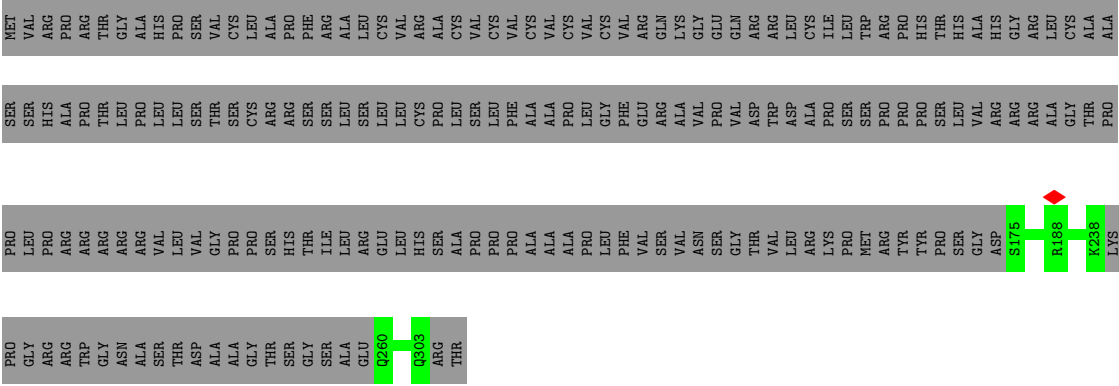
- Molecule 17: CFAP127



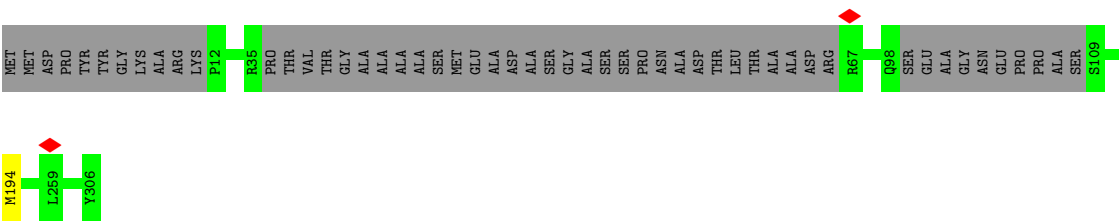
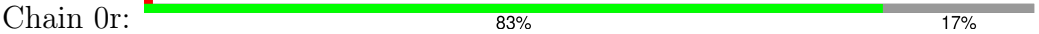




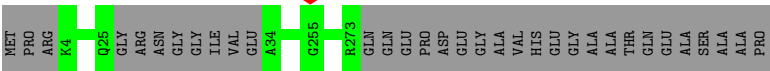
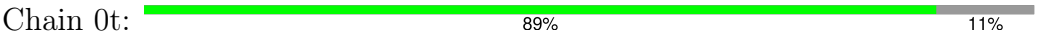
• Molecule 18: CFAP141



• Molecule 19: CFAP143



• Molecule 20: CFAP161









[illegible]

- Molecule 22: DMIP5



D248	R265	R273	E274	Y275	Y276	A277	A278	Q279	E280	GLN	GLU	SER	P176	E177	E180	D181	L182	E183	A184	L185	I186	L187	E188	E189	H190	Q191	Q192	R195	V196	E197	E198	D199	V200	D201	E202	L203	A204	A206	I206	Q207	R208	D209	T210	THR	ALA	ASP	TRP	TYR	LYS	LYS	SER	TYR	ASN	ASP	ALA	ALA	ARG	ARG	ARG	PHE	LEU	SER	GLN	ILE	SER	D233	D236																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0

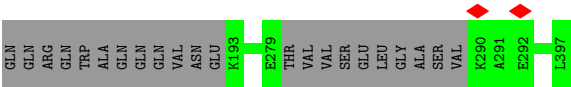
- Molecule 22: DMIP5



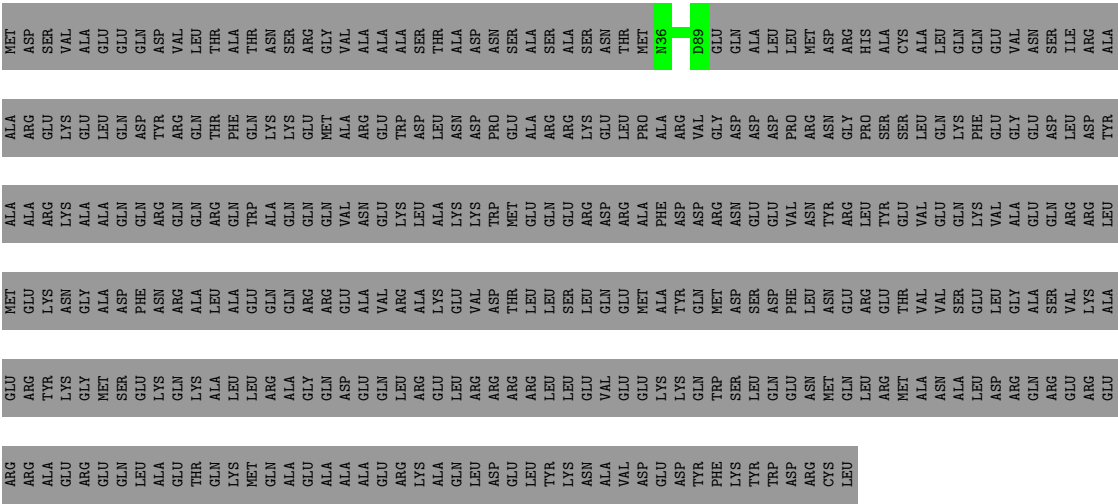




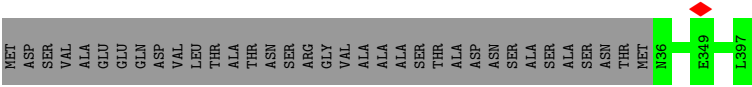
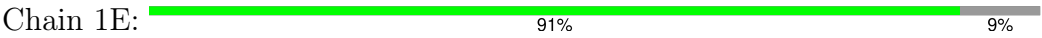




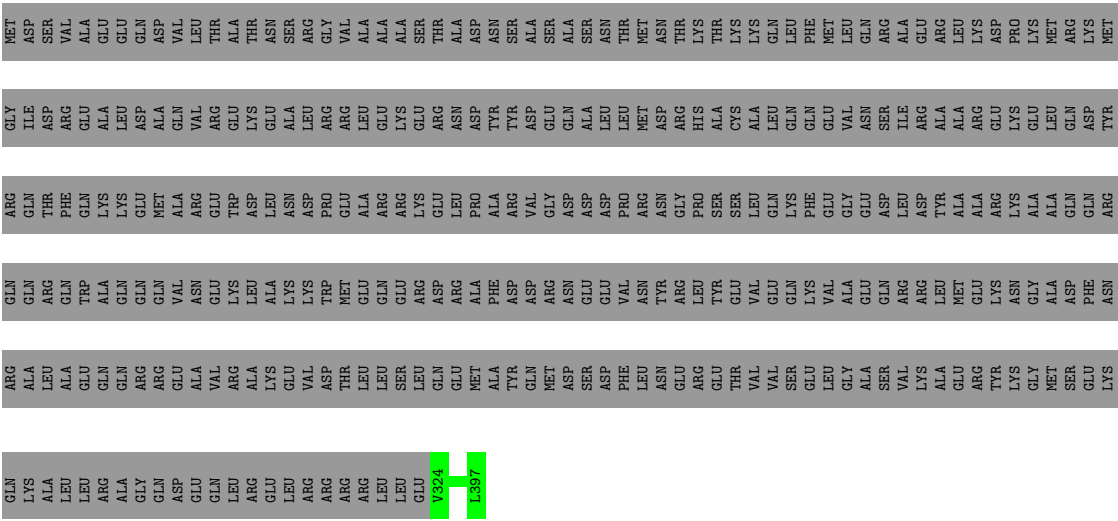
● Molecule 23: RIB43



● Molecule 23: RIB43

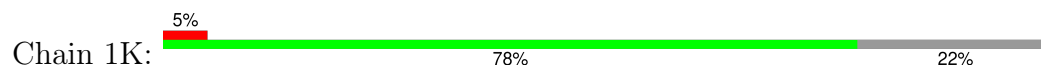


● Molecule 23: RIB43

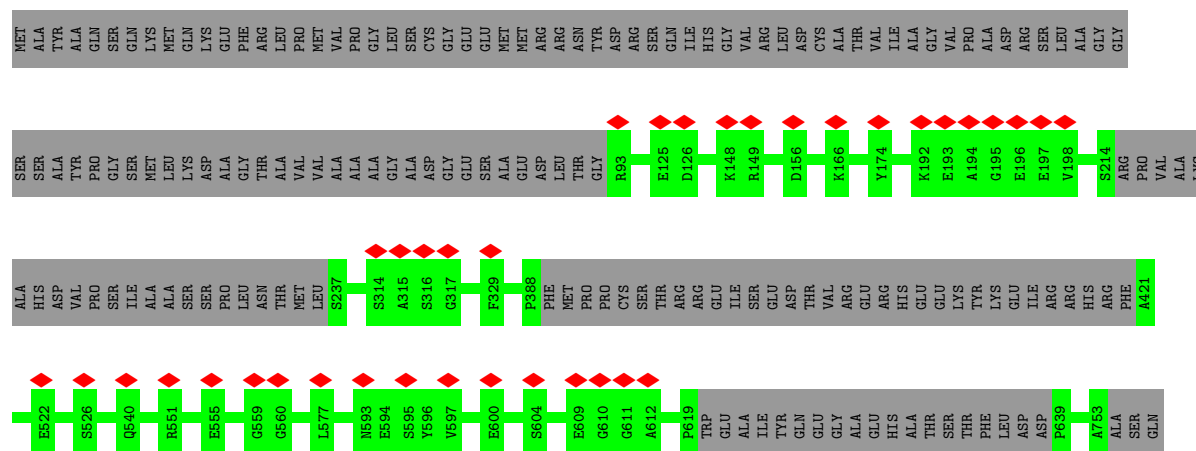


● Molecule 24: RIB72A





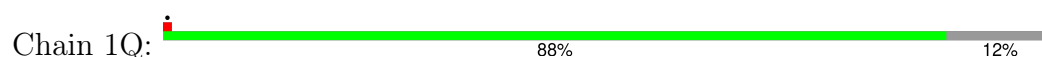




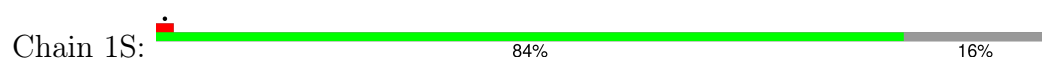
• Molecule 25: RIB72B



• Molecule 26: RIB72C



• Molecule 27: RIB72D

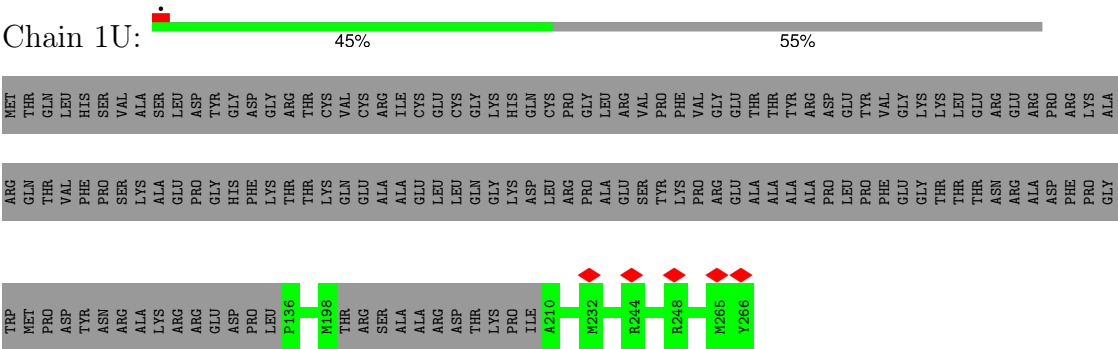


• Molecule 27: RIB72D

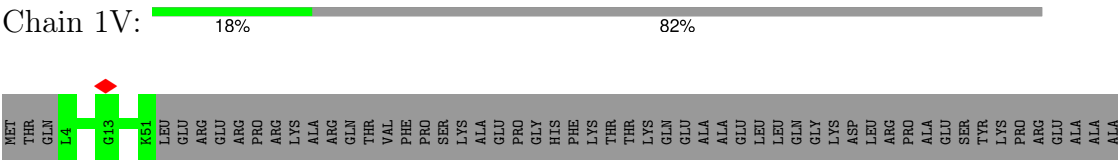




• Molecule 28: DMIP1



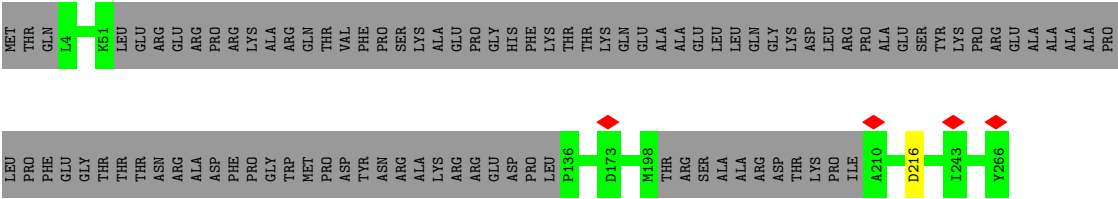
• Molecule 28: DMIP1





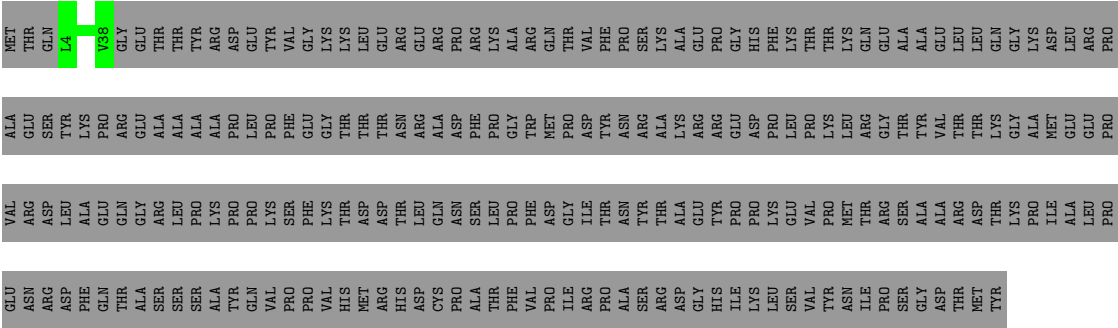






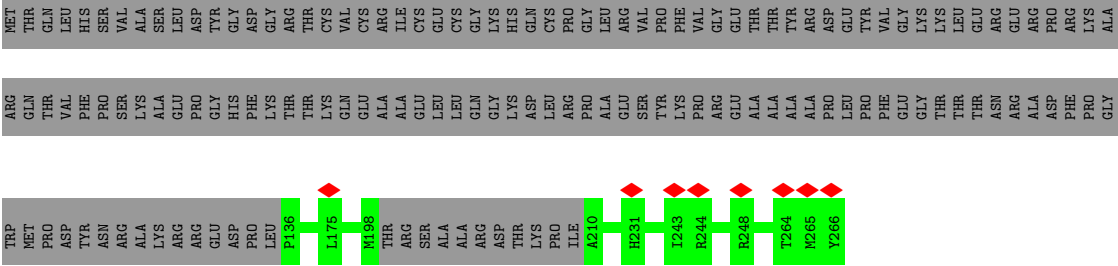
• Molecule 28: DMIP1

Chain 1c: 13% 87%



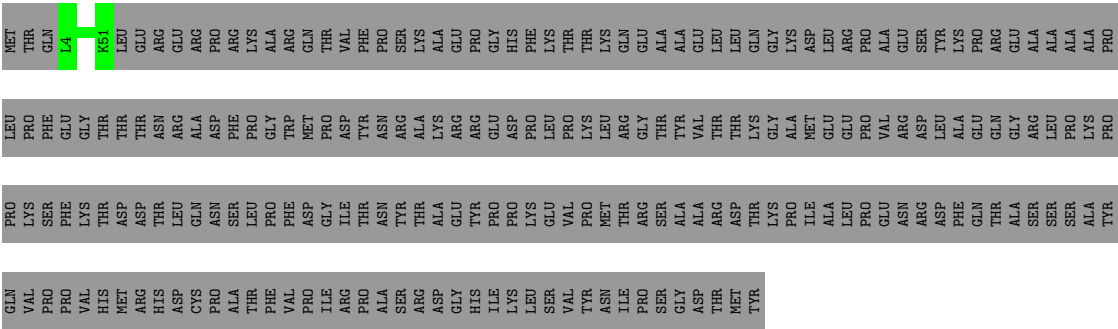
• Molecule 28: DMIP1

Chain 1d: 45% 55%



• Molecule 28: DMIP1

Chain 1e: 18% 82%

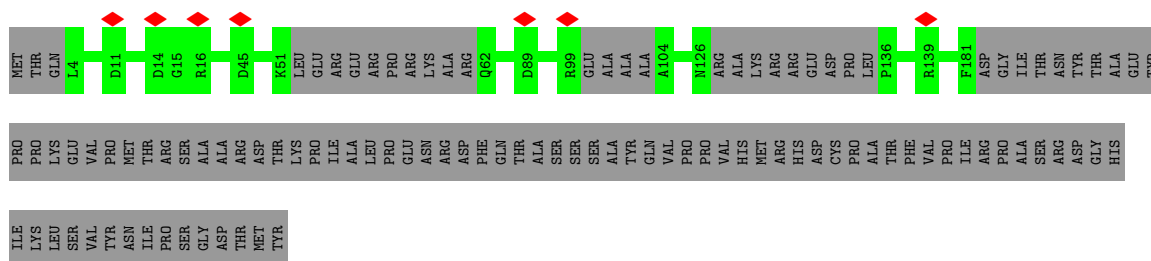


• Molecule 28: DMIP1

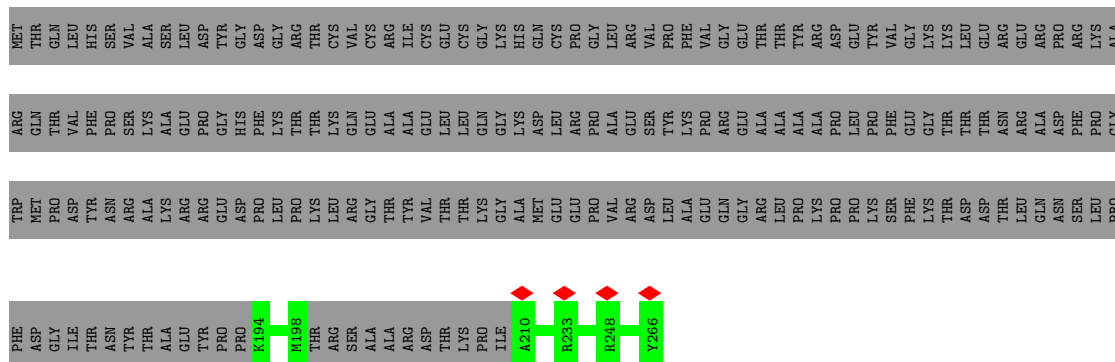
Chain 1g: 6% 45% 55%



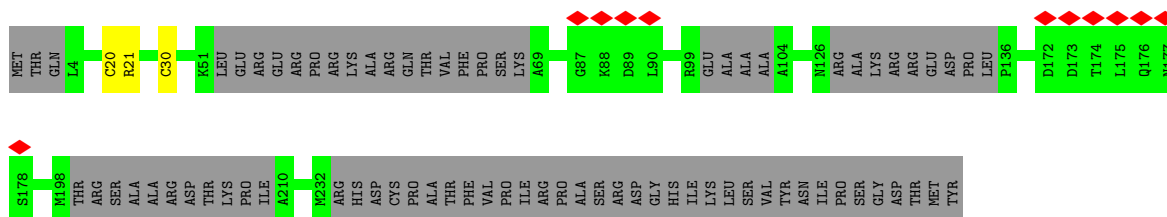
- Molecule 28: DMIP1



- Molecule 28: DMIP1



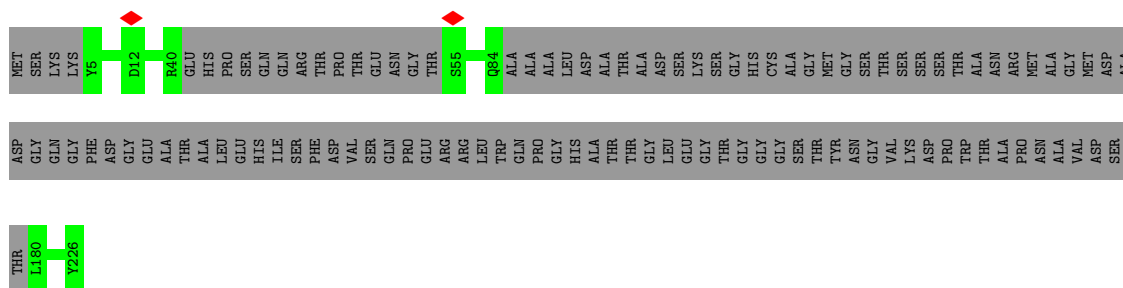
- Molecule 28: DMIP1



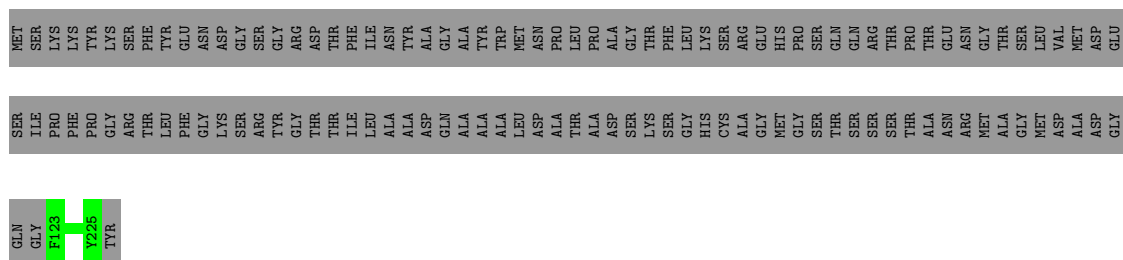
- Molecule 29: DMIP2



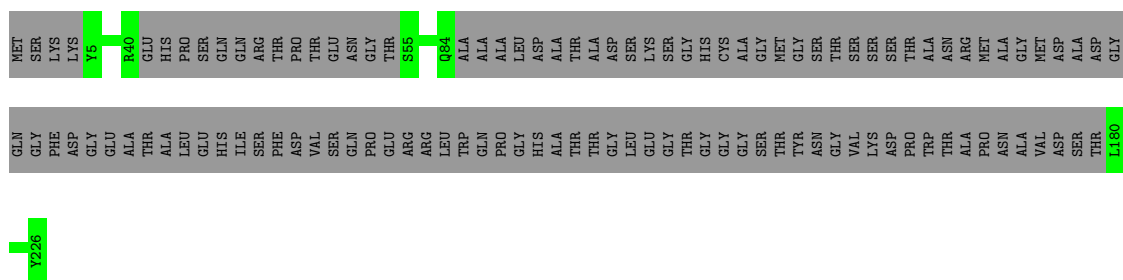




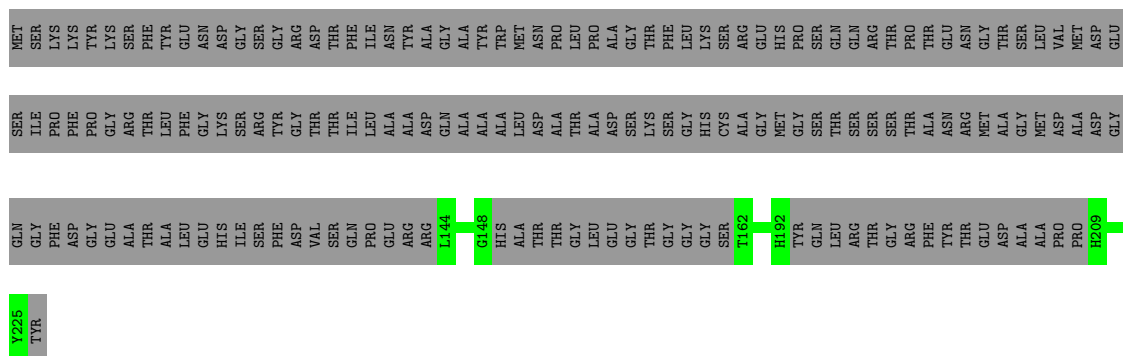
- Molecule 29: DMIP2



- Molecule 29: DMIP2



- Molecule 29: DMIP2



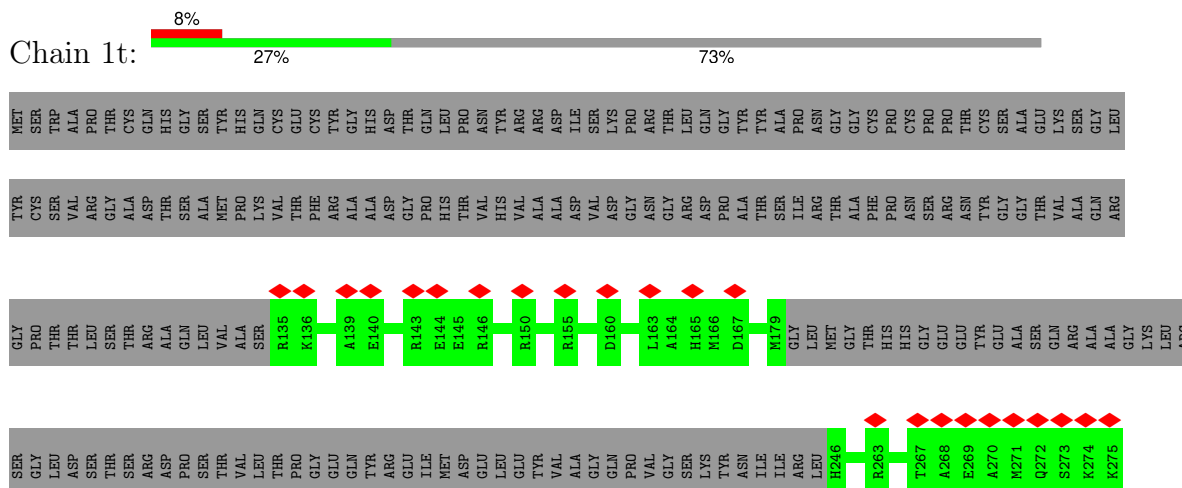
- Molecule 30: DMIP3



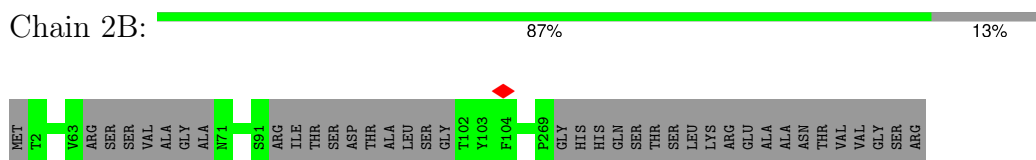




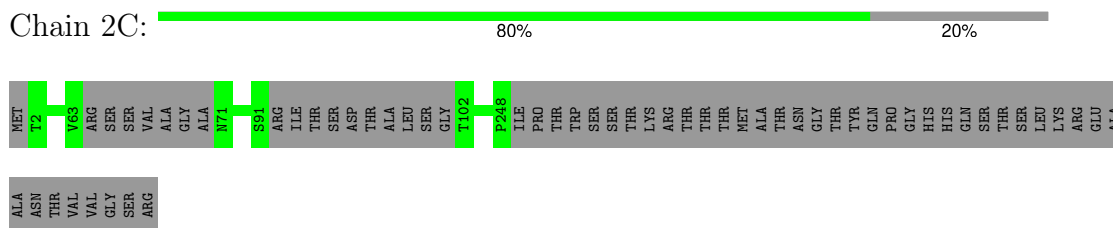
## Chain 1t:



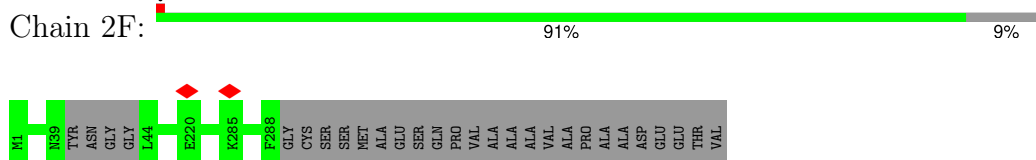
## Chain 2B:



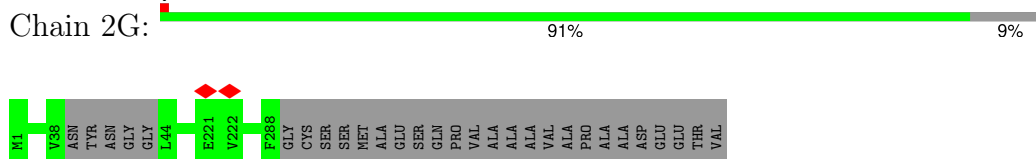
## Chain 2C:



Chain 2F:



## Chain 2G:



## Chain 2H:





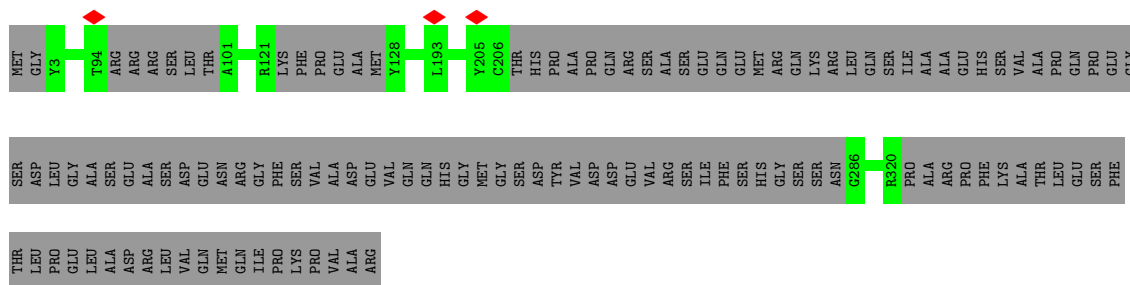




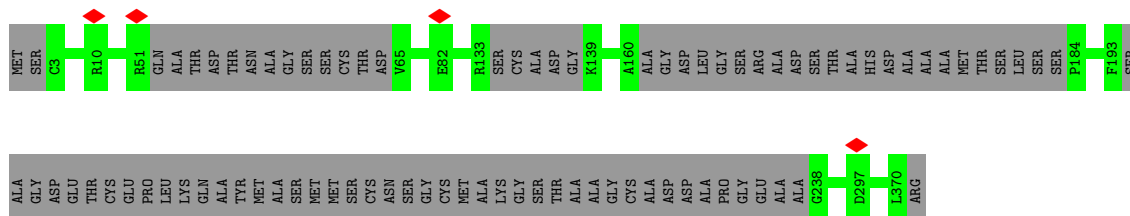
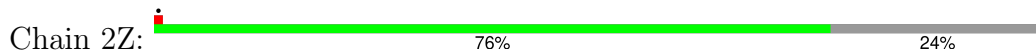




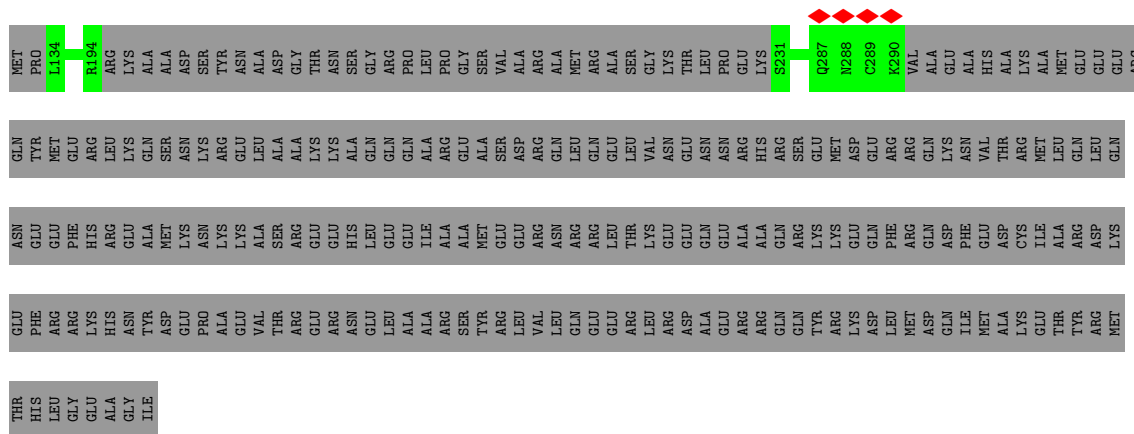
- Molecule 39: DMIP13



- Molecule 40: DMIP14



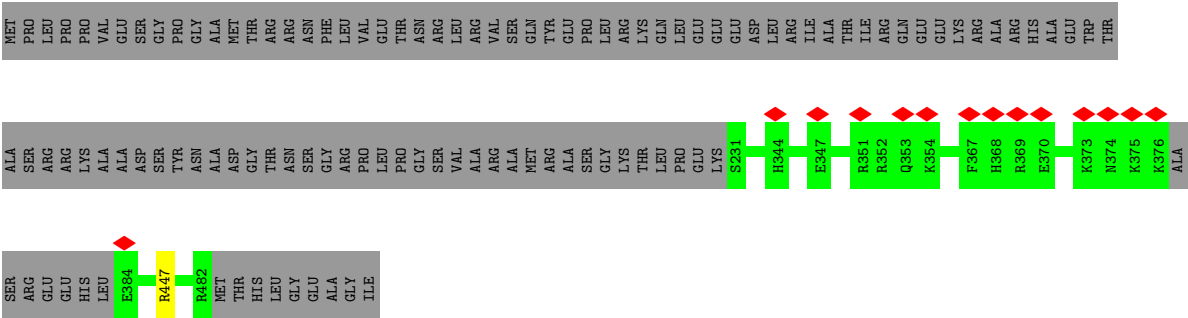
- Molecule 41: DMIP15



- Molecule 41: DMIP15



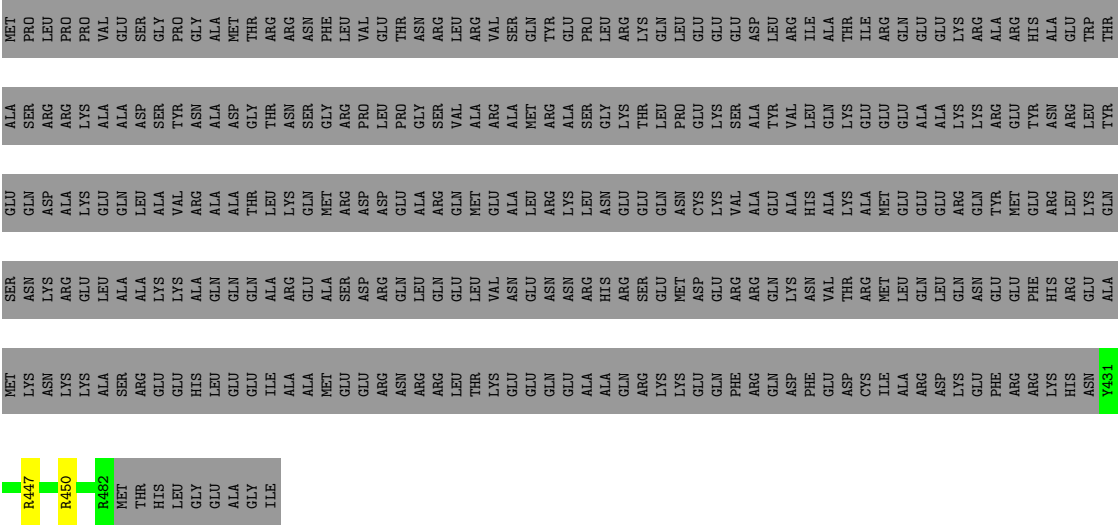




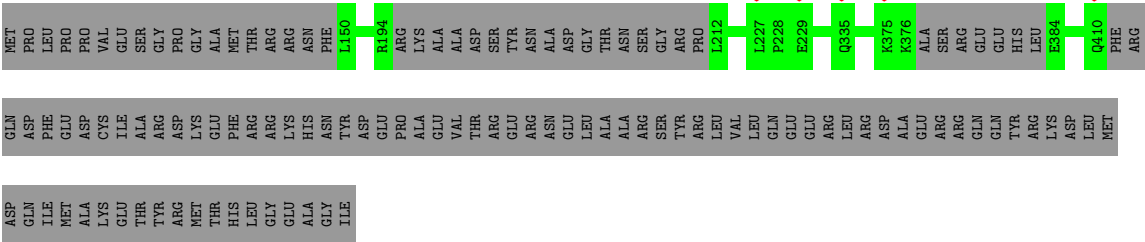
• Molecule 41: DMIP15



• Molecule 41: DMIP15



• Molecule 41: DMIP15



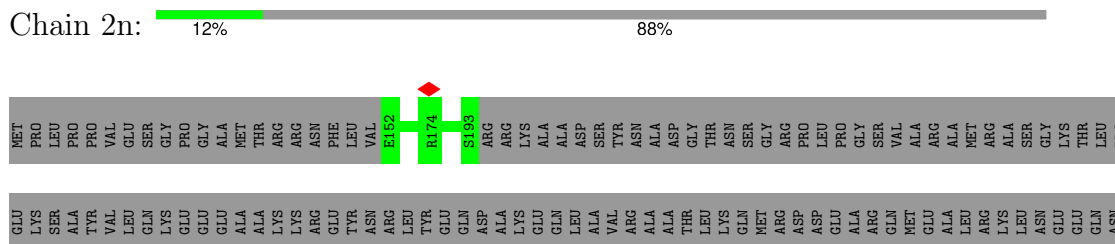
• Molecule 41: DMIP15



- Molecule 41: DMIP15

- Molecule 41: DMIP15

- Molecule 41: DMIP15





[illegible]

- Molecule 41: DMIP15

Chain 20:  79% 20%

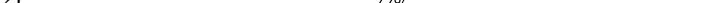
[illegible]

- Molecule 41: DMIP15

Chain 2p:  14% 86%

[illegible]

- Molecule 42: DMIP16

Chain 2r:  77% 23%

Sequence logo for the 100th position of the protein. The y-axis represents information content in bits, ranging from 0 to 1.5. The x-axis lists amino acids. The most conserved position is 'A' (Ala) with an information content of approximately 1.4 bits. Other highly conserved positions include 'G' (Gly) and 'L' (Leu) at approximately 1.3 bits. The sequence shown is: MET, PRO, ILE, ARG, ARG, A6, L7, R52, ALA, VAL, ALA, ALA, SER, SER, ASP, LYS, SER, THR, SER, SER, ALA, ALA, PRO, PRO, PRO, PRO, PRO, GLN, GLY, THR, ARG, ARG, VAL, ALA, ALA, VAL, GLY, HIS, ARG, ALA, ASP, PHE, SER, ASN, SER, SER, PHE, VAL, VAL, VAL, PRO, GLN, ILE, S100, R103.



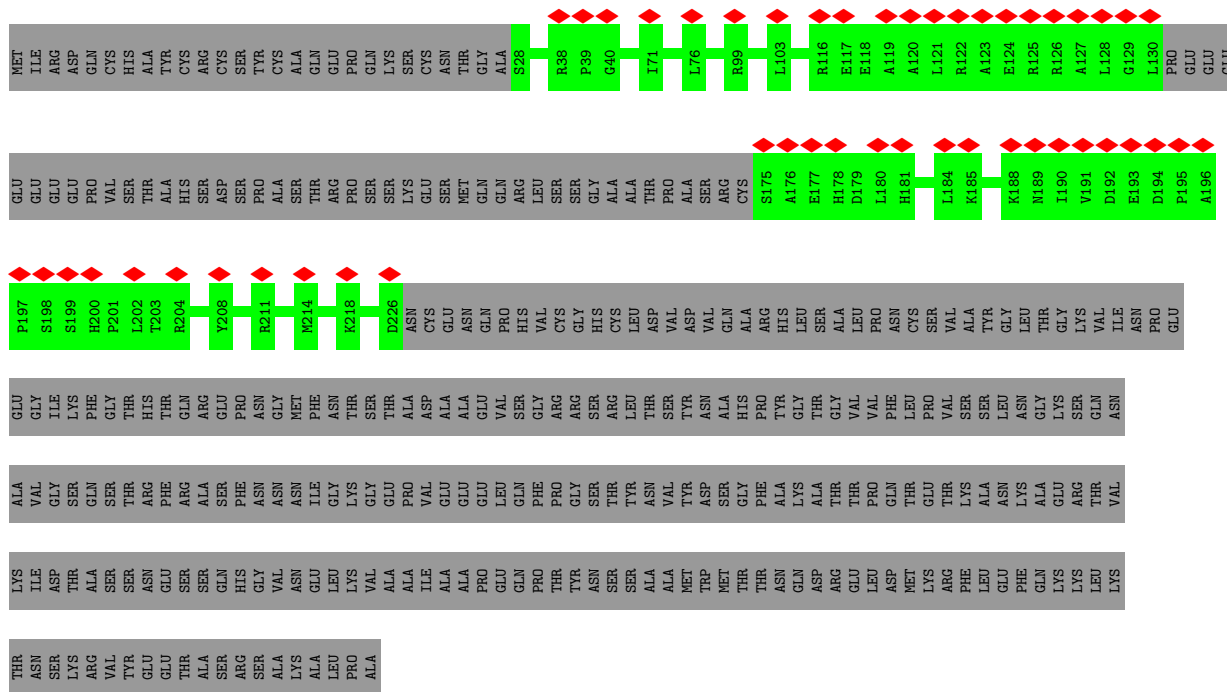




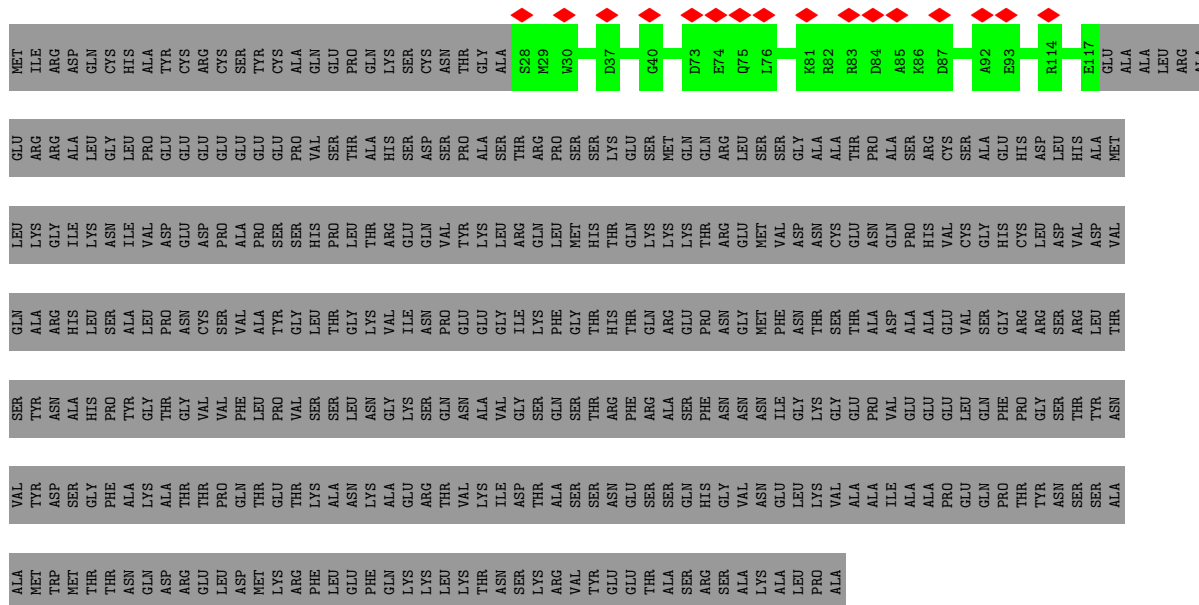




- Molecule 48: DMIP22

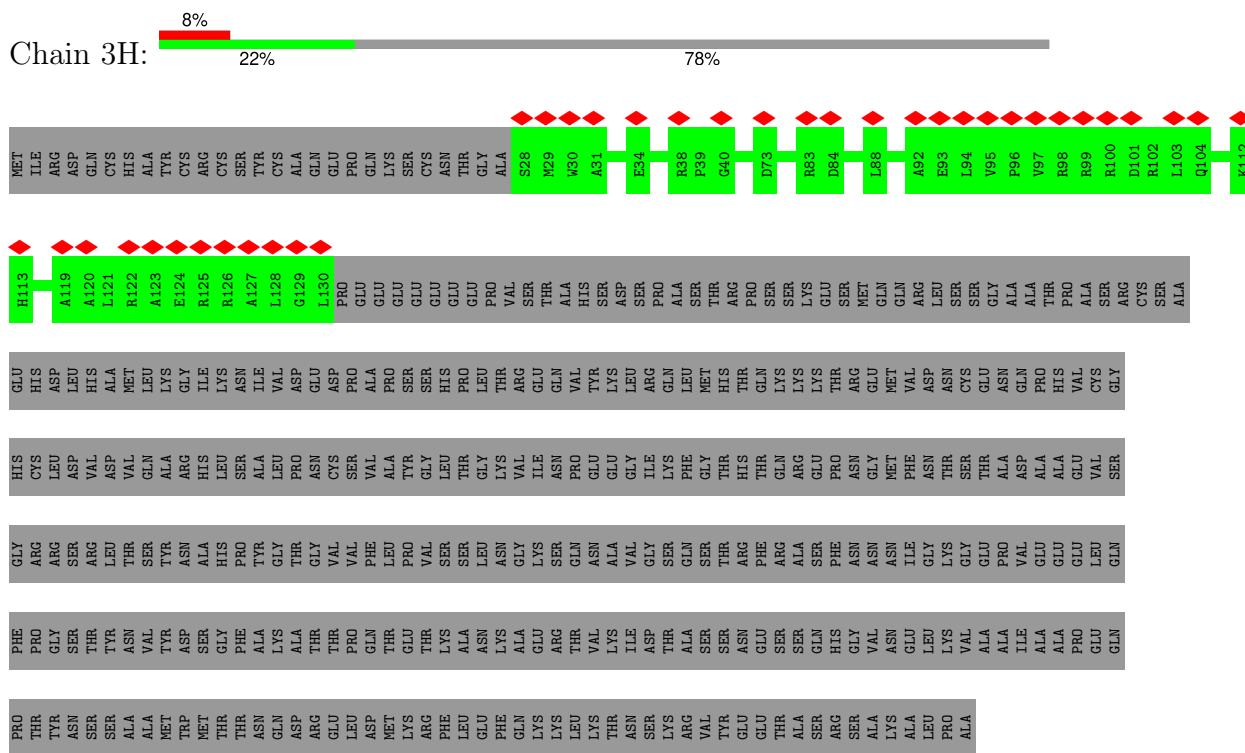


- Molecule 48: DMIP22

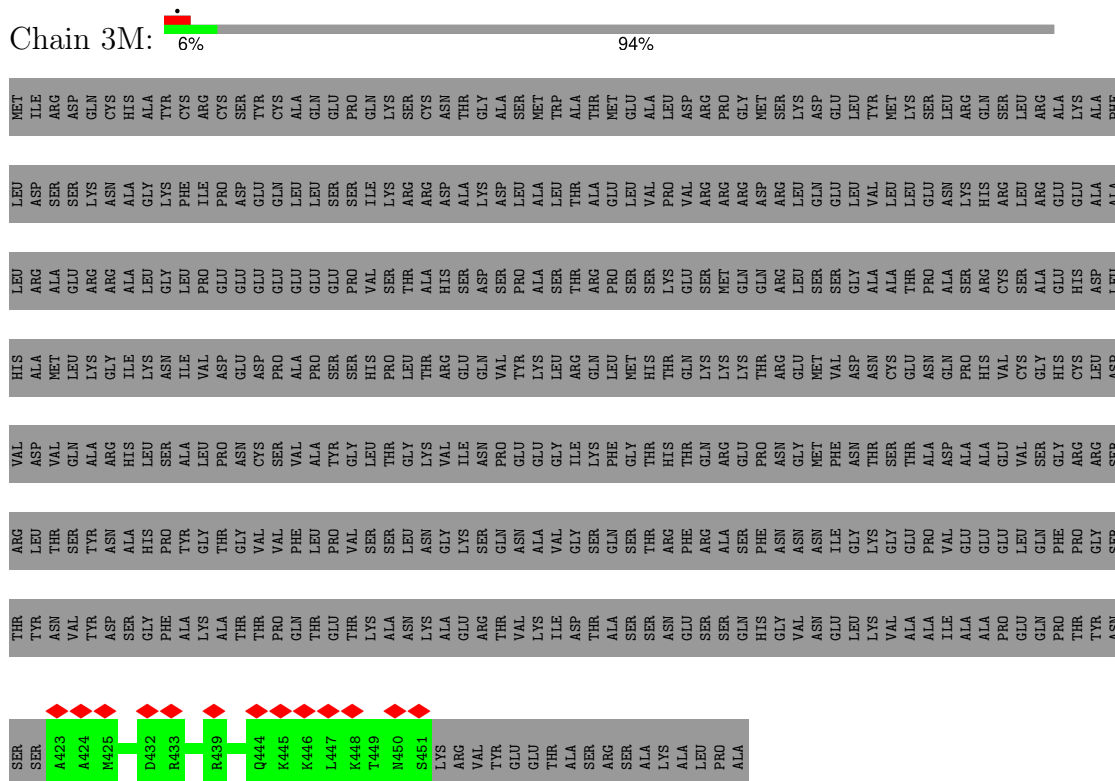


- Molecule 48: DMIP22





- Molecule 48: DMIP22



- Molecule 48: DMIP22



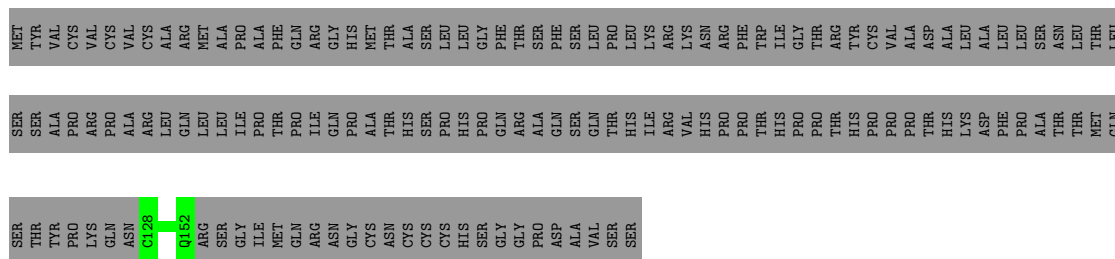






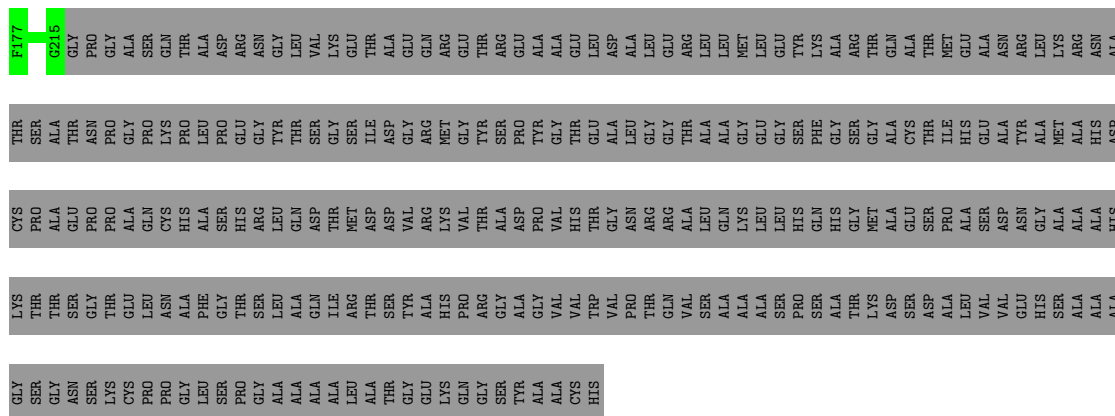
- Molecule 50: DMIP24

Chain 3S:  14% 86%



- Molecule 51: DMIP24

Chain X1:  13% 87%



- Molecule 52: DMIP25

Chain 3U:  34% 66%



- Molecule 53: DMIP26

Chain 3X: 







80%

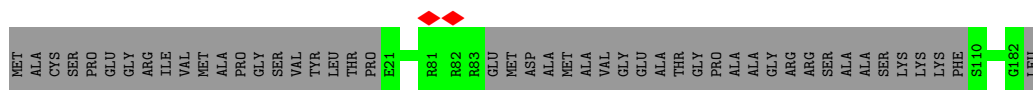
- Molecule 54: DMIP27

96%

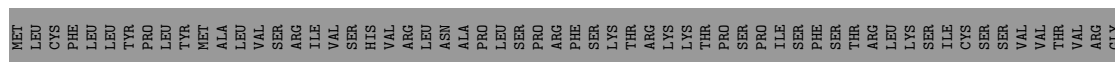
- Molecule 55: ArcMAP2

26%

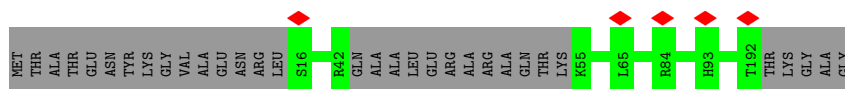
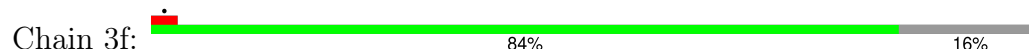




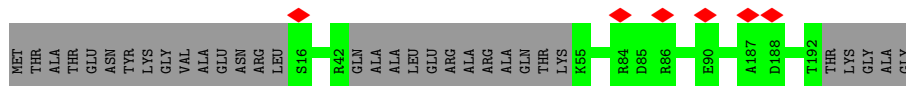
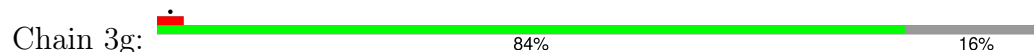
• Molecule 56: ArcMAP1



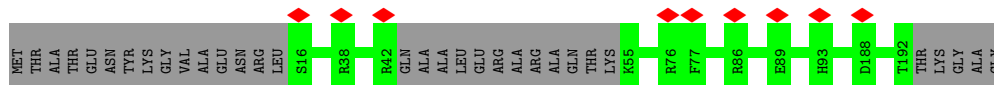
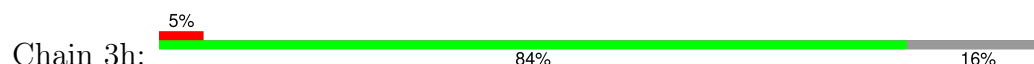
• Molecule 57: ArcMAP4



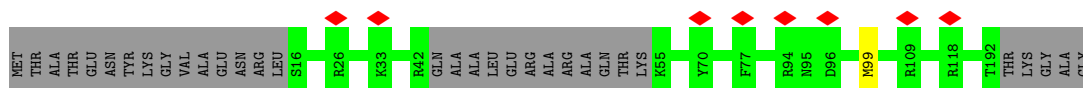
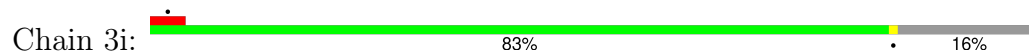
• Molecule 57: ArcMAP4



• Molecule 57: ArcMAP4



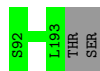
• Molecule 57: ArcMAP4



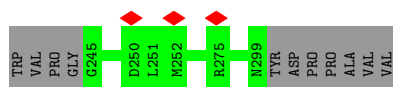
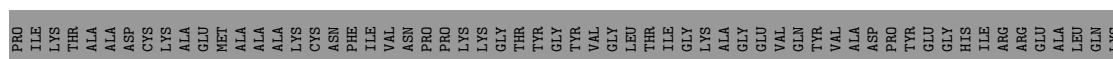
• Molecule 58: ArcMAP3



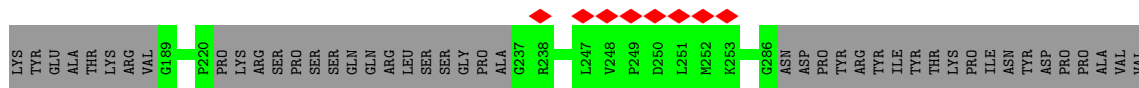
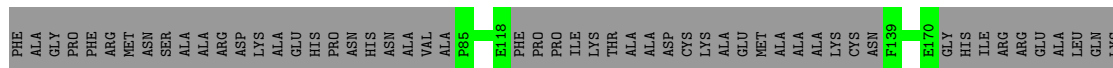
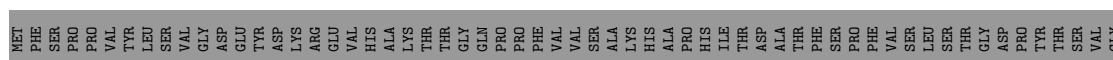




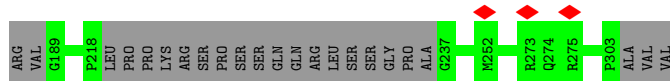
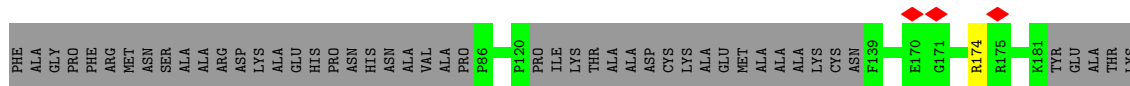
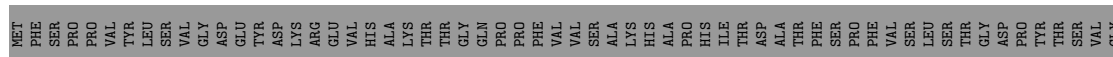
- Molecule 59: CFAP96



- Molecule 59: CFAP96



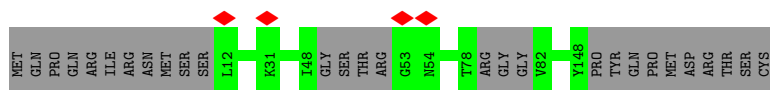
- Molecule 59: CFAP96



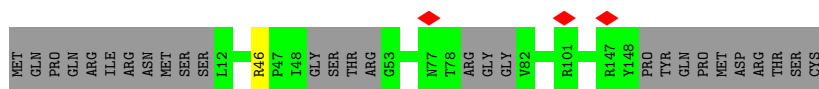
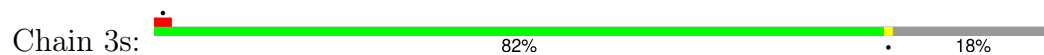




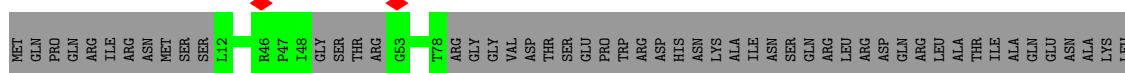




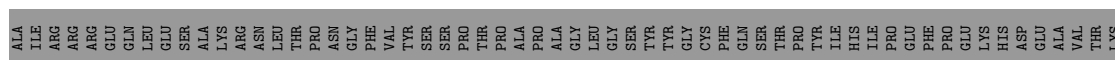
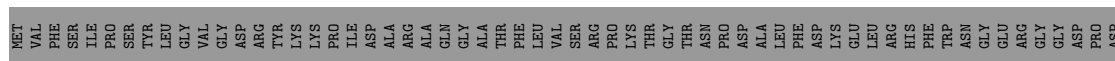
- Molecule 60: CFAP97



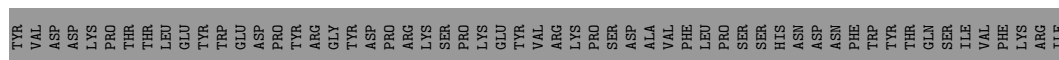
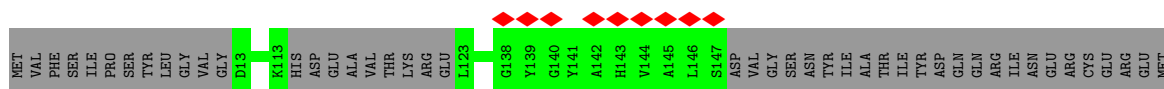
- Molecule 60: CFAP97



- Molecule 61: DMAP1



- Molecule 61: DMAP1



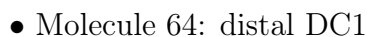
- Molecule 62: DMAP2















GLU	GLN	GLY	GLY	PRO	SER	SER	LYS	ARG	VAL	VAL	ARG	ARG	GLN	MET	GLN	ALA	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY
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[illegible]

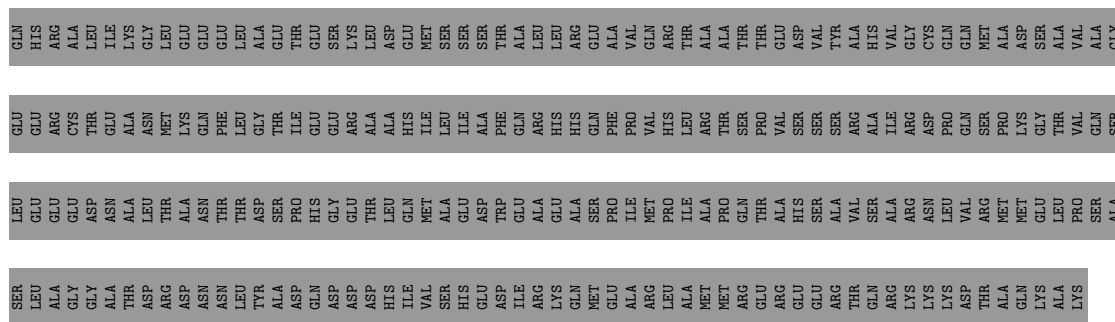
- Molecule 65: distal DC2

[illegible]

- Molecule 65: distal DC2

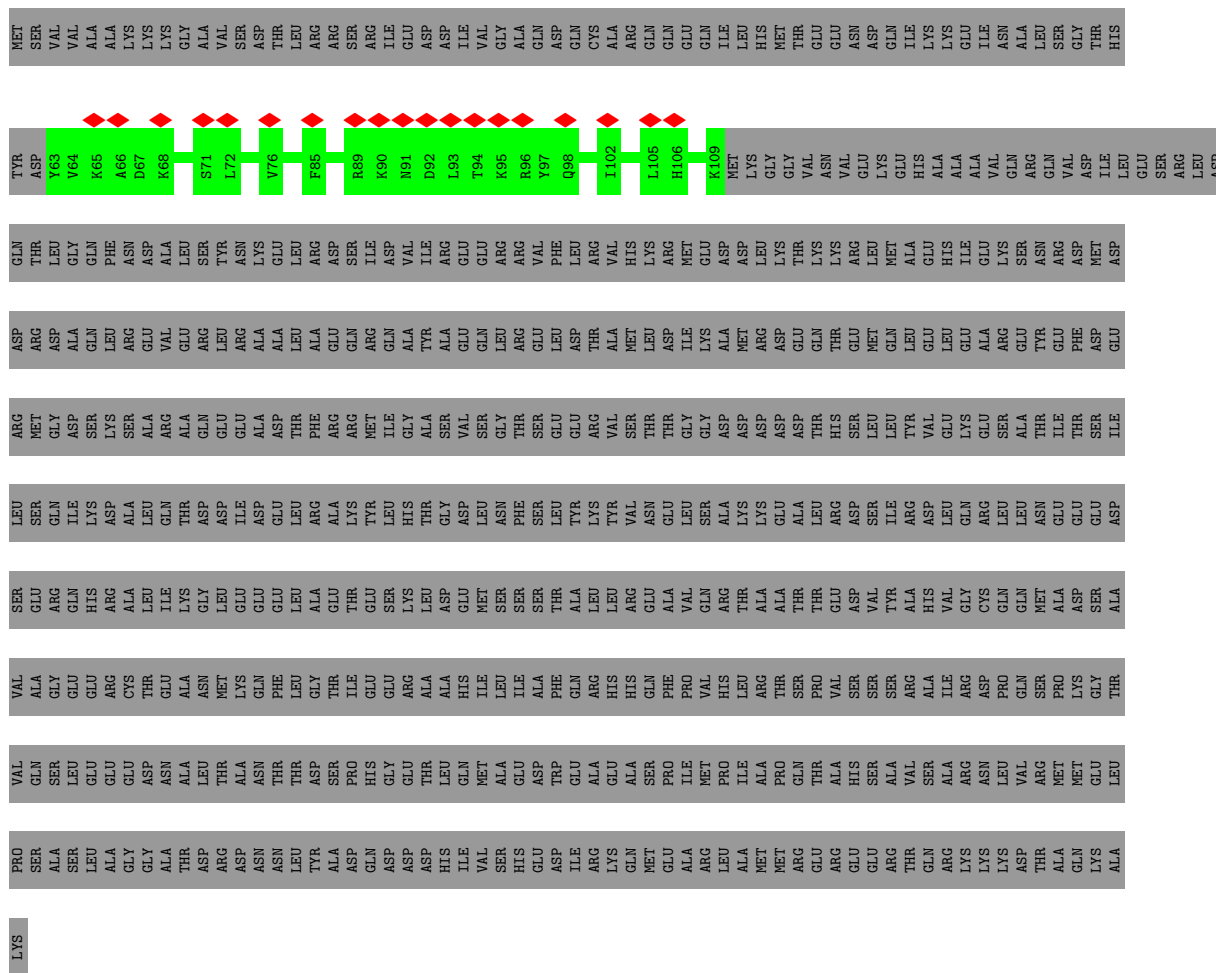
[illegible]





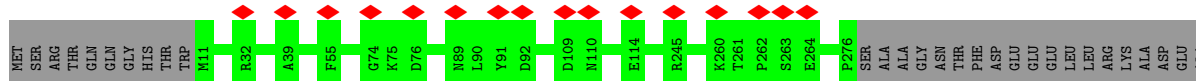
- Molecule 65: distal DC2

Chain 5I:  8% 92%

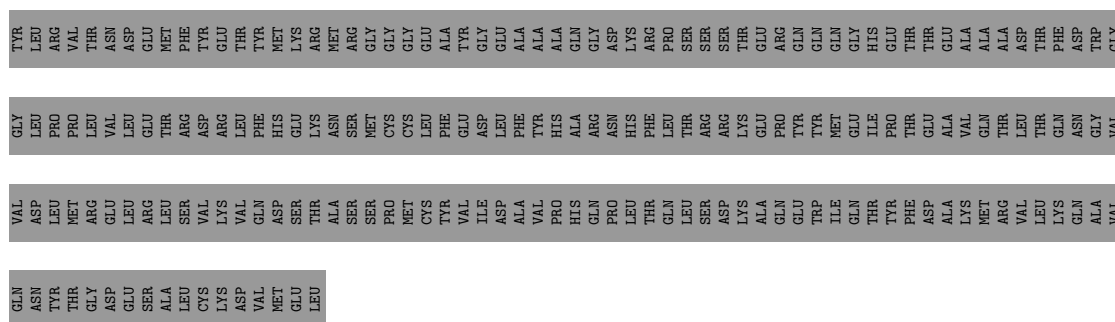


- Molecule 66: distal DC4

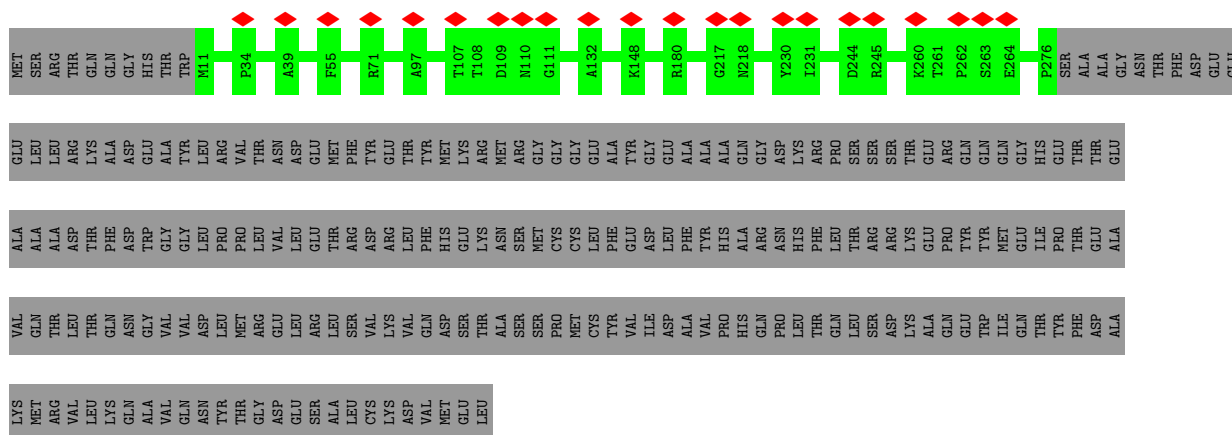
Chain 5K:  54% 46%



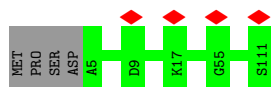




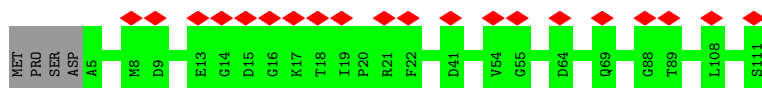
- Molecule 66: distal DC4



- Molecule 67: DC5



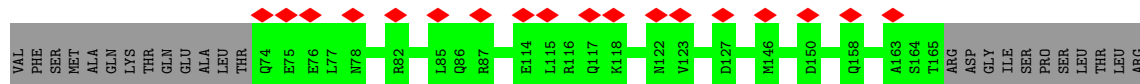
- Molecule 67: DC5



- Molecule 68: DC6









## 4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	533420	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION	Depositor
Microscope	TFS KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ( $e^-/\text{\AA}^2$ )	62.6	Depositor
Minimum defocus (nm)	500	Depositor
Maximum defocus (nm)	2000	Depositor
Magnification	Not provided	
Image detector	GATAN K3 (6k x 4k)	Depositor
Maximum map value	1.841	Depositor
Minimum map value	-0.012	Depositor
Average map value	0.010	Depositor
Map value standard deviation	0.058	Depositor
Recommended contour level	0.0435	Depositor
Map size ( $\text{\AA}$ )	680.96, 680.96, 680.96	wwPDB
Map dimensions	512, 512, 512	wwPDB
Map angles ( $^\circ$ )	90.0, 90.0, 90.0	wwPDB
Pixel spacing ( $\text{\AA}$ )	1.33, 1.33, 1.33	Depositor



## 5 Model quality

### 5.1 Standard geometry

Bond lengths and bond angles in the following residue types are not validated in this section: GTP, CA, ATP, GDP, MG, ZN

The Z score for a bond length (or angle) is the number of standard deviations the observed value is removed from the expected value. A bond length (or angle) with  $|Z| > 5$  is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z  >5	RMSZ	# Z  >5
1	A	0.27	0/3432	0.54	0/4637
1	AB	0.27	0/3351	0.52	0/4528
1	AD	0.27	0/3432	0.53	0/4637
1	AF	0.27	0/3432	0.52	0/4637
1	AH	0.29	0/3432	0.54	0/4637
1	AJ	0.27	0/3432	0.52	0/4637
1	AL	0.27	0/3432	0.53	0/4637
1	AN	0.27	0/3351	0.52	0/4528
1	B	0.27	0/3334	0.53	0/4502
1	BB	0.27	0/3432	0.52	0/4637
1	BD	0.28	0/3440	0.53	0/4647
1	BF	0.27	0/3432	0.52	0/4637
1	BH	0.32	0/3432	0.56	1/4637 (0.0%)
1	BJ	0.27	0/3432	0.53	0/4637
1	BL	0.27	0/3432	0.53	0/4637
1	BN	0.27	0/3432	0.54	0/4637
1	CA	0.29	0/3387	0.53	0/4575
1	CC	0.27	0/3440	0.53	0/4647
1	CE	0.27	0/3440	0.54	0/4647
1	CG	0.26	0/3440	0.51	0/4647
1	CI	0.27	0/3432	0.52	0/4637
1	CK	0.26	0/3432	0.52	0/4637
1	CM	0.28	0/3432	0.59	1/4637 (0.0%)
1	DA	0.27	0/3432	0.51	0/4637
1	DC	0.27	0/3432	0.52	0/4637
1	DE	0.27	0/3432	0.54	0/4637
1	DG	0.27	0/3432	0.53	0/4637
1	DI	0.26	0/3432	0.52	0/4637
1	DK	0.26	0/3432	0.52	0/4637
1	DM	0.28	0/3432	0.54	0/4637
1	E	0.28	0/3440	0.53	0/4647
1	EB	0.27	0/3440	0.53	0/4647



Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z  >5	RMSZ	# Z  >5
1	ED	0.27	0/3440	0.53	0/4647
1	EF	0.27	0/3440	0.53	0/4647
1	EH	0.27	0/3440	0.52	0/4647
1	EJ	0.27	0/3440	0.53	0/4647
1	EL	0.30	0/3432	0.57	0/4637
1	F	0.28	0/3432	0.55	0/4637
1	FB	0.28	0/3432	0.53	0/4637
1	FD	0.28	0/3432	0.53	0/4637
1	FF	0.27	0/3432	0.53	0/4637
1	FH	0.27	0/3432	0.53	0/4637
1	FJ	0.27	0/3430	0.54	2/4633 (0.0%)
1	FL	0.27	0/3413	0.55	0/4610
1	G	0.26	0/3432	0.53	0/4637
1	GB	0.26	0/3432	0.54	1/4637 (0.0%)
1	GD	0.29	0/3413	0.53	0/4610
1	GF	0.28	0/3432	0.55	0/4637
1	GH	0.28	0/3432	0.54	0/4637
1	GJ	0.27	0/3405	0.54	0/4599
1	GL	0.27	0/3432	0.54	0/4637
1	H	0.28	0/3432	0.54	0/4637
1	HB	0.28	0/3432	0.55	0/4637
1	HD	0.27	0/3432	0.55	0/4637
1	HF	0.27	0/3432	0.52	0/4637
1	HH	0.27	0/3432	0.53	1/4637 (0.0%)
1	HJ	0.26	0/3432	0.52	0/4637
1	HL	0.27	0/3432	0.54	0/4637
1	I	0.28	0/3440	0.54	0/4647
1	IB	0.27	0/3432	0.53	0/4637
1	ID	0.26	0/3432	0.52	0/4637
1	IF	0.27	0/3432	0.53	0/4637
1	IH	0.27	0/3432	0.51	0/4637
1	IJ	0.27	0/3432	0.52	0/4637
1	IL	0.28	0/3432	0.57	0/4637
1	JA	0.27	0/3432	0.54	1/4637 (0.0%)
1	JC	0.26	0/3432	0.54	0/4637
1	JE	0.27	0/3432	0.54	0/4637
1	JG	0.27	0/3432	0.53	0/4637
1	JI	0.27	0/3432	0.52	0/4637
1	JK	0.28	0/3432	0.57	0/4637
1	JM	0.27	0/3413	0.53	0/4610
1	KA	0.27	0/3440	0.51	0/4647
1	KC	0.26	0/3432	0.52	0/4637
1	KE	0.27	0/3432	0.53	0/4637



Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z  >5	RMSZ	# Z  >5
1	KG	0.27	0/3432	0.51	0/4637
1	KI	0.26	0/3432	0.51	0/4637
1	KK	0.27	0/3432	0.53	0/4637
1	KM	0.27	0/3432	0.52	0/4637
1	LA	0.27	0/3432	0.54	0/4637
1	LC	0.27	0/3432	0.51	0/4637
1	LE	0.27	0/3432	0.54	0/4637
1	LG	0.28	0/3432	0.53	1/4637 (0.0%)
1	LI	0.27	0/3432	0.52	0/4637
1	LK	0.27	0/3432	0.52	0/4637
1	LM	0.28	0/3432	0.54	0/4637
1	LO	0.27	0/3432	0.53	0/4637
1	M	0.26	0/3432	0.51	0/4637
1	MB	0.27	0/3432	0.52	0/4637
1	MD	0.27	0/3432	0.51	0/4637
1	MF	0.28	0/3432	0.54	0/4637
1	MH	0.27	0/3432	0.53	0/4637
1	MJ	0.28	0/3432	0.55	0/4637
1	ML	0.26	0/3432	0.52	0/4637
1	MN	0.28	0/3432	0.53	0/4637
1	N	0.28	0/3358	0.56	1/4538 (0.0%)
1	NB	0.26	0/3358	0.53	0/4538
1	ND	0.27	0/3418	0.54	0/4617
1	NF	0.26	0/3418	0.52	0/4617
1	NH	0.28	0/3413	0.54	0/4610
1	NJ	0.27	0/3432	0.52	0/4637
1	NL	0.28	0/3413	0.56	0/4610
1	O	0.27	0/3413	0.56	0/4610
1	OB	0.27	0/3405	0.52	0/4599
1	OD	0.26	0/3413	0.51	0/4610
1	OF	0.27	0/3413	0.53	0/4610
1	OH	0.27	0/3413	0.53	0/4610
1	OJ	0.28	0/3413	0.55	1/4610 (0.0%)
1	OL	0.29	0/3413	0.57	0/4610
1	P	0.28	0/3184	0.55	2/4303 (0.0%)
1	PB	0.27	0/3432	0.53	1/4637 (0.0%)
1	PD	0.28	0/3432	0.54	0/4637
1	PF	0.27	0/3432	0.53	1/4637 (0.0%)
1	PH	0.28	0/3412	0.54	1/4608 (0.0%)
1	PJ	0.27	0/3432	0.52	0/4637
1	PL	0.28	0/3432	0.55	0/4637
1	QA	0.27	0/3418	0.55	0/4617
1	QC	0.27	0/3418	0.51	0/4617



Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z  >5	RMSZ	# Z  >5
1	QE	0.28	0/3413	0.52	0/4610
1	QG	0.27	0/3418	0.52	0/4617
1	QI	0.27	0/3418	0.52	0/4617
1	QK	0.28	0/3418	0.53	0/4617
1	RA	0.27	0/3413	0.53	0/4610
1	RC	0.28	0/3432	0.53	0/4637
1	RE	0.27	0/3413	0.50	0/4610
1	RG	0.27	0/3413	0.52	0/4610
1	RI	0.27	0/3411	0.52	0/4606
1	RK	0.27	0/3425	0.53	0/4627
1	S	0.27	0/3405	0.52	0/4599
1	SB	0.28	0/3405	0.52	0/4599
1	SD	0.28	0/3405	0.53	0/4599
1	SF	0.27	0/3405	0.53	0/4599
1	SH	0.27	0/3425	0.55	0/4627
1	SJ	0.27	0/3418	0.54	0/4617
1	T	0.28	0/3418	0.54	0/4617
1	TB	0.28	0/3425	0.54	0/4627
1	TD	0.28	0/3413	0.55	0/4610
1	TF	0.27	0/3418	0.54	0/4617
1	TH	0.26	0/3413	0.54	1/4610 (0.0%)
1	TJ	0.27	0/3432	0.54	0/4637
1	TL	0.28	0/3418	0.55	0/4617
1	U	0.27	0/3405	0.52	1/4599 (0.0%)
1	UB	0.26	0/3405	0.51	0/4599
1	UD	0.27	0/3405	0.52	0/4599
1	UF	0.27	0/3405	0.53	0/4599
1	UH	0.27	0/3405	0.52	0/4599
1	UJ	0.27	0/3418	0.52	0/4617
1	UL	0.27	0/3413	0.55	0/4610
1	V	0.28	0/3425	0.55	1/4627 (0.0%)
1	VB	0.27	0/3413	0.51	0/4610
1	VD	0.27	0/3418	0.54	0/4617
1	VF	0.27	0/3425	0.52	0/4627
1	VH	0.27	0/3405	0.52	0/4599
1	VJ	0.27	0/3432	0.53	0/4637
1	VL	0.26	0/3432	0.52	0/4637
1	W	0.27	0/3405	0.52	0/4599
1	WB	0.26	0/3405	0.52	0/4599
1	WD	0.27	0/3405	0.52	0/4599
1	WF	0.27	0/3418	0.52	0/4617
1	WH	0.26	0/3405	0.52	0/4599
1	WJ	0.27	0/3405	0.52	0/4599



Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z  >5	RMSZ	# Z  >5
1	WL	0.27	0/3413	0.52	0/4610
2	AA	0.27	0/3400	0.52	0/4614
2	AC	0.27	0/3424	0.52	0/4647
2	AE	0.27	0/3466	0.51	0/4704
2	AG	0.27	0/3423	0.53	2/4644 (0.0%)
2	AI	0.27	0/3466	0.53	0/4704
2	AK	0.27	0/3466	0.52	0/4704
2	AM	0.28	0/3400	0.52	0/4614
2	BA	0.27	0/3392	0.52	0/4602
2	BC	0.28	0/3400	0.54	0/4614
2	BE	0.27	0/3392	0.52	0/4602
2	BG	0.27	0/3400	0.54	0/4614
2	BI	0.29	0/3466	0.54	0/4704
2	BK	0.27	0/3392	0.52	0/4602
2	BM	0.28	0/3400	0.53	0/4614
2	C	0.28	0/3466	0.51	0/4704
2	CB	0.28	0/3466	0.53	0/4704
2	CD	0.28	0/3466	0.54	1/4704 (0.0%)
2	CF	0.26	0/3400	0.49	0/4614
2	CH	0.27	0/3466	0.53	0/4704
2	CJ	0.26	0/3466	0.51	0/4704
2	CL	0.28	0/3466	0.53	1/4704 (0.0%)
2	D	0.27	0/3400	0.52	0/4614
2	DB	0.27	0/3400	0.51	0/4614
2	DD	0.28	0/3400	0.52	0/4614
2	DF	0.26	0/3408	0.51	0/4625
2	DH	0.27	0/3398	0.51	0/4610
2	DJ	0.27	0/3400	0.50	0/4614
2	DL	0.28	0/3400	0.54	0/4614
2	EA	0.27	0/3400	0.52	0/4614
2	EC	0.27	0/3466	0.51	0/4704
2	EE	0.26	0/3417	0.50	0/4637
2	EG	0.28	0/3422	0.53	0/4644
2	EI	0.26	0/3408	0.52	0/4625
2	EK	0.28	0/3408	0.52	0/4625
2	FA	0.27	0/3466	0.53	0/4704
2	FC	0.28	0/3431	0.53	0/4656
2	FE	0.28	0/3414	0.53	0/4633
2	FG	0.29	0/3408	0.53	0/4625
2	FI	0.26	0/3392	0.50	0/4602
2	FK	0.29	0/3408	0.54	0/4625
2	GA	0.28	0/3400	0.54	0/4614
2	GC	0.27	0/3400	0.53	0/4614



Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z  >5	RMSZ	# Z  >5
2	GE	0.28	0/3408	0.53	0/4625
2	GG	0.27	0/3400	0.52	0/4614
2	GI	0.28	0/3400	0.53	1/4614 (0.0%)
2	GK	0.27	0/3400	0.53	0/4614
2	HA	0.27	0/3400	0.54	0/4614
2	HC	0.26	0/3400	0.52	1/4614 (0.0%)
2	HE	0.27	0/3466	0.53	1/4704 (0.0%)
2	HG	0.28	0/3414	0.53	0/4633
2	HI	0.28	0/3406	0.53	1/4621 (0.0%)
2	HK	0.28	0/3414	0.54	0/4633
2	HM	0.28	0/3400	0.55	0/4614
2	IA	0.28	0/3400	0.54	0/4614
2	IC	0.27	0/3414	0.53	0/4633
2	IE	0.27	0/3466	0.52	0/4704
2	IG	0.26	0/3466	0.52	0/4704
2	II	0.27	0/3466	0.52	0/4704
2	IK	0.29	0/3400	0.54	0/4614
2	IM	0.28	0/3400	0.54	1/4614 (0.0%)
2	J	0.29	0/3466	0.56	0/4704
2	JB	0.27	0/3466	0.52	0/4704
2	JD	0.28	0/3400	0.52	0/4614
2	JF	0.28	0/3400	0.53	0/4614
2	JH	0.28	0/3413	0.52	0/4631
2	JJ	0.28	0/3414	0.52	1/4633 (0.0%)
2	JL	0.29	0/3414	0.55	0/4633
2	JN	0.28	0/3466	0.56	0/4704
2	K	0.28	0/3429	0.55	1/4652 (0.0%)
2	KB	0.27	0/3466	0.54	0/4704
2	KD	0.27	0/3400	0.52	0/4614
2	KF	0.27	0/3466	0.53	0/4704
2	KH	0.28	0/3406	0.54	0/4622
2	KJ	0.26	0/3417	0.51	0/4637
2	KL	0.28	0/3466	0.53	0/4704
2	KN	0.27	0/3466	0.52	0/4704
2	L	0.27	0/3466	0.52	1/4704 (0.0%)
2	LB	0.28	0/3417	0.51	0/4637
2	LD	0.28	0/3392	0.51	0/4603
2	LF	0.27	0/3466	0.52	0/4704
2	LH	0.29	0/3466	0.53	0/4704
2	LJ	0.27	0/3466	0.53	0/4704
2	LL	0.28	0/3466	0.53	0/4704
2	LN	0.27	0/3417	0.52	0/4637
2	MA	0.28	0/3406	0.52	0/4622



Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z  >5	RMSZ	# Z  >5
2	MC	0.28	0/3451	0.53	0/4684
2	ME	0.28	0/3439	0.53	0/4666
2	MG	0.27	0/3466	0.52	0/4704
2	MI	0.27	0/3466	0.52	0/4704
2	MK	0.28	0/3466	0.54	0/4704
2	MM	0.28	0/3406	0.53	0/4622
2	NA	0.27	0/3466	0.53	0/4704
2	NC	0.27	0/3466	0.54	1/4704 (0.0%)
2	NE	0.27	0/3466	0.53	0/4704
2	NG	0.27	0/3466	0.53	0/4704
2	NI	0.28	0/3466	0.53	1/4704 (0.0%)
2	NK	0.28	0/3466	0.54	0/4704
2	NM	0.28	0/3466	0.55	0/4704
2	OA	0.28	0/3414	0.53	0/4633
2	OC	0.27	0/3408	0.53	0/4625
2	OE	0.27	0/3408	0.52	0/4625
2	OG	0.28	0/3466	0.52	0/4704
2	OI	0.27	0/3400	0.53	0/4614
2	OK	0.28	0/3400	0.55	0/4614
2	OM	0.29	0/3423	0.53	0/4645
2	PA	0.27	0/3400	0.53	0/4614
2	PC	0.27	0/3408	0.51	0/4625
2	PE	0.29	0/3408	0.52	0/4625
2	PG	0.28	0/3466	0.52	0/4704
2	PI	0.28	0/3408	0.53	0/4625
2	PK	0.29	0/3414	0.53	0/4633
2	PM	0.30	0/3414	0.56	1/4633 (0.0%)
2	Q	0.28	0/3466	0.53	0/4704
2	QB	0.28	0/3394	0.53	0/4606
2	QD	0.29	0/3400	0.54	0/4614
2	QF	0.28	0/3400	0.52	0/4614
2	QH	0.29	0/3466	0.53	0/4704
2	QJ	0.28	0/3408	0.52	0/4625
2	QL	0.29	0/3414	0.56	0/4633
2	R	0.27	0/3466	0.53	0/4704
2	RB	0.29	0/3408	0.55	2/4625 (0.0%)
2	RD	0.29	0/3408	0.53	0/4625
2	RF	0.28	0/3408	0.52	0/4625
2	RH	0.29	0/3400	0.55	1/4614 (0.0%)
2	RJ	0.29	0/3400	0.56	1/4614 (0.0%)
2	RL	0.28	0/3406	0.55	0/4622
2	SA	0.28	0/3408	0.53	0/4625
2	SC	0.28	0/3406	0.53	0/4622



Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z  >5	RMSZ	# Z  >5
2	SE	0.27	0/3406	0.51	0/4622
2	SG	0.27	0/3408	0.50	0/4625
2	SI	0.28	0/3400	0.52	0/4614
2	SK	0.29	0/3414	0.54	0/4633
2	TA	0.28	0/3400	0.52	0/4614
2	TC	0.28	0/3384	0.54	0/4592
2	TE	0.27	0/3400	0.51	0/4614
2	TG	0.27	0/3408	0.51	0/4625
2	TI	0.27	0/3400	0.51	0/4614
2	TK	0.28	0/3424	0.53	0/4647
2	UA	0.28	0/3400	0.53	0/4614
2	UC	0.27	0/3392	0.51	0/4603
2	UE	0.28	0/3400	0.53	0/4614
2	UG	0.28	0/3408	0.52	0/4625
2	UI	0.27	0/3400	0.52	0/4614
2	UK	0.28	0/3400	0.52	1/4614 (0.0%)
2	VA	0.28	0/3408	0.53	0/4625
2	VC	0.28	0/3408	0.54	0/4625
2	VE	0.27	0/3408	0.51	0/4625
2	VG	0.27	0/3408	0.52	0/4625
2	VI	0.27	0/3412	0.51	0/4629
2	VK	0.28	0/3400	0.51	0/4614
2	VM	0.28	0/3431	0.55	0/4656
2	WA	0.27	0/3466	0.51	0/4704
2	WC	0.27	0/3408	0.52	0/4625
2	WE	0.26	0/3466	0.52	0/4704
2	WG	0.28	0/3408	0.52	1/4625 (0.0%)
2	WI	0.28	0/3466	0.54	0/4704
2	WK	0.27	0/3408	0.51	0/4625
2	WM	0.28	0/3466	0.52	0/4704
3	X	0.27	0/1544	0.54	0/2083
3	XA	0.27	0/1544	0.55	1/2083 (0.0%)
3	XB	0.27	0/1544	0.54	0/2083
3	XC	0.27	0/1544	0.55	0/2083
3	XD	0.26	0/1544	0.54	0/2083
3	XE	0.27	0/1544	0.56	0/2083
3	XF	0.26	0/1544	0.54	0/2083
4	XM	0.28	0/2094	0.51	0/2833
4	XO	0.27	0/2102	0.50	0/2844
4	XQ	0.26	0/2102	0.52	0/2844
4	XR	0.29	0/2105	0.52	0/2847
5	XN	0.27	0/2172	0.51	0/2940
5	XP	0.27	0/2172	0.51	0/2940



Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z  >5	RMSZ	# Z  >5
6	0	0.27	0/2040	0.54	0/2754
6	0A	0.29	0/2040	0.55	0/2754
7	0C	0.27	0/955	0.52	0/1293
7	0D	0.26	0/2785	0.57	2/3777 (0.1%)
8	0F	0.25	0/1449	0.57	0/1930
8	0G	0.28	0/2966	0.60	0/3932
8	0H	0.28	0/230	0.62	0/307
8	0I	0.27	0/2384	0.62	0/3167
8	0J	0.27	0/1910	0.64	0/2530
9	0L	0.26	0/4845	0.55	1/6569 (0.0%)
9	0M	0.26	0/4845	0.55	0/6569
9	0N	0.27	0/4845	0.56	0/6569
9	0O	0.29	0/2401	0.59	0/3253
10	0R	0.29	0/2646	0.62	1/3521 (0.0%)
10	0S	0.30	0/1888	0.62	0/2513
11	0U	0.27	0/2621	0.51	0/3555
12	0W	0.26	0/2645	0.52	0/3600
13	0Y	0.26	0/1875	0.50	0/2538
13	0Z	0.27	0/1888	0.50	0/2554
13	0a	0.25	0/430	0.53	0/584
14	0c	0.27	0/1965	0.50	0/2631
14	0d	0.29	0/2190	0.56	0/2934
15	0f	0.26	0/1283	0.52	0/1737
15	0g	0.28	0/223	0.45	0/303
16	0k	0.26	0/5705	0.55	0/7710
16	0l	0.25	0/5141	0.53	0/6953
17	0m	0.27	0/1164	0.61	0/1550
17	0n	0.29	0/3406	0.62	0/4525
17	0o	0.24	0/173	0.56	0/232
18	0p	0.27	0/915	0.62	0/1222
19	0r	0.27	0/2076	0.59	1/2806 (0.0%)
20	0t	0.27	0/2117	0.53	0/2877
20	0u	0.27	0/1819	0.53	0/2476
21	0v	0.24	0/588	0.57	0/788
21	0w	0.28	0/3753	0.58	0/5006
21	0x	0.26	0/917	0.54	0/1228
22	0z	0.30	0/1177	0.56	0/1585
22	1w	0.26	0/1509	0.56	0/2035
22	1x	0.27	0/1714	0.57	1/2310 (0.0%)
22	1y	0.28	0/733	0.57	0/989
23	1A	0.27	0/2310	0.59	0/3075
23	1B	0.29	0/1682	0.61	0/2236
23	1D	0.26	0/467	0.67	0/616



Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z  >5	RMSZ	# Z  >5
23	1E	0.28	0/3083	0.57	0/4112
23	1F	0.27	0/642	0.60	0/856
24	1H	0.27	0/4800	0.52	1/6491 (0.0%)
24	1I	0.26	0/5391	0.53	0/7280
24	1J	0.26	0/5470	0.53	0/7387
24	1K	0.27	0/4799	0.53	0/6489
25	1O	0.26	0/5862	0.51	0/7901
26	1Q	0.26	0/5371	0.54	0/7261
27	1S	0.26	0/5967	0.53	0/8066
27	1T	0.27	0/1822	0.60	1/2458 (0.0%)
28	1U	0.27	0/969	0.50	0/1318
28	1V	0.27	0/378	0.55	0/508
28	1X	0.26	0/969	0.51	0/1318
28	1Y	0.26	0/1357	0.54	0/1833
28	1a	0.26	0/460	0.48	0/627
28	1b	0.39	0/1347	0.59	1/1826 (0.1%)
28	1c	0.27	0/268	0.57	0/361
28	1d	0.27	0/969	0.48	0/1318
28	1e	0.26	0/378	0.51	0/508
28	1g	0.27	0/969	0.51	0/1318
28	1h	0.30	0/1248	0.55	0/1685
28	4V	0.27	0/500	0.50	0/679
28	4W	0.33	0/1512	0.70	5/2048 (0.2%)
29	1j	0.26	0/936	0.50	0/1267
29	1k	0.29	0/826	0.50	0/1128
29	1l	0.26	0/936	0.53	0/1267
29	1m	0.27	0/433	0.50	0/591
30	1o	0.25	0/1059	0.51	0/1435
31	1q	0.26	0/1708	0.54	0/2297
31	1r	0.27	0/875	0.53	0/1164
31	1s	0.27	0/1471	0.50	0/1978
31	1t	0.26	0/620	0.59	0/817
32	2B	0.27	0/2020	0.52	0/2728
32	2C	0.28	0/1852	0.56	0/2496
33	2F	0.30	0/2316	0.56	0/3146
33	2G	0.29	0/2308	0.54	0/3135
33	2H	0.29	0/2346	0.55	0/3188
33	2I	0.30	0/1986	0.55	0/2689
34	2L	0.26	0/1473	0.54	0/2003
35	2N	0.26	0/1143	0.55	0/1555
35	2O	0.27	0/1369	0.56	0/1856
36	2Q	0.27	0/2383	0.50	0/3232
37	2S	0.26	0/1845	0.52	0/2506



Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z  >5	RMSZ	# Z  >5
38	2U	0.26	0/1840	0.55	0/2491
38	2V	0.26	0/888	0.58	0/1202
39	2X	0.27	0/1809	0.54	0/2439
40	2Z	0.26	0/2305	0.55	0/3116
41	2b	0.30	0/1016	0.57	0/1358
41	2c	0.29	0/2107	0.55	0/2794
41	2e	0.31	0/2760	0.63	0/3672
41	2f	0.33	0/458	0.62	0/611
41	2h	0.28	0/1990	0.57	0/2642
41	2i	0.27	0/1311	0.57	0/1737
41	2k	0.32	0/1383	0.59	0/1846
41	2l	0.26	0/2245	0.57	0/2979
41	2n	0.26	0/365	0.67	0/489
41	2o	0.29	0/2472	0.62	0/3283
41	2p	0.32	0/428	0.69	0/569
42	2r	0.27	0/2528	0.52	0/3431
43	2t	0.26	0/1750	0.55	0/2372
44	2v	0.29	0/2308	0.53	0/3111
44	2w	0.28	0/3370	0.54	0/4575
45	2y	0.25	0/2372	0.53	0/3216
45	2z	0.40	0/1465	0.64	2/1989 (0.1%)
46	3B	0.25	0/3375	0.52	1/4571 (0.0%)
47	3D	0.28	0/3268	0.53	0/4423
48	3F	0.26	0/1269	0.60	0/1696
48	3G	0.24	0/741	0.59	0/989
48	3H	0.27	0/840	0.59	0/1121
48	3I	0.26	0/646	0.62	1/861 (0.1%)
48	3L	0.25	0/250	0.48	0/331
48	3M	0.24	0/250	0.43	0/331
49	3P	0.26	0/2031	0.56	0/2750
49	3Q	0.27	0/3890	0.54	0/5277
50	3S	0.25	0/183	0.44	0/242
51	X1	0.26	0/310	0.53	0/422
52	3U	0.25	0/1100	0.51	0/1501
53	3W	0.25	0/1282	0.52	0/1717
53	3X	0.25	0/393	0.60	0/530
54	3Z	0.27	0/1431	0.54	0/1933
54	3a	0.26	0/734	0.50	0/998
54	4Y	0.23	0/125	0.42	0/170
55	3b	0.27	0/1139	0.53	0/1526
56	3d	0.26	0/1259	0.57	0/1692
57	3f	0.25	0/1426	0.55	0/1897
57	3g	0.25	0/1426	0.55	0/1897



Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z  >5	RMSZ	# Z  >5
57	3h	0.24	0/1426	0.53	0/1897
57	3i	0.32	0/1426	0.72	1/1897 (0.1%)
58	3m	0.27	0/1229	0.56	0/1638
59	3o	0.27	0/473	0.61	0/642
59	3p	0.28	0/1195	0.53	0/1614
59	4O	0.31	0/1444	0.51	0/1951
59	4P	0.28	0/548	0.47	0/742
59	4a	0.27	0/1273	0.49	0/1719
59	4b	0.28	0/548	0.45	0/742
60	3r	0.28	0/1115	0.59	0/1497
60	3s	0.28	0/1115	0.60	0/1497
60	3t	0.31	0/541	0.59	0/726
61	3w	0.31	0/1410	0.51	0/1916
61	3x	0.33	0/1018	0.56	0/1381
62	4A	0.25	0/236	0.48	0/322
62	4B	0.32	0/1637	0.50	0/2225
63	4I	0.26	0/639	0.57	0/863
64	5B	0.23	0/1356	0.49	0/1811
64	5C	0.27	0/1356	0.62	1/1811 (0.1%)
64	5D	0.37	0/321	0.67	0/425
65	5G	0.24	0/1552	0.52	0/2068
65	5H	0.27	0/1552	0.61	0/2068
65	5I	0.26	0/405	0.55	0/537
66	5K	0.25	0/2204	0.49	0/2980
66	5L	0.26	0/2204	0.53	0/2980
67	5O	0.27	0/826	0.51	0/1117
67	5P	0.28	0/826	0.53	0/1117
68	5S	0.29	0/762	0.56	0/1022
68	5T	0.27	0/762	0.56	0/1022
All	All	0.27	0/1389933	0.53	60/1880072 (0.0%)

Chiral center outliers are detected by calculating the chiral volume of a chiral center and verifying if the center is modelled as a planar moiety or with the opposite hand. A planarity outlier is detected by checking planarity of atoms in a peptide group, atoms in a mainchain group or atoms of a sidechain that are expected to be planar.

Mol	Chain	#Chirality outliers	#Planarity outliers
1	AB	0	1
1	BH	0	1
1	DE	0	1
1	EH	0	1
1	HB	0	1

*Continued on next page...*



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Mol	Chain	#Chirality outliers	#Planarity outliers
1	HF	0	1
1	JK	0	1
1	SH	0	1
1	SJ	0	1
1	TF	0	1
1	W	0	1
2	FE	0	1
2	MG	0	1
2	QD	0	1
2	RF	0	1
2	WM	0	1
6	0A	0	1
8	0I	0	1
9	0O	0	1
17	0n	0	2
27	1S	0	1
28	4W	0	1
33	2H	0	1
41	2c	0	1
41	2f	0	2
41	2i	0	1
41	2k	0	1
41	2l	0	1
41	2o	0	1
44	2v	0	1
44	2w	0	1
59	4O	0	1
59	4P	0	1
60	3s	0	1
All	All	0	36

There are no bond length outliers.

The worst 5 of 60 bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
45	2z	188	PRO	CA-N-CD	-11.42	95.51	111.50
2	RH	298	PRO	CA-N-CD	-10.86	96.30	111.50
28	4W	20	CYS	CA-CB-SG	-10.76	94.63	114.00
28	4W	20	CYS	CB-CA-C	-10.20	90.00	110.40
1	HH	80	PRO	CA-N-CD	-8.61	99.45	111.50

There are no chirality outliers.



5 of 36 planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	AB	267	MET	Peptide
1	BH	77	ARG	Sidechain
1	DE	271	ALA	Peptide
1	EH	271	ALA	Peptide
2	FE	338	LYS	Peptide

## 5.2 Too-close contacts [i](#)

Due to software issues we are unable to calculate clashes - this section is therefore empty.

## 5.3 Torsion angles [i](#)

### 5.3.1 Protein backbone [i](#)

There are no protein backbone outliers to report in this entry.

### 5.3.2 Protein sidechains [i](#)

There are no protein residues with a non-rotameric sidechain to report in this entry.

### 5.3.3 RNA [i](#)

There are no RNA molecules in this entry.

## 5.4 Non-standard residues in protein, DNA, RNA chains [i](#)

There are no non-standard protein/DNA/RNA residues in this entry.

## 5.5 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

## 5.6 Ligand geometry [i](#)

Of 511 ligands modelled in this entry, 190 are monoatomic - leaving 321 for Mogul analysis.

In the following table, the Counts columns list the number of bonds (or angles) for which Mogul statistics could be retrieved, the number of bonds (or angles) that are observed in the model and



the number of bonds (or angles) that are defined in the Chemical Component Dictionary. The Link column lists molecule types, if any, to which the group is linked. The Z score for a bond length (or angle) is the number of standard deviations the observed value is removed from the expected value. A bond length (or angle) with  $|Z| > 2$  is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z  > 2	Counts	RMSZ	# Z  > 2
69	GDP	CE	500	-	25,30,30	0.96	1 (4%)	30,47,47	1.07	1 (3%)
69	GDP	HF	500	-	25,30,30	0.95	1 (4%)	30,47,47	1.03	1 (3%)
71	GTP	MK	501	70	29,34,34	1.25	2 (6%)	35,54,54	1.28	4 (11%)
71	GTP	HK	501	70	29,34,34	1.21	2 (6%)	35,54,54	1.27	4 (11%)
69	GDP	GB	500	-	25,30,30	0.98	1 (4%)	30,47,47	1.07	2 (6%)
69	GDP	UJ	500	-	25,30,30	0.95	1 (4%)	30,47,47	1.06	2 (6%)
69	GDP	TD	500	-	25,30,30	0.95	1 (4%)	30,47,47	1.10	2 (6%)
71	GTP	NC	501	70	29,34,34	1.25	2 (6%)	35,54,54	1.25	4 (11%)
71	GTP	IA	501	70	29,34,34	1.21	2 (6%)	35,54,54	1.27	4 (11%)
69	GDP	EH	500	-	25,30,30	0.93	1 (4%)	30,47,47	1.06	1 (3%)
71	GTP	TG	501	70	29,34,34	1.24	2 (6%)	35,54,54	1.26	4 (11%)
69	GDP	VF	500	-	25,30,30	0.96	1 (4%)	30,47,47	1.09	2 (6%)
71	GTP	LB	501	70	29,34,34	1.26	3 (10%)	35,54,54	1.25	4 (11%)
69	GDP	MB	500	-	25,30,30	0.96	1 (4%)	30,47,47	1.05	2 (6%)
71	GTP	HG	501	70	29,34,34	1.21	2 (6%)	35,54,54	1.33	5 (14%)
71	GTP	EK	501	70	29,34,34	1.27	3 (10%)	35,54,54	1.32	5 (14%)
71	GTP	UI	501	70	29,34,34	1.25	2 (6%)	35,54,54	1.30	4 (11%)
69	GDP	V	500	-	25,30,30	0.95	1 (4%)	30,47,47	1.06	2 (6%)
71	GTP	JL	501	70	29,34,34	1.21	2 (6%)	35,54,54	1.34	4 (11%)
71	GTP	QH	501	70	29,34,34	1.25	2 (6%)	35,54,54	1.38	6 (17%)
71	GTP	WI	501	70	29,34,34	1.26	2 (6%)	35,54,54	1.26	4 (11%)
69	GDP	QE	500	-	25,30,30	0.94	1 (4%)	30,47,47	1.09	2 (6%)
71	GTP	GI	501	70	29,34,34	1.20	2 (6%)	35,54,54	1.27	4 (11%)
71	GTP	SA	501	70	29,34,34	1.23	2 (6%)	35,54,54	1.25	4 (11%)
71	GTP	PC	501	70	29,34,34	1.26	2 (6%)	35,54,54	1.27	4 (11%)
69	GDP	LI	500	-	25,30,30	0.96	1 (4%)	30,47,47	1.05	2 (6%)
71	GTP	MI	501	70	29,34,34	1.26	2 (6%)	35,54,54	1.24	4 (11%)
71	GTP	RJ	501	-	29,34,34	1.26	2 (6%)	35,54,54	1.30	4 (11%)
69	GDP	JC	500	-	25,30,30	0.95	1 (4%)	30,47,47	1.06	2 (6%)
69	GDP	ID	500	-	25,30,30	0.96	1 (4%)	30,47,47	1.06	2 (6%)



Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z  > 2	Counts	RMSZ	# Z  > 2
69	GDP	KG	500	-	25,30,30	0.97	1 (4%)	30,47,47	1.08	1 (3%)
71	GTP	FK	501	-	29,34,34	1.24	2 (6%)	35,54,54	1.33	4 (11%)
69	GDP	RC	500	-	25,30,30	0.95	1 (4%)	30,47,47	1.07	2 (6%)
69	GDP	JA	500	-	25,30,30	0.97	1 (4%)	30,47,47	1.07	2 (6%)
69	GDP	DE	500	-	25,30,30	0.96	1 (4%)	30,47,47	1.08	2 (6%)
71	GTP	RH	501	70	29,34,34	1.23	2 (6%)	35,54,54	1.31	4 (11%)
71	GTP	CF	501	70	29,34,34	1.28	3 (10%)	35,54,54	1.26	3 (8%)
69	GDP	LK	500	-	25,30,30	0.97	1 (4%)	30,47,47	1.08	2 (6%)
71	GTP	WK	501	70	29,34,34	1.25	2 (6%)	35,54,54	1.25	4 (11%)
69	GDP	NF	500	-	25,30,30	0.96	1 (4%)	30,47,47	1.06	1 (3%)
71	GTP	DD	501	70	29,34,34	1.28	3 (10%)	35,54,54	1.24	4 (11%)
69	GDP	CC	500	-	25,30,30	0.97	1 (4%)	30,47,47	1.06	2 (6%)
71	GTP	OK	501	-	29,34,34	1.21	2 (6%)	35,54,54	1.32	4 (11%)
69	GDP	BF	500	-	25,30,30	0.95	1 (4%)	30,47,47	1.09	2 (6%)
69	GDP	HH	500	-	25,30,30	0.94	1 (4%)	30,47,47	1.08	2 (6%)
71	GTP	ME	501	70	29,34,34	1.28	4 (13%)	35,54,54	1.32	4 (11%)
71	GTP	RB	501	70	29,34,34	1.28	3 (10%)	35,54,54	1.27	4 (11%)
69	GDP	H	500	-	25,30,30	0.98	1 (4%)	30,47,47	1.05	2 (6%)
69	GDP	VJ	500	-	25,30,30	0.95	1 (4%)	30,47,47	1.08	3 (10%)
71	GTP	RL	501	70	29,34,34	1.24	2 (6%)	35,54,54	1.32	4 (11%)
71	GTP	PE	501	70	29,34,34	1.25	2 (6%)	35,54,54	1.31	4 (11%)
71	GTP	LH	501	70	29,34,34	1.24	2 (6%)	35,54,54	1.36	5 (14%)
69	GDP	PF	500	-	25,30,30	0.94	1 (4%)	30,47,47	1.04	2 (6%)
69	GDP	G	500	-	25,30,30	0.98	1 (4%)	30,47,47	1.03	2 (6%)
71	GTP	WC	501	70	29,34,34	1.25	2 (6%)	35,54,54	1.25	4 (11%)
69	GDP	PL	500	-	25,30,30	0.96	1 (4%)	30,47,47	1.07	1 (3%)
69	GDP	JE	500	-	25,30,30	0.95	1 (4%)	30,47,47	1.07	2 (6%)
69	GDP	DG	500	-	25,30,30	0.96	1 (4%)	30,47,47	1.09	2 (6%)
71	GTP	J	501	70	29,34,34	1.24	2 (6%)	35,54,54	1.23	4 (11%)
71	GTP	R	501	70	29,34,34	1.24	2 (6%)	35,54,54	1.28	4 (11%)
69	GDP	IB	500	-	25,30,30	0.96	1 (4%)	30,47,47	1.06	1 (3%)
71	GTP	LF	501	70	29,34,34	1.21	2 (6%)	35,54,54	1.35	5 (14%)
71	GTP	KJ	501	70	29,34,34	1.24	2 (6%)	35,54,54	1.29	4 (11%)
69	GDP	JI	500	-	25,30,30	0.97	1 (4%)	30,47,47	1.07	2 (6%)
69	GDP	RK	500	-	25,30,30	0.96	1 (4%)	30,47,47	1.07	2 (6%)



Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z  > 2	Counts	RMSZ	# Z  > 2
71	GTP	SC	501	70	29,34,34	1.20	2 (6%)	35,54,54	1.27	4 (11%)
69	GDP	WJ	500	-	25,30,30	0.95	1 (4%)	30,47,47	1.05	2 (6%)
69	GDP	LO	500	-	25,30,30	0.95	1 (4%)	30,47,47	1.08	2 (6%)
71	GTP	KD	501	70	29,34,34	1.26	2 (6%)	35,54,54	1.26	4 (11%)
71	GTP	NI	501	70	29,34,34	1.22	2 (6%)	35,54,54	1.27	4 (11%)
69	GDP	MJ	500	-	25,30,30	0.98	1 (4%)	30,47,47	1.17	3 (10%)
69	GDP	KM	500	-	25,30,30	0.95	1 (4%)	30,47,47	1.06	2 (6%)
71	GTP	D	501	-	29,34,34	1.29	4 (13%)	35,54,54	1.30	5 (14%)
71	GTP	VC	501	70	29,34,34	1.28	3 (10%)	35,54,54	1.24	4 (11%)
69	GDP	NH	500	-	25,30,30	0.97	1 (4%)	30,47,47	1.08	2 (6%)
69	GDP	RE	500	-	25,30,30	0.97	1 (4%)	30,47,47	1.18	4 (13%)
71	GTP	QJ	501	70	29,34,34	1.24	3 (10%)	35,54,54	1.30	4 (11%)
71	GTP	CB	501	70	29,34,34	1.27	2 (6%)	35,54,54	1.27	4 (11%)
71	GTP	AM	501	70	29,34,34	1.24	2 (6%)	35,54,54	1.26	3 (8%)
71	GTP	NE	501	70	29,34,34	1.28	3 (10%)	35,54,54	1.24	4 (11%)
69	GDP	PH	500	-	25,30,30	0.94	1 (4%)	30,47,47	1.06	2 (6%)
69	GDP	FF	500	-	25,30,30	0.95	1 (4%)	30,47,47	1.06	1 (3%)
71	GTP	HC	501	70	29,34,34	1.26	3 (10%)	35,54,54	1.28	4 (11%)
69	GDP	UH	500	-	25,30,30	0.97	1 (4%)	30,47,47	1.07	2 (6%)
71	GTP	K	501	70	29,34,34	1.26	3 (10%)	35,54,54	1.30	4 (11%)
71	GTP	CL	501	70	29,34,34	1.30	4 (13%)	35,54,54	1.25	4 (11%)
71	GTP	MC	501	70	29,34,34	1.22	2 (6%)	35,54,54	1.28	4 (11%)
71	GTP	AI	501	70	29,34,34	1.21	2 (6%)	35,54,54	1.28	4 (11%)
69	GDP	F	500	-	25,30,30	0.95	1 (4%)	30,47,47	1.08	2 (6%)
71	GTP	BC	501	70	29,34,34	1.27	3 (10%)	35,54,54	1.25	4 (11%)
69	GDP	MH	500	-	25,30,30	0.96	1 (4%)	30,47,47	1.08	2 (6%)
69	GDP	TF	500	-	25,30,30	0.94	1 (4%)	30,47,47	1.07	2 (6%)
71	GTP	FC	501	70	29,34,34	1.24	2 (6%)	35,54,54	1.25	4 (11%)
71	GTP	VA	501	70	29,34,34	1.24	2 (6%)	35,54,54	1.24	4 (11%)
69	GDP	QA	500	-	25,30,30	0.97	1 (4%)	30,47,47	1.07	2 (6%)
71	GTP	FI	501	70	29,34,34	1.22	2 (6%)	35,54,54	1.30	5 (14%)
69	GDP	DC	500	-	25,30,30	0.96	1 (4%)	30,47,47	1.06	2 (6%)
69	GDP	MF	500	-	25,30,30	0.95	1 (4%)	30,47,47	1.07	2 (6%)
71	GTP	MG	501	70	29,34,34	1.19	2 (6%)	35,54,54	1.29	4 (11%)
69	GDP	AL	500	-	25,30,30	0.95	1 (4%)	30,47,47	1.06	2 (6%)



Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z  > 2	Counts	RMSZ	# Z  > 2
71	GTP	LD	501	70	29,34,34	1.25	2 (6%)	35,54,54	1.26	4 (11%)
71	GTP	UG	501	70	29,34,34	1.20	2 (6%)	35,54,54	1.28	4 (11%)
69	GDP	DM	500	-	25,30,30	0.98	1 (4%)	30,47,47	1.08	2 (6%)
69	GDP	S	500	-	25,30,30	0.93	1 (4%)	30,47,47	1.08	2 (6%)
69	GDP	TB	500	-	25,30,30	0.95	1 (4%)	30,47,47	1.09	2 (6%)
71	GTP	KF	501	70	29,34,34	1.27	3 (10%)	35,54,54	1.24	4 (11%)
71	GTP	JN	501	70	29,34,34	1.23	2 (6%)	35,54,54	1.25	4 (11%)
69	GDP	W	500	-	25,30,30	0.95	1 (4%)	30,47,47	1.07	2 (6%)
69	GDP	BH	500	-	25,30,30	0.96	1 (4%)	30,47,47	1.10	2 (6%)
69	GDP	IL	500	-	25,30,30	0.96	1 (4%)	30,47,47	1.09	2 (6%)
71	GTP	JJ	501	70	29,34,34	1.26	2 (6%)	35,54,54	1.25	3 (8%)
69	GDP	GF	500	-	25,30,30	0.95	1 (4%)	30,47,47	1.08	2 (6%)
71	GTP	KH	501	70	29,34,34	1.23	2 (6%)	35,54,54	1.35	4 (11%)
69	GDP	BD	500	-	25,30,30	0.97	1 (4%)	30,47,47	1.06	2 (6%)
69	GDP	KA	500	-	25,30,30	0.95	1 (4%)	30,47,47	1.07	1 (3%)
71	GTP	RD	501	70	29,34,34	1.27	3 (10%)	35,54,54	1.26	4 (11%)
69	GDP	ED	500	-	25,30,30	0.96	1 (4%)	30,47,47	1.06	2 (6%)
69	GDP	NB	500	-	25,30,30	0.96	1 (4%)	30,47,47	1.09	1 (3%)
69	GDP	KI	500	-	25,30,30	0.95	1 (4%)	30,47,47	1.08	2 (6%)
71	GTP	DL	501	-	29,34,34	1.26	2 (6%)	35,54,54	1.28	5 (14%)
69	GDP	AF	500	-	25,30,30	0.95	1 (4%)	30,47,47	1.08	2 (6%)
69	GDP	CI	500	-	25,30,30	0.96	1 (4%)	30,47,47	1.06	2 (6%)
71	GTP	PM	501	70	29,34,34	1.26	2 (6%)	35,54,54	1.25	4 (11%)
69	GDP	N	500	-	25,30,30	0.98	1 (4%)	30,47,47	1.06	2 (6%)
69	GDP	LE	500	-	25,30,30	0.95	1 (4%)	30,47,47	1.07	1 (3%)
69	GDP	QI	500	-	25,30,30	0.94	1 (4%)	30,47,47	1.08	2 (6%)
71	GTP	LN	501	70	29,34,34	1.26	2 (6%)	35,54,54	1.25	4 (11%)
71	GTP	DB	501	70	29,34,34	1.28	3 (10%)	35,54,54	1.25	4 (11%)
71	GTP	JH	501	70	29,34,34	1.22	2 (6%)	35,54,54	1.26	4 (11%)
71	GTP	II	501	70	29,34,34	1.20	2 (6%)	35,54,54	1.30	4 (11%)
71	GTP	KL	501	70	29,34,34	1.25	3 (10%)	35,54,54	1.28	4 (11%)
69	GDP	CA	500	-	25,30,30	0.97	1 (4%)	30,47,47	1.08	3 (10%)
71	GTP	UE	501	70	29,34,34	1.21	2 (6%)	35,54,54	1.24	4 (11%)
71	GTP	HA	501	70	29,34,34	1.22	2 (6%)	35,54,54	1.23	4 (11%)
69	GDP	ND	500	-	25,30,30	0.99	1 (4%)	30,47,47	1.11	3 (10%)



Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z  > 2	Counts	RMSZ	# Z  > 2
69	GDP	SB	500	-	25,30,30	0.95	1 (4%)	30,47,47	1.07	2 (6%)
69	GDP	FH	500	-	25,30,30	0.95	1 (4%)	30,47,47	1.08	2 (6%)
71	GTP	TC	501	70	29,34,34	1.21	2 (6%)	35,54,54	1.32	4 (11%)
69	GDP	GH	500	-	25,30,30	0.95	1 (4%)	30,47,47	1.09	2 (6%)
69	GDP	RA	500	-	25,30,30	0.94	1 (4%)	30,47,47	1.07	2 (6%)
71	GTP	GA	501	70	29,34,34	1.25	2 (6%)	35,54,54	1.35	5 (14%)
71	GTP	KN	501	70	29,34,34	1.21	2 (6%)	35,54,54	1.29	4 (11%)
71	GTP	BG	501	70	29,34,34	1.20	2 (6%)	35,54,54	1.27	4 (11%)
69	GDP	VB	500	-	25,30,30	0.94	1 (4%)	30,47,47	1.09	2 (6%)
71	GTP	JF	501	70	29,34,34	1.20	2 (6%)	35,54,54	1.35	5 (14%)
71	GTP	GE	501	70	29,34,34	1.23	2 (6%)	35,54,54	1.33	4 (11%)
71	GTP	PG	501	-	29,34,34	1.21	2 (6%)	35,54,54	1.30	4 (11%)
69	GDP	SD	500	-	25,30,30	0.94	1 (4%)	30,47,47	1.07	2 (6%)
71	GTP	VG	501	70	29,34,34	1.29	4 (13%)	35,54,54	1.26	4 (11%)
69	GDP	AH	500	-	25,30,30	0.95	1 (4%)	30,47,47	1.03	1 (3%)
71	GTP	DJ	501	70	29,34,34	1.27	3 (10%)	35,54,54	1.29	4 (11%)
69	GDP	TL	500	-	25,30,30	0.98	1 (4%)	30,47,47	1.05	2 (6%)
71	GTP	AA	501	70	29,34,34	1.26	2 (6%)	35,54,54	1.23	4 (11%)
71	GTP	QB	501	70	29,34,34	1.26	2 (6%)	35,54,54	1.29	4 (11%)
71	GTP	UA	501	70	29,34,34	1.25	2 (6%)	35,54,54	1.22	4 (11%)
71	GTP	BA	501	70	29,34,34	1.27	2 (6%)	35,54,54	1.24	4 (11%)
69	GDP	FJ	500	-	25,30,30	0.95	1 (4%)	30,47,47	1.06	2 (6%)
69	GDP	WL	500	-	25,30,30	0.95	1 (4%)	30,47,47	1.07	2 (6%)
69	GDP	KK	500	-	25,30,30	0.96	1 (4%)	30,47,47	1.06	2 (6%)
71	GTP	OI	501	70	29,34,34	1.22	2 (6%)	35,54,54	1.29	4 (11%)
69	GDP	IJ	500	-	25,30,30	0.95	1 (4%)	30,47,47	1.08	2 (6%)
71	GTP	NA	501	-	29,34,34	1.24	2 (6%)	35,54,54	1.26	4 (11%)
71	GTP	TK	501	70	29,34,34	1.22	2 (6%)	35,54,54	1.24	4 (11%)
71	GTP	BM	501	70	29,34,34	1.29	4 (13%)	35,54,54	1.23	4 (11%)
71	GTP	LJ	501	70	29,34,34	1.21	2 (6%)	35,54,54	1.31	4 (11%)
69	GDP	AB	500	-	25,30,30	0.94	1 (4%)	30,47,47	1.07	1 (3%)
69	GDP	HD	500	-	25,30,30	0.96	1 (4%)	30,47,47	1.08	2 (6%)
71	GTP	AK	501	70	29,34,34	1.26	2 (6%)	35,54,54	1.25	4 (11%)
69	GDP	PD	500	-	25,30,30	0.94	1 (4%)	30,47,47	1.06	2 (6%)
69	GDP	EB	500	-	25,30,30	0.95	1 (4%)	30,47,47	1.05	1 (3%)



Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z  > 2	Counts	RMSZ	# Z  > 2
71	GTP	OC	501	70	29,34,34	1.25	2 (6%)	35,54,54	1.28	4 (11%)
71	GTP	PA	501	70	29,34,34	1.28	2 (6%)	35,54,54	1.27	4 (11%)
69	GDP	I	500	-	25,30,30	0.94	1 (4%)	30,47,47	1.09	2 (6%)
69	GDP	OB	500	-	25,30,30	0.95	1 (4%)	30,47,47	1.11	2 (6%)
71	GTP	IE	501	70	29,34,34	1.26	2 (6%)	35,54,54	1.41	5 (14%)
69	GDP	AJ	500	-	25,30,30	0.96	1 (4%)	30,47,47	1.07	3 (10%)
69	GDP	LM	500	-	25,30,30	0.95	1 (4%)	30,47,47	1.06	2 (6%)
71	GTP	CJ	501	70	29,34,34	1.26	2 (6%)	35,54,54	1.25	4 (11%)
71	GTP	NK	501	-	29,34,34	1.20	2 (6%)	35,54,54	1.37	5 (14%)
69	GDP	PB	500	-	25,30,30	0.95	1 (4%)	30,47,47	1.07	1 (3%)
71	GTP	QD	501	70	29,34,34	1.27	3 (10%)	35,54,54	1.31	5 (14%)
69	GDP	LC	500	-	25,30,30	0.95	1 (4%)	30,47,47	1.08	2 (6%)
69	GDP	OH	500	-	25,30,30	0.95	1 (4%)	30,47,47	1.06	1 (3%)
69	GDP	MN	500	-	25,30,30	0.96	1 (4%)	30,47,47	1.07	3 (10%)
69	GDP	KE	500	-	25,30,30	0.98	1 (4%)	30,47,47	1.07	2 (6%)
69	GDP	VH	500	-	25,30,30	0.95	1 (4%)	30,47,47	1.07	2 (6%)
71	GTP	HM	501	70	29,34,34	1.21	2 (6%)	35,54,54	1.22	4 (11%)
71	GTP	WA	501	70	29,34,34	1.26	2 (6%)	35,54,54	1.24	4 (11%)
71	GTP	AE	501	70	29,34,34	1.23	2 (6%)	35,54,54	1.28	4 (11%)
69	GDP	JM	500	-	25,30,30	0.95	1 (4%)	30,47,47	1.05	2 (6%)
71	GTP	EC	501	70	29,34,34	1.22	2 (6%)	35,54,54	1.26	4 (11%)
69	GDP	QC	500	-	25,30,30	0.94	1 (4%)	30,47,47	1.09	2 (6%)
69	GDP	BJ	500	-	25,30,30	0.93	1 (4%)	30,47,47	1.08	1 (3%)
71	GTP	RF	501	70	29,34,34	1.21	2 (6%)	35,54,54	1.33	4 (11%)
69	GDP	IH	500	-	25,30,30	0.95	1 (4%)	30,47,47	1.06	2 (6%)
69	GDP	FB	500	-	25,30,30	0.98	1 (4%)	30,47,47	1.15	3 (10%)
69	GDP	PJ	500	-	25,30,30	0.93	1 (4%)	30,47,47	1.04	2 (6%)
71	GTP	CD	501	70	29,34,34	1.30	4 (13%)	35,54,54	1.30	5 (14%)
69	GDP	CK	500	-	25,30,30	0.97	1 (4%)	30,47,47	1.10	2 (6%)
71	GTP	LL	501	70	29,34,34	1.25	2 (6%)	35,54,54	1.23	4 (11%)
69	GDP	OL	500	-	25,30,30	0.96	1 (4%)	30,47,47	1.06	2 (6%)
74	ATP	2w	501	-	28,33,33	0.67	0	34,52,52	0.59	1 (2%)
69	GDP	VL	500	-	25,30,30	0.96	1 (4%)	30,47,47	1.06	2 (6%)
71	GTP	AG	501	70	29,34,34	1.20	2 (6%)	35,54,54	1.23	4 (11%)
71	GTP	SK	501	70	29,34,34	1.26	2 (6%)	35,54,54	1.27	4 (11%)



Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z  > 2	Counts	RMSZ	# Z  > 2
69	GDP	CG	500	-	25,30,30	0.95	1 (4%)	30,47,47	1.08	2 (6%)
71	GTP	OA	501	70	29,34,34	1.24	2 (6%)	35,54,54	1.25	4 (11%)
71	GTP	SI	501	70	29,34,34	1.20	2 (6%)	35,54,54	1.30	4 (11%)
71	GTP	NM	501	70	29,34,34	1.25	2 (6%)	35,54,54	1.25	4 (11%)
69	GDP	M	500	-	25,30,30	0.97	1 (4%)	30,47,47	1.07	2 (6%)
71	GTP	WG	501	70	29,34,34	1.18	2 (6%)	35,54,54	1.29	4 (11%)
69	GDP	OF	500	-	25,30,30	0.95	1 (4%)	30,47,47	1.09	2 (6%)
69	GDP	RI	500	-	25,30,30	0.95	1 (4%)	30,47,47	1.06	1 (3%)
69	GDP	EF	500	-	25,30,30	0.95	1 (4%)	30,47,47	1.09	2 (6%)
69	GDP	WB	500	-	25,30,30	0.94	1 (4%)	30,47,47	1.07	2 (6%)
69	GDP	TH	500	-	25,30,30	0.95	1 (4%)	30,47,47	1.05	2 (6%)
71	GTP	JB	501	70	29,34,34	1.22	2 (6%)	35,54,54	1.26	4 (11%)
69	GDP	AN	500	-	25,30,30	0.94	1 (4%)	30,47,47	1.07	2 (6%)
71	GTP	BE	501	70	29,34,34	1.20	2 (6%)	35,54,54	1.25	4 (11%)
71	GTP	CH	501	70	29,34,34	1.26	2 (6%)	35,54,54	1.33	5 (14%)
69	GDP	MD	500	-	25,30,30	0.95	1 (4%)	30,47,47	1.09	2 (6%)
69	GDP	A	500	-	25,30,30	0.98	1 (4%)	30,47,47	1.07	2 (6%)
69	GDP	GD	500	-	25,30,30	0.98	1 (4%)	30,47,47	1.11	2 (6%)
71	GTP	OG	501	70	29,34,34	1.21	2 (6%)	35,54,54	1.37	5 (14%)
71	GTP	VK	501	70	29,34,34	1.25	2 (6%)	35,54,54	1.27	4 (11%)
69	GDP	WH	500	-	25,30,30	0.96	1 (4%)	30,47,47	1.08	2 (6%)
69	GDP	QK	500	-	25,30,30	0.99	1 (4%)	30,47,47	1.01	1 (3%)
71	GTP	Q	501	70	29,34,34	1.24	2 (6%)	35,54,54	1.26	4 (11%)
69	GDP	RG	500	-	25,30,30	0.95	1 (4%)	30,47,47	1.06	2 (6%)
71	GTP	OE	501	70	29,34,34	1.25	3 (10%)	35,54,54	1.32	5 (14%)
69	GDP	CM	500	-	25,30,30	0.97	1 (4%)	30,47,47	1.22	3 (10%)
69	GDP	GL	500	-	25,30,30	0.93	1 (4%)	30,47,47	1.08	2 (6%)
69	GDP	UL	500	-	25,30,30	0.96	1 (4%)	30,47,47	1.07	2 (6%)
71	GTP	GC	501	70	29,34,34	1.21	2 (6%)	35,54,54	1.38	5 (14%)
71	GTP	FA	501	70	29,34,34	1.24	2 (6%)	35,54,54	1.25	4 (11%)
69	GDP	SJ	500	-	25,30,30	0.95	1 (4%)	30,47,47	1.06	2 (6%)
71	GTP	IG	501	70	29,34,34	1.21	2 (6%)	35,54,54	1.25	4 (11%)
69	GDP	DI	500	-	25,30,30	0.95	1 (4%)	30,47,47	1.08	2 (6%)
71	GTP	WM	501	70	29,34,34	1.27	2 (6%)	35,54,54	1.25	4 (11%)
69	GDP	E	500	-	25,30,30	0.99	1 (4%)	30,47,47	1.03	2 (6%)



Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z  > 2	Counts	RMSZ	# Z  > 2
69	GDP	U	500	-	25,30,30	0.95	1 (4%)	30,47,47	1.09	2 (6%)
69	GDP	VD	500	-	25,30,30	0.95	1 (4%)	30,47,47	1.07	2 (6%)
71	GTP	BK	501	70	29,34,34	1.24	2 (6%)	35,54,54	1.27	4 (11%)
71	GTP	SE	501	70	29,34,34	1.21	1 (3%)	35,54,54	1.32	5 (14%)
71	GTP	HE	501	70	29,34,34	1.22	2 (6%)	35,54,54	1.24	4 (11%)
71	GTP	L	501	70	29,34,34	1.24	2 (6%)	35,54,54	1.26	4 (11%)
69	GDP	OJ	500	-	25,30,30	0.95	1 (4%)	30,47,47	1.07	2 (6%)
71	GTP	EG	501	70	29,34,34	1.25	2 (6%)	35,54,54	1.32	5 (14%)
71	GTP	JD	501	70	29,34,34	1.24	2 (6%)	35,54,54	1.25	3 (8%)
71	GTP	VE	501	70	29,34,34	1.22	2 (6%)	35,54,54	1.34	5 (14%)
71	GTP	DH	501	70	29,34,34	1.17	2 (6%)	35,54,54	1.32	4 (11%)
71	GTP	DF	501	70	29,34,34	1.25	3 (10%)	35,54,54	1.32	5 (14%)
74	ATP	2v	501	-	28,33,33	0.64	0	34,52,52	0.60	1 (2%)
69	GDP	WD	500	-	25,30,30	0.95	1 (4%)	30,47,47	1.07	2 (6%)
71	GTP	VM	501	70	29,34,34	1.26	2 (6%)	35,54,54	1.23	4 (11%)
69	GDP	HB	500	-	25,30,30	0.96	1 (4%)	30,47,47	1.07	2 (6%)
69	GDP	OD	500	-	25,30,30	0.96	1 (4%)	30,47,47	1.08	2 (6%)
71	GTP	QL	501	-	29,34,34	1.25	2 (6%)	35,54,54	1.26	4 (11%)
71	GTP	UC	501	70	29,34,34	1.24	2 (6%)	35,54,54	1.27	4 (11%)
69	GDP	NJ	500	-	25,30,30	0.96	1 (4%)	30,47,47	1.08	2 (6%)
71	GTP	QF	501	70	29,34,34	1.19	2 (6%)	35,54,54	1.31	4 (11%)
71	GTP	PI	501	70	29,34,34	1.22	2 (6%)	35,54,54	1.27	4 (11%)
71	GTP	IK	501	70	29,34,34	1.49	6 (20%)	35,54,54	1.36	5 (14%)
69	GDP	IF	500	-	25,30,30	0.95	1 (4%)	30,47,47	1.07	2 (6%)
71	GTP	GK	501	70	29,34,34	1.26	3 (10%)	35,54,54	1.27	4 (11%)
71	GTP	EA	501	70	29,34,34	1.26	2 (6%)	35,54,54	1.34	5 (14%)
71	GTP	OM	501	70	29,34,34	1.23	2 (6%)	35,54,54	1.26	4 (11%)
69	GDP	JG	500	-	25,30,30	0.96	1 (4%)	30,47,47	1.05	2 (6%)
71	GTP	KB	501	70	29,34,34	1.23	2 (6%)	35,54,54	1.23	4 (11%)
71	GTP	MA	501	70	29,34,34	1.26	2 (6%)	35,54,54	1.25	4 (11%)
69	GDP	FD	500	-	25,30,30	0.95	1 (4%)	30,47,47	1.06	2 (6%)
71	GTP	FE	501	70	29,34,34	1.24	2 (6%)	35,54,54	1.22	4 (11%)
69	GDP	HJ	500	-	25,30,30	0.95	1 (4%)	30,47,47	1.06	2 (6%)
69	GDP	DK	500	-	25,30,30	0.95	1 (4%)	30,47,47	1.06	2 (6%)
69	GDP	LA	500	-	25,30,30	0.96	1 (4%)	30,47,47	1.06	2 (6%)



Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z  > 2	Counts	RMSZ	# Z  > 2
69	GDP	FL	500	-	25,30,30	0.95	1 (4%)	30,47,47	1.09	2 (6%)
69	GDP	HL	500	-	25,30,30	0.96	1 (4%)	30,47,47	1.03	1 (3%)
71	GTP	MM	501	70	29,34,34	1.26	2 (6%)	35,54,54	1.28	4 (11%)
71	GTP	WE	501	70	29,34,34	1.25	2 (6%)	35,54,54	1.31	5 (14%)
71	GTP	TE	501	70	29,34,34	1.20	2 (6%)	35,54,54	1.25	4 (11%)
69	GDP	NL	500	-	25,30,30	0.95	1 (4%)	30,47,47	1.05	1 (3%)
71	GTP	HI	501	70	29,34,34	1.19	2 (6%)	35,54,54	1.26	4 (11%)
71	GTP	BI	501	70	29,34,34	1.29	4 (13%)	35,54,54	1.31	4 (11%)
69	GDP	EL	500	-	25,30,30	0.98	1 (4%)	30,47,47	1.07	2 (6%)
71	GTP	C	501	70	29,34,34	1.26	2 (6%)	35,54,54	1.27	4 (11%)
69	GDP	UF	500	-	25,30,30	0.95	1 (4%)	30,47,47	1.08	2 (6%)
71	GTP	GG	501	70	29,34,34	1.21	2 (6%)	35,54,54	1.34	5 (14%)
69	GDP	UD	500	-	25,30,30	0.96	1 (4%)	30,47,47	1.07	1 (3%)
69	GDP	DA	500	-	25,30,30	0.95	1 (4%)	30,47,47	1.10	2 (6%)
71	GTP	TI	501	70	29,34,34	1.27	2 (6%)	35,54,54	1.26	4 (11%)
69	GDP	SF	500	-	25,30,30	0.94	1 (4%)	30,47,47	1.05	1 (3%)
69	GDP	P	500	-	25,30,30	0.97	1 (4%)	30,47,47	1.16	3 (10%)
71	GTP	NG	501	-	29,34,34	1.31	4 (13%)	35,54,54	1.30	4 (11%)
71	GTP	FG	501	70	29,34,34	1.24	2 (6%)	35,54,54	1.30	4 (11%)
69	GDP	ML	500	-	25,30,30	0.97	1 (4%)	30,47,47	1.07	2 (6%)
69	GDP	QG	500	-	25,30,30	0.94	1 (4%)	30,47,47	1.10	2 (6%)
69	GDP	O	500	-	25,30,30	0.97	1 (4%)	30,47,47	1.04	1 (3%)
71	GTP	EE	501	70	29,34,34	1.30	4 (13%)	35,54,54	1.28	5 (14%)
69	GDP	EJ	500	-	25,30,30	0.96	1 (4%)	30,47,47	1.07	2 (6%)
69	GDP	JK	500	-	25,30,30	0.95	1 (4%)	30,47,47	1.03	2 (6%)
71	GTP	VI	501	70	29,34,34	1.24	2 (6%)	35,54,54	1.31	4 (11%)
71	GTP	SG	501	70	29,34,34	1.23	2 (6%)	35,54,54	1.30	5 (14%)
69	GDP	KC	500	-	25,30,30	0.95	1 (4%)	30,47,47	1.07	2 (6%)
69	GDP	BB	500	-	25,30,30	0.97	1 (4%)	30,47,47	1.09	2 (6%)
71	GTP	UK	501	70	29,34,34	1.25	2 (6%)	35,54,54	1.26	4 (11%)
71	GTP	PK	501	70	29,34,34	1.23	2 (6%)	35,54,54	1.30	4 (11%)
69	GDP	BL	500	-	25,30,30	0.95	1 (4%)	30,47,47	1.08	2 (6%)
69	GDP	LG	500	-	25,30,30	0.96	1 (4%)	30,47,47	1.09	2 (6%)
71	GTP	TA	501	70	29,34,34	1.27	3 (10%)	35,54,54	1.31	5 (14%)
69	GDP	T	500	-	25,30,30	0.92	1 (4%)	30,47,47	1.05	2 (6%)



Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z  > 2	Counts	RMSZ	# Z  > 2
69	GDP	BN	500	-	25,30,30	0.99	1 (4%)	30,47,47	1.14	3 (10%)
69	GDP	GJ	500	-	25,30,30	0.94	1 (4%)	30,47,47	1.09	2 (6%)
69	GDP	UB	500	-	25,30,30	0.97	1 (4%)	30,47,47	1.10	2 (6%)
69	GDP	AD	500	-	25,30,30	0.95	1 (4%)	30,47,47	1.08	2 (6%)
71	GTP	EI	501	70	29,34,34	1.22	2 (6%)	35,54,54	1.26	4 (11%)
69	GDP	TJ	500	-	25,30,30	0.95	1 (4%)	30,47,47	1.08	2 (6%)
69	GDP	WF	500	-	25,30,30	0.94	1 (4%)	30,47,47	1.07	2 (6%)
69	GDP	SH	500	-	25,30,30	0.96	1 (4%)	30,47,47	1.08	2 (6%)
71	GTP	AC	501	70	29,34,34	1.22	2 (6%)	35,54,54	1.23	4 (11%)
71	GTP	IC	501	70	29,34,34	1.28	3 (10%)	35,54,54	1.31	4 (11%)
71	GTP	IM	501	70	29,34,34	1.24	2 (6%)	35,54,54	1.25	4 (11%)

In the following table, the Chirals column lists the number of chiral outliers, the number of chiral centers analysed, the number of these observed in the model and the number defined in the Chemical Component Dictionary. Similar counts are reported in the Torsion and Rings columns. '-' means no outliers of that kind were identified.

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
69	GDP	CE	500	-	-	1/12/32/32	0/3/3/3
69	GDP	HF	500	-	-	2/12/32/32	0/3/3/3
71	GTP	MK	501	70	-	5/18/38/38	0/3/3/3
71	GTP	HK	501	70	-	4/18/38/38	0/3/3/3
69	GDP	GB	500	-	-	1/12/32/32	0/3/3/3
69	GDP	UJ	500	-	-	1/12/32/32	0/3/3/3
69	GDP	TD	500	-	-	1/12/32/32	0/3/3/3
71	GTP	NC	501	70	-	3/18/38/38	0/3/3/3
71	GTP	IA	501	70	-	6/18/38/38	0/3/3/3
69	GDP	EH	500	-	-	1/12/32/32	0/3/3/3
71	GTP	TG	501	70	-	1/18/38/38	0/3/3/3
69	GDP	VF	500	-	-	1/12/32/32	0/3/3/3
71	GTP	LB	501	70	-	3/18/38/38	0/3/3/3
69	GDP	MB	500	-	-	2/12/32/32	0/3/3/3
71	GTP	HG	501	70	-	3/18/38/38	0/3/3/3
71	GTP	EK	501	70	-	3/18/38/38	0/3/3/3
71	GTP	UI	501	70	-	3/18/38/38	0/3/3/3
69	GDP	V	500	-	-	1/12/32/32	0/3/3/3
71	GTP	JL	501	70	-	3/18/38/38	0/3/3/3

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
71	GTP	QH	501	70	-	10/18/38/38	0/3/3/3
71	GTP	WI	501	70	-	3/18/38/38	0/3/3/3
69	GDP	QE	500	-	-	2/12/32/32	0/3/3/3
71	GTP	GI	501	70	-	0/18/38/38	0/3/3/3
71	GTP	SA	501	70	-	3/18/38/38	0/3/3/3
71	GTP	PC	501	70	-	3/18/38/38	0/3/3/3
69	GDP	LI	500	-	-	3/12/32/32	0/3/3/3
71	GTP	MI	501	70	-	5/18/38/38	0/3/3/3
71	GTP	RJ	501	-	-	1/18/38/38	0/3/3/3
69	GDP	JC	500	-	-	2/12/32/32	0/3/3/3
69	GDP	ID	500	-	-	1/12/32/32	0/3/3/3
69	GDP	KG	500	-	-	2/12/32/32	0/3/3/3
71	GTP	FK	501	-	-	3/18/38/38	0/3/3/3
69	GDP	RC	500	-	-	1/12/32/32	0/3/3/3
69	GDP	JA	500	-	-	1/12/32/32	0/3/3/3
69	GDP	DE	500	-	-	1/12/32/32	0/3/3/3
71	GTP	RH	501	70	-	2/18/38/38	0/3/3/3
71	GTP	CF	501	70	-	7/18/38/38	0/3/3/3
69	GDP	LK	500	-	-	1/12/32/32	0/3/3/3
71	GTP	WK	501	70	-	5/18/38/38	0/3/3/3
69	GDP	NF	500	-	-	3/12/32/32	0/3/3/3
71	GTP	DD	501	70	-	3/18/38/38	0/3/3/3
69	GDP	CC	500	-	-	2/12/32/32	0/3/3/3
71	GTP	OK	501	-	-	6/18/38/38	0/3/3/3
69	GDP	BF	500	-	-	1/12/32/32	0/3/3/3
69	GDP	HH	500	-	-	1/12/32/32	0/3/3/3
71	GTP	ME	501	70	-	5/18/38/38	0/3/3/3
71	GTP	RB	501	70	-	3/18/38/38	0/3/3/3
69	GDP	H	500	-	-	1/12/32/32	0/3/3/3
69	GDP	VJ	500	-	-	2/12/32/32	0/3/3/3
71	GTP	RL	501	70	-	9/18/38/38	0/3/3/3
71	GTP	PE	501	70	-	0/18/38/38	0/3/3/3
71	GTP	LH	501	70	-	3/18/38/38	0/3/3/3
69	GDP	PF	500	-	-	3/12/32/32	0/3/3/3
69	GDP	G	500	-	-	0/12/32/32	0/3/3/3
71	GTP	WC	501	70	-	2/18/38/38	0/3/3/3
69	GDP	PL	500	-	-	1/12/32/32	0/3/3/3

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
69	GDP	JE	500	-	-	1/12/32/32	0/3/3/3
69	GDP	DG	500	-	-	2/12/32/32	0/3/3/3
71	GTP	J	501	70	-	8/18/38/38	0/3/3/3
71	GTP	R	501	70	-	6/18/38/38	0/3/3/3
69	GDP	IB	500	-	-	3/12/32/32	0/3/3/3
71	GTP	LF	501	70	-	2/18/38/38	0/3/3/3
71	GTP	KJ	501	70	-	3/18/38/38	0/3/3/3
69	GDP	JI	500	-	-	1/12/32/32	0/3/3/3
69	GDP	RK	500	-	-	2/12/32/32	0/3/3/3
71	GTP	SC	501	70	-	6/18/38/38	0/3/3/3
69	GDP	WJ	500	-	-	1/12/32/32	0/3/3/3
69	GDP	LO	500	-	-	3/12/32/32	0/3/3/3
71	GTP	KD	501	70	-	3/18/38/38	0/3/3/3
71	GTP	NI	501	70	-	1/18/38/38	0/3/3/3
69	GDP	MJ	500	-	-	3/12/32/32	0/3/3/3
69	GDP	KM	500	-	-	2/12/32/32	0/3/3/3
71	GTP	D	501	-	-	12/18/38/38	0/3/3/3
71	GTP	VC	501	70	-	6/18/38/38	0/3/3/3
69	GDP	NH	500	-	-	2/12/32/32	0/3/3/3
69	GDP	RE	500	-	-	0/12/32/32	0/3/3/3
71	GTP	QJ	501	70	-	4/18/38/38	0/3/3/3
71	GTP	CB	501	70	-	3/18/38/38	0/3/3/3
71	GTP	AM	501	70	-	5/18/38/38	0/3/3/3
71	GTP	NE	501	70	-	4/18/38/38	0/3/3/3
69	GDP	PH	500	-	-	1/12/32/32	0/3/3/3
69	GDP	FF	500	-	-	2/12/32/32	0/3/3/3
71	GTP	HC	501	70	-	7/18/38/38	0/3/3/3
69	GDP	UH	500	-	-	1/12/32/32	0/3/3/3
71	GTP	K	501	70	-	2/18/38/38	0/3/3/3
71	GTP	CL	501	70	-	8/18/38/38	0/3/3/3
71	GTP	MC	501	70	-	4/18/38/38	0/3/3/3
71	GTP	AI	501	70	-	0/18/38/38	0/3/3/3
69	GDP	F	500	-	-	3/12/32/32	0/3/3/3
71	GTP	BC	501	70	-	0/18/38/38	0/3/3/3
69	GDP	MH	500	-	-	1/12/32/32	0/3/3/3
69	GDP	TF	500	-	-	1/12/32/32	0/3/3/3

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
71	GTP	FC	501	70	-	4/18/38/38	0/3/3/3
71	GTP	VA	501	70	-	4/18/38/38	0/3/3/3
69	GDP	QA	500	-	-	1/12/32/32	0/3/3/3
71	GTP	FI	501	70	-	3/18/38/38	0/3/3/3
69	GDP	DC	500	-	-	1/12/32/32	0/3/3/3
69	GDP	MF	500	-	-	3/12/32/32	0/3/3/3
71	GTP	MG	501	70	-	5/18/38/38	0/3/3/3
69	GDP	AL	500	-	-	2/12/32/32	0/3/3/3
71	GTP	LD	501	70	-	6/18/38/38	0/3/3/3
71	GTP	UG	501	70	-	5/18/38/38	0/3/3/3
69	GDP	DM	500	-	-	1/12/32/32	0/3/3/3
69	GDP	S	500	-	-	2/12/32/32	0/3/3/3
69	GDP	TB	500	-	-	3/12/32/32	0/3/3/3
71	GTP	KF	501	70	-	6/18/38/38	0/3/3/3
71	GTP	JN	501	70	-	3/18/38/38	0/3/3/3
69	GDP	W	500	-	-	1/12/32/32	0/3/3/3
69	GDP	BH	500	-	-	2/12/32/32	0/3/3/3
69	GDP	IL	500	-	-	0/12/32/32	0/3/3/3
71	GTP	JJ	501	70	-	3/18/38/38	0/3/3/3
69	GDP	GF	500	-	-	4/12/32/32	0/3/3/3
71	GTP	KH	501	70	-	5/18/38/38	0/3/3/3
69	GDP	BD	500	-	-	1/12/32/32	0/3/3/3
69	GDP	KA	500	-	-	3/12/32/32	0/3/3/3
71	GTP	RD	501	70	-	7/18/38/38	0/3/3/3
69	GDP	ED	500	-	-	4/12/32/32	0/3/3/3
69	GDP	NB	500	-	-	3/12/32/32	0/3/3/3
69	GDP	KI	500	-	-	3/12/32/32	0/3/3/3
71	GTP	DL	501	-	-	8/18/38/38	0/3/3/3
69	GDP	AF	500	-	-	1/12/32/32	0/3/3/3
69	GDP	CI	500	-	-	1/12/32/32	0/3/3/3
71	GTP	PM	501	70	-	3/18/38/38	0/3/3/3
69	GDP	N	500	-	-	1/12/32/32	0/3/3/3
69	GDP	LE	500	-	-	2/12/32/32	0/3/3/3
69	GDP	QI	500	-	-	2/12/32/32	0/3/3/3
71	GTP	LN	501	70	-	3/18/38/38	0/3/3/3
71	GTP	DB	501	70	-	3/18/38/38	0/3/3/3

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
71	GTP	JH	501	70	-	5/18/38/38	0/3/3/3
71	GTP	II	501	70	-	3/18/38/38	0/3/3/3
71	GTP	KL	501	70	-	2/18/38/38	0/3/3/3
69	GDP	CA	500	-	-	3/12/32/32	0/3/3/3
71	GTP	UE	501	70	-	9/18/38/38	0/3/3/3
71	GTP	HA	501	70	-	3/18/38/38	0/3/3/3
69	GDP	ND	500	-	-	0/12/32/32	0/3/3/3
69	GDP	SB	500	-	-	3/12/32/32	0/3/3/3
69	GDP	FH	500	-	-	1/12/32/32	0/3/3/3
71	GTP	TC	501	70	-	5/18/38/38	0/3/3/3
69	GDP	GH	500	-	-	3/12/32/32	0/3/3/3
69	GDP	RA	500	-	-	1/12/32/32	0/3/3/3
71	GTP	GA	501	70	-	8/18/38/38	0/3/3/3
71	GTP	KN	501	70	-	3/18/38/38	0/3/3/3
71	GTP	BG	501	70	-	0/18/38/38	0/3/3/3
69	GDP	VB	500	-	-	1/12/32/32	0/3/3/3
71	GTP	JF	501	70	-	3/18/38/38	0/3/3/3
71	GTP	GE	501	70	-	4/18/38/38	0/3/3/3
71	GTP	PG	501	-	-	5/18/38/38	0/3/3/3
69	GDP	SD	500	-	-	3/12/32/32	0/3/3/3
71	GTP	VG	501	70	-	4/18/38/38	0/3/3/3
69	GDP	AH	500	-	-	2/12/32/32	0/3/3/3
71	GTP	DJ	501	70	-	4/18/38/38	0/3/3/3
69	GDP	TL	500	-	-	0/12/32/32	0/3/3/3
71	GTP	AA	501	70	-	4/18/38/38	0/3/3/3
71	GTP	QB	501	70	-	2/18/38/38	0/3/3/3
71	GTP	UA	501	70	-	5/18/38/38	0/3/3/3
71	GTP	BA	501	70	-	3/18/38/38	0/3/3/3
69	GDP	FJ	500	-	-	2/12/32/32	0/3/3/3
69	GDP	WL	500	-	-	1/12/32/32	0/3/3/3
69	GDP	KK	500	-	-	1/12/32/32	0/3/3/3
71	GTP	OI	501	70	-	6/18/38/38	0/3/3/3
69	GDP	IJ	500	-	-	2/12/32/32	0/3/3/3
71	GTP	NA	501	-	-	7/18/38/38	0/3/3/3
71	GTP	TK	501	70	-	5/18/38/38	0/3/3/3
71	GTP	BM	501	70	-	6/18/38/38	0/3/3/3

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
71	GTP	LJ	501	70	-	4/18/38/38	0/3/3/3
69	GDP	AB	500	-	-	1/12/32/32	0/3/3/3
69	GDP	HD	500	-	-	3/12/32/32	0/3/3/3
71	GTP	AK	501	70	-	3/18/38/38	0/3/3/3
69	GDP	PD	500	-	-	4/12/32/32	0/3/3/3
69	GDP	EB	500	-	-	4/12/32/32	0/3/3/3
71	GTP	OC	501	70	-	1/18/38/38	0/3/3/3
71	GTP	PA	501	70	-	0/18/38/38	0/3/3/3
69	GDP	I	500	-	-	0/12/32/32	0/3/3/3
69	GDP	OB	500	-	-	5/12/32/32	0/3/3/3
71	GTP	IE	501	70	-	2/18/38/38	0/3/3/3
69	GDP	AJ	500	-	-	1/12/32/32	0/3/3/3
69	GDP	LM	500	-	-	1/12/32/32	0/3/3/3
71	GTP	CJ	501	70	-	3/18/38/38	0/3/3/3
71	GTP	NK	501	-	-	3/18/38/38	0/3/3/3
69	GDP	PB	500	-	-	1/12/32/32	0/3/3/3
71	GTP	QD	501	70	-	5/18/38/38	0/3/3/3
69	GDP	LC	500	-	-	2/12/32/32	0/3/3/3
69	GDP	OH	500	-	-	3/12/32/32	0/3/3/3
69	GDP	MN	500	-	-	2/12/32/32	0/3/3/3
69	GDP	KE	500	-	-	1/12/32/32	0/3/3/3
69	GDP	VH	500	-	-	1/12/32/32	0/3/3/3
71	GTP	HM	501	70	-	3/18/38/38	0/3/3/3
71	GTP	WA	501	70	-	2/18/38/38	0/3/3/3
71	GTP	AE	501	70	-	4/18/38/38	0/3/3/3
69	GDP	JM	500	-	-	0/12/32/32	0/3/3/3
71	GTP	EC	501	70	-	4/18/38/38	0/3/3/3
69	GDP	QC	500	-	-	2/12/32/32	0/3/3/3
69	GDP	BJ	500	-	-	2/12/32/32	0/3/3/3
71	GTP	RF	501	70	-	1/18/38/38	0/3/3/3
69	GDP	IH	500	-	-	2/12/32/32	0/3/3/3
69	GDP	FB	500	-	-	0/12/32/32	0/3/3/3
69	GDP	PJ	500	-	-	3/12/32/32	0/3/3/3
71	GTP	CD	501	70	-	3/18/38/38	0/3/3/3
69	GDP	CK	500	-	-	3/12/32/32	0/3/3/3
71	GTP	LL	501	70	-	4/18/38/38	0/3/3/3

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
69	GDP	OL	500	-	-	2/12/32/32	0/3/3/3
74	ATP	2w	501	-	-	5/18/38/38	0/3/3/3
69	GDP	VL	500	-	-	1/12/32/32	0/3/3/3
71	GTP	AG	501	70	-	7/18/38/38	0/3/3/3
71	GTP	SK	501	70	-	0/18/38/38	0/3/3/3
69	GDP	CG	500	-	-	2/12/32/32	0/3/3/3
71	GTP	OA	501	70	-	4/18/38/38	0/3/3/3
71	GTP	SI	501	70	-	3/18/38/38	0/3/3/3
71	GTP	NM	501	70	-	4/18/38/38	0/3/3/3
69	GDP	M	500	-	-	3/12/32/32	0/3/3/3
71	GTP	WG	501	70	-	1/18/38/38	0/3/3/3
69	GDP	OF	500	-	-	1/12/32/32	0/3/3/3
69	GDP	RI	500	-	-	0/12/32/32	0/3/3/3
69	GDP	EF	500	-	-	3/12/32/32	0/3/3/3
69	GDP	WB	500	-	-	1/12/32/32	0/3/3/3
69	GDP	TH	500	-	-	1/12/32/32	0/3/3/3
71	GTP	JB	501	70	-	2/18/38/38	0/3/3/3
69	GDP	AN	500	-	-	1/12/32/32	0/3/3/3
71	GTP	BE	501	70	-	9/18/38/38	0/3/3/3
71	GTP	CH	501	70	-	5/18/38/38	0/3/3/3
69	GDP	MD	500	-	-	1/12/32/32	0/3/3/3
69	GDP	A	500	-	-	2/12/32/32	0/3/3/3
69	GDP	GD	500	-	-	1/12/32/32	0/3/3/3
71	GTP	OG	501	70	-	3/18/38/38	0/3/3/3
71	GTP	VK	501	70	-	5/18/38/38	0/3/3/3
69	GDP	WH	500	-	-	2/12/32/32	0/3/3/3
69	GDP	QK	500	-	-	5/12/32/32	0/3/3/3
71	GTP	Q	501	70	-	3/18/38/38	0/3/3/3
69	GDP	RG	500	-	-	1/12/32/32	0/3/3/3
71	GTP	OE	501	70	-	4/18/38/38	0/3/3/3
69	GDP	CM	500	-	-	3/12/32/32	0/3/3/3
69	GDP	GL	500	-	-	3/12/32/32	0/3/3/3
69	GDP	UL	500	-	-	1/12/32/32	0/3/3/3
71	GTP	GC	501	70	-	3/18/38/38	0/3/3/3
71	GTP	FA	501	70	-	3/18/38/38	0/3/3/3
69	GDP	SJ	500	-	-	2/12/32/32	0/3/3/3

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
71	GTP	IG	501	70	-	7/18/38/38	0/3/3/3
69	GDP	DI	500	-	-	2/12/32/32	0/3/3/3
71	GTP	WM	501	70	-	3/18/38/38	0/3/3/3
69	GDP	E	500	-	-	4/12/32/32	0/3/3/3
69	GDP	U	500	-	-	2/12/32/32	0/3/3/3
69	GDP	VD	500	-	-	1/12/32/32	0/3/3/3
71	GTP	BK	501	70	-	5/18/38/38	0/3/3/3
71	GTP	SE	501	70	-	5/18/38/38	0/3/3/3
71	GTP	HE	501	70	-	4/18/38/38	0/3/3/3
71	GTP	L	501	70	-	4/18/38/38	0/3/3/3
69	GDP	OJ	500	-	-	3/12/32/32	0/3/3/3
71	GTP	EG	501	70	-	6/18/38/38	0/3/3/3
71	GTP	JD	501	70	-	5/18/38/38	0/3/3/3
71	GTP	VE	501	70	-	1/18/38/38	0/3/3/3
71	GTP	DH	501	70	-	2/18/38/38	0/3/3/3
71	GTP	DF	501	70	-	6/18/38/38	0/3/3/3
74	ATP	2v	501	-	-	2/18/38/38	0/3/3/3
69	GDP	WD	500	-	-	2/12/32/32	0/3/3/3
71	GTP	VM	501	70	-	5/18/38/38	0/3/3/3
69	GDP	HB	500	-	-	3/12/32/32	0/3/3/3
69	GDP	OD	500	-	-	2/12/32/32	0/3/3/3
71	GTP	QL	501	-	-	3/18/38/38	0/3/3/3
71	GTP	UC	501	70	-	3/18/38/38	0/3/3/3
69	GDP	NJ	500	-	-	1/12/32/32	0/3/3/3
71	GTP	QF	501	70	-	2/18/38/38	0/3/3/3
71	GTP	PI	501	70	-	4/18/38/38	0/3/3/3
71	GTP	IK	501	70	-	3/18/38/38	0/3/3/3
69	GDP	IF	500	-	-	3/12/32/32	0/3/3/3
71	GTP	GK	501	70	-	3/18/38/38	0/3/3/3
71	GTP	EA	501	70	-	8/18/38/38	0/3/3/3
71	GTP	OM	501	70	-	5/18/38/38	0/3/3/3
69	GDP	JG	500	-	-	2/12/32/32	0/3/3/3
71	GTP	KB	501	70	-	4/18/38/38	0/3/3/3
71	GTP	MA	501	70	-	0/18/38/38	0/3/3/3
69	GDP	FD	500	-	-	2/12/32/32	0/3/3/3

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
71	GTP	FE	501	70	-	5/18/38/38	0/3/3/3
69	GDP	HJ	500	-	-	2/12/32/32	0/3/3/3
69	GDP	DK	500	-	-	1/12/32/32	0/3/3/3
69	GDP	LA	500	-	-	2/12/32/32	0/3/3/3
69	GDP	FL	500	-	-	3/12/32/32	0/3/3/3
69	GDP	HL	500	-	-	1/12/32/32	0/3/3/3
71	GTP	MM	501	70	-	2/18/38/38	0/3/3/3
71	GTP	WE	501	70	-	8/18/38/38	0/3/3/3
71	GTP	TE	501	70	-	6/18/38/38	0/3/3/3
69	GDP	NL	500	-	-	1/12/32/32	0/3/3/3
71	GTP	HI	501	70	-	2/18/38/38	0/3/3/3
71	GTP	BI	501	70	-	6/18/38/38	0/3/3/3
69	GDP	EL	500	-	-	3/12/32/32	0/3/3/3
71	GTP	C	501	70	-	6/18/38/38	0/3/3/3
69	GDP	UF	500	-	-	1/12/32/32	0/3/3/3
71	GTP	GG	501	70	-	4/18/38/38	0/3/3/3
69	GDP	UD	500	-	-	3/12/32/32	0/3/3/3
69	GDP	DA	500	-	-	4/12/32/32	0/3/3/3
71	GTP	TI	501	70	-	4/18/38/38	0/3/3/3
69	GDP	SF	500	-	-	1/12/32/32	0/3/3/3
69	GDP	P	500	-	-	2/12/32/32	0/3/3/3
71	GTP	NG	501	-	-	6/18/38/38	0/3/3/3
71	GTP	FG	501	70	-	7/18/38/38	0/3/3/3
69	GDP	ML	500	-	-	1/12/32/32	0/3/3/3
69	GDP	QG	500	-	-	1/12/32/32	0/3/3/3
69	GDP	O	500	-	-	2/12/32/32	0/3/3/3
71	GTP	EE	501	70	-	5/18/38/38	0/3/3/3
69	GDP	EJ	500	-	-	1/12/32/32	0/3/3/3
69	GDP	JK	500	-	-	3/12/32/32	0/3/3/3
71	GTP	VI	501	70	-	4/18/38/38	0/3/3/3
71	GTP	SG	501	70	-	8/18/38/38	0/3/3/3
69	GDP	KC	500	-	-	1/12/32/32	0/3/3/3
69	GDP	BB	500	-	-	2/12/32/32	0/3/3/3
71	GTP	UK	501	70	-	5/18/38/38	0/3/3/3
71	GTP	PK	501	70	-	3/18/38/38	0/3/3/3
69	GDP	BL	500	-	-	3/12/32/32	0/3/3/3

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
69	GDP	LG	500	-	-	2/12/32/32	0/3/3/3
71	GTP	TA	501	70	-	7/18/38/38	0/3/3/3
69	GDP	T	500	-	-	1/12/32/32	0/3/3/3
69	GDP	BN	500	-	-	2/12/32/32	0/3/3/3
69	GDP	GJ	500	-	-	2/12/32/32	0/3/3/3
69	GDP	UB	500	-	-	3/12/32/32	0/3/3/3
69	GDP	AD	500	-	-	2/12/32/32	0/3/3/3
71	GTP	EI	501	70	-	2/18/38/38	0/3/3/3
69	GDP	TJ	500	-	-	2/12/32/32	0/3/3/3
69	GDP	WF	500	-	-	1/12/32/32	0/3/3/3
69	GDP	SH	500	-	-	2/12/32/32	0/3/3/3
71	GTP	AC	501	70	-	4/18/38/38	0/3/3/3
71	GTP	IC	501	70	-	4/18/38/38	0/3/3/3
71	GTP	IM	501	70	-	4/18/38/38	0/3/3/3

The worst 5 of 520 bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
71	RD	501	GTP	C5-C6	-4.37	1.38	1.47
71	PA	501	GTP	C5-C6	-4.36	1.38	1.47
71	RH	501	GTP	C5-C6	-4.35	1.38	1.47
71	PI	501	GTP	C5-C6	-4.33	1.38	1.47
71	IE	501	GTP	C5-C6	-4.31	1.38	1.47

The worst 5 of 970 bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
71	IK	501	GTP	C8-N7-C5	3.82	109.05	102.55
71	OC	501	GTP	C8-N7-C5	3.73	108.90	102.55
71	PE	501	GTP	C8-N7-C5	3.72	108.88	102.55
71	DJ	501	GTP	C8-N7-C5	3.71	108.86	102.55
71	EE	501	GTP	C8-N7-C5	3.70	108.85	102.55

There are no chirality outliers.

5 of 941 torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
69	AB	500	GDP	C5'-O5'-PA-O1A
69	AD	500	GDP	C5'-O5'-PA-O1A

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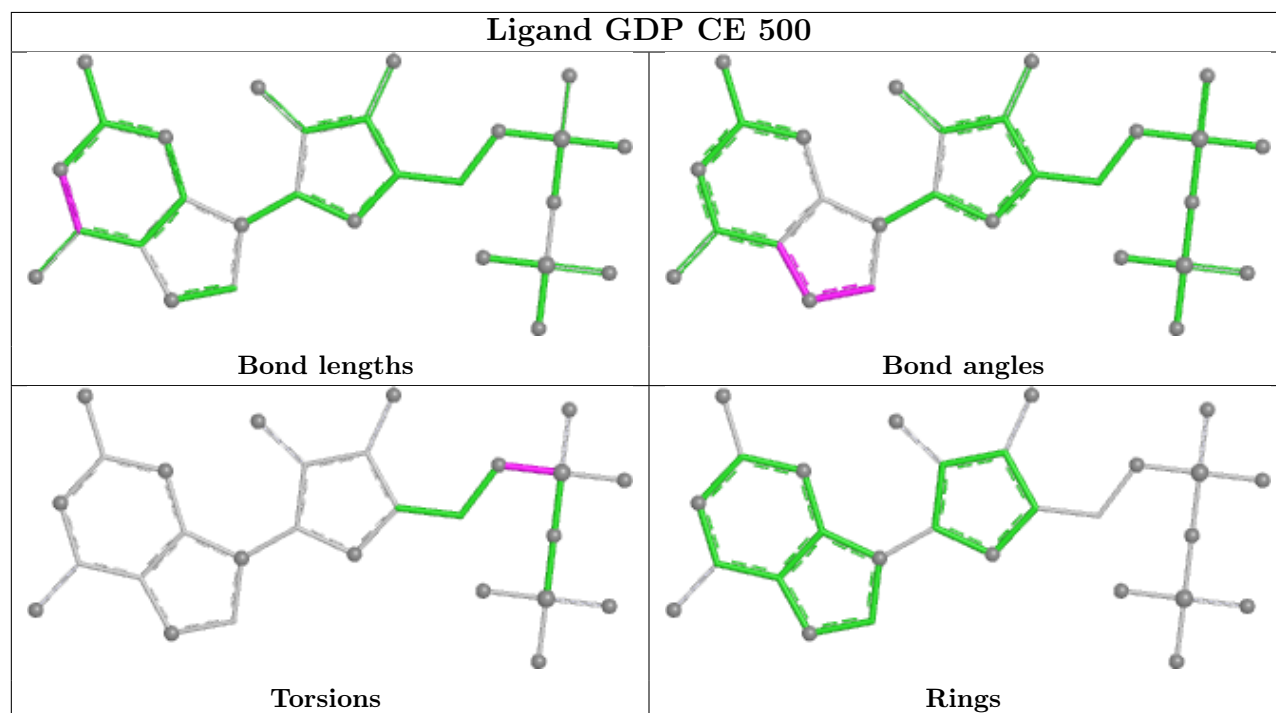
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Mol	Chain	Res	Type	Atoms
69	AF	500	GDP	C5'-O5'-PA-O1A
69	AH	500	GDP	C5'-O5'-PA-O1A
69	AJ	500	GDP	C5'-O5'-PA-O1A

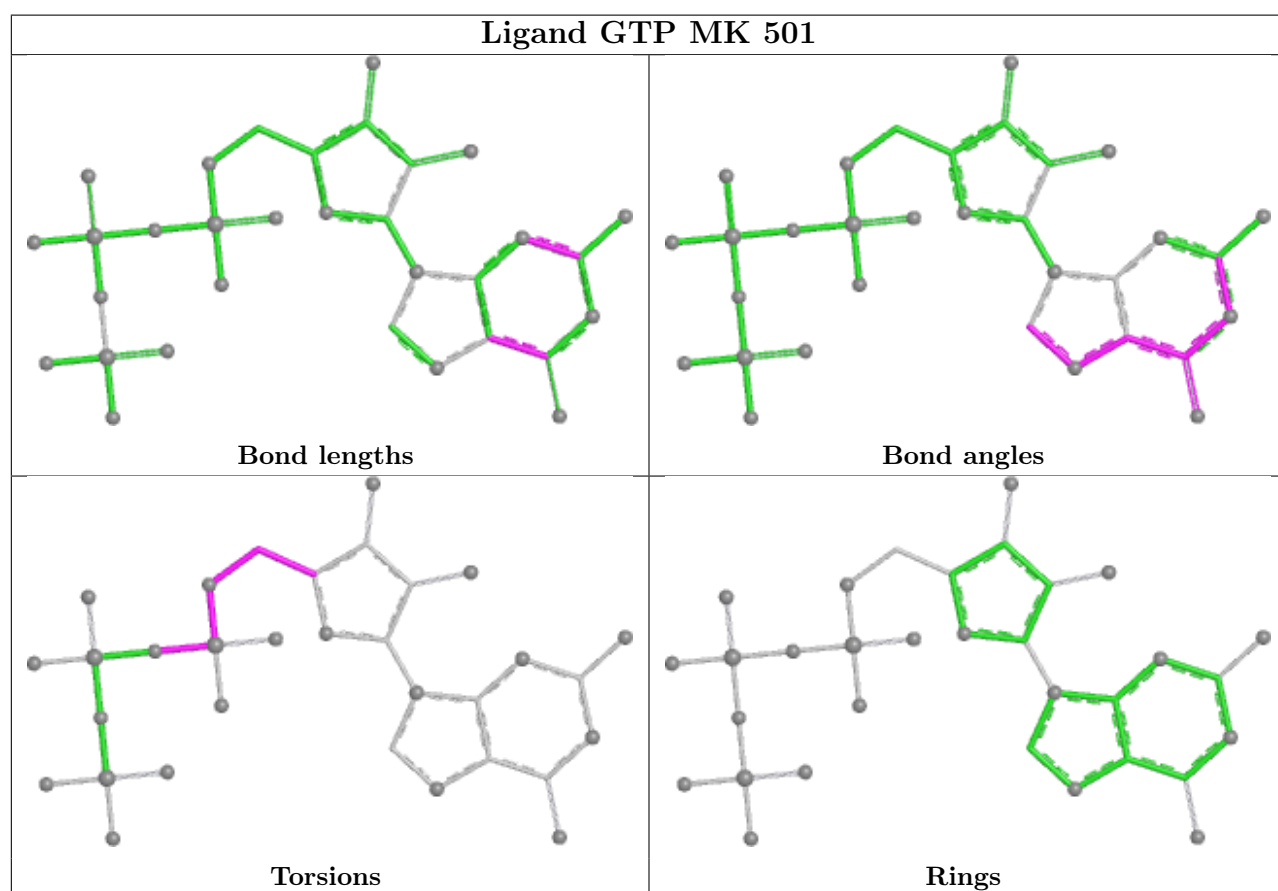
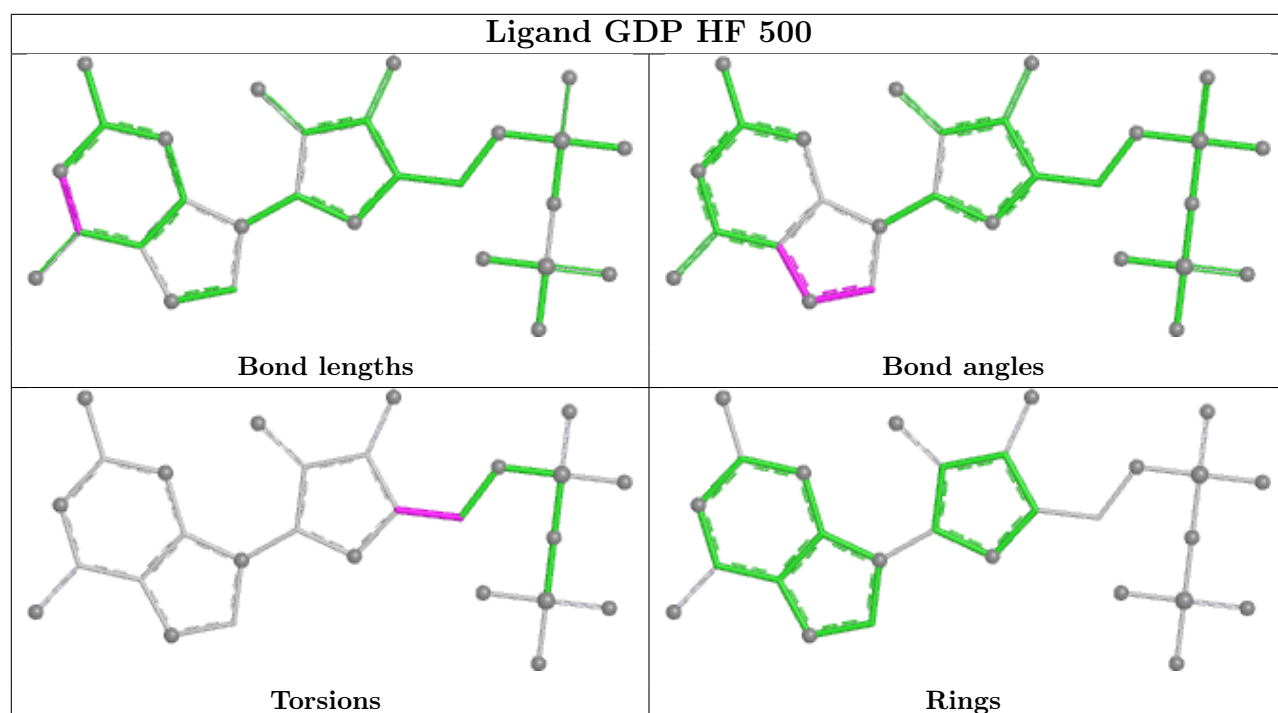
There are no ring outliers.

No monomer is involved in short contacts.

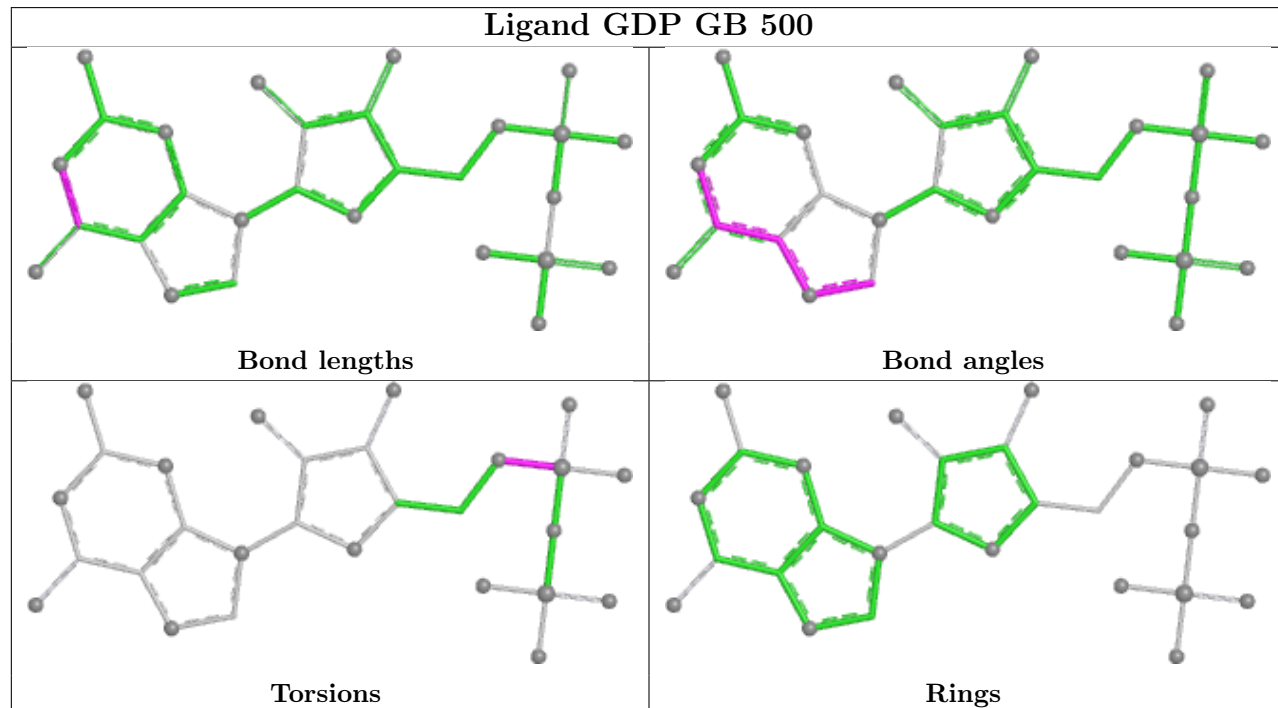
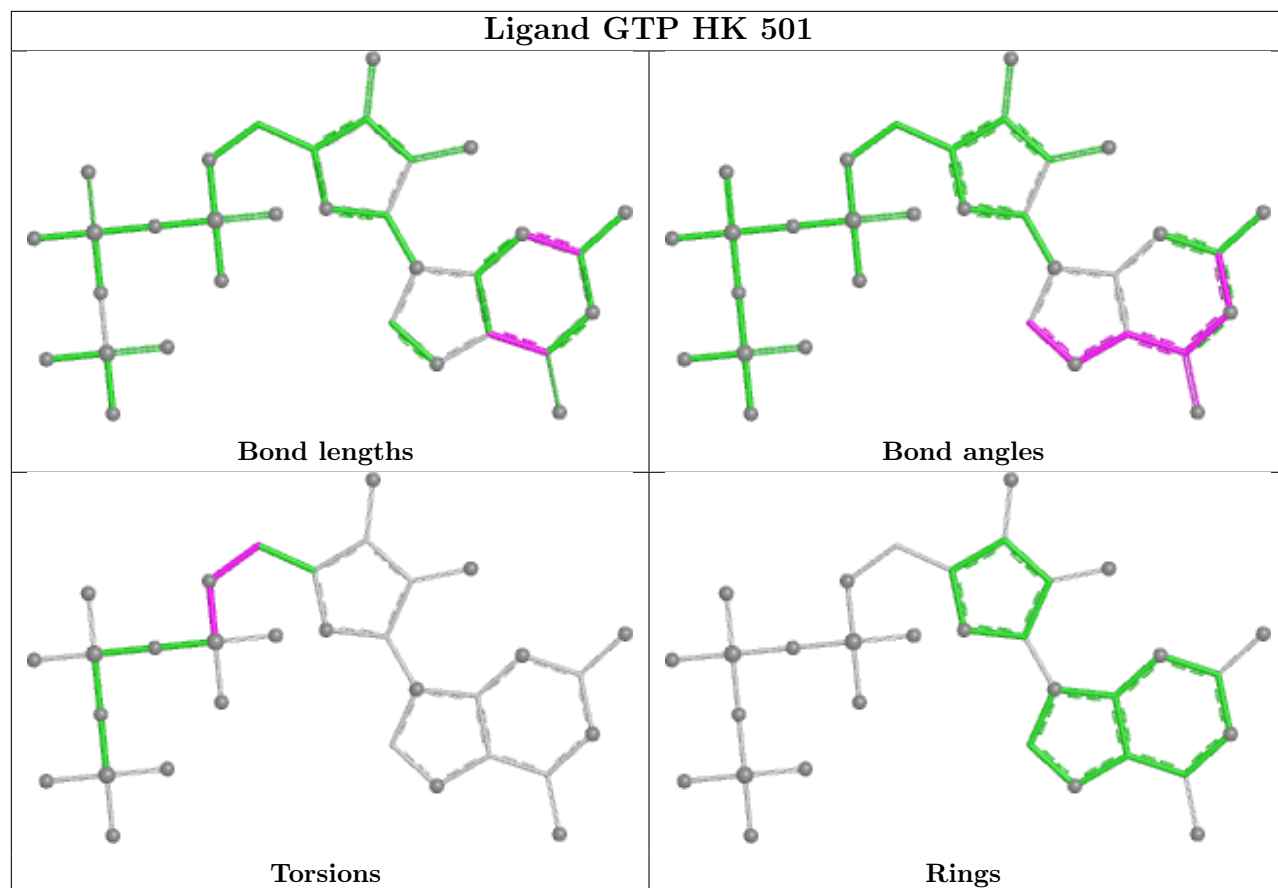
The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included. For torsion angles, if less than 5% of the Mogul distribution of torsion angles is within 10 degrees of the torsion angle in question, then that torsion angle is considered an outlier. Any bond that is central to one or more torsion angles identified as an outlier by Mogul will be highlighted in the graph. For rings, the root-mean-square deviation (RMSD) between the ring in question and similar rings identified by Mogul is calculated over all ring torsion angles. If the average RMSD is greater than 60 degrees and the minimal RMSD between the ring in question and any Mogul-identified rings is also greater than 60 degrees, then that ring is considered an outlier. The outliers are highlighted in purple. The color gray indicates Mogul did not find sufficient equivalents in the CSD to analyse the geometry.



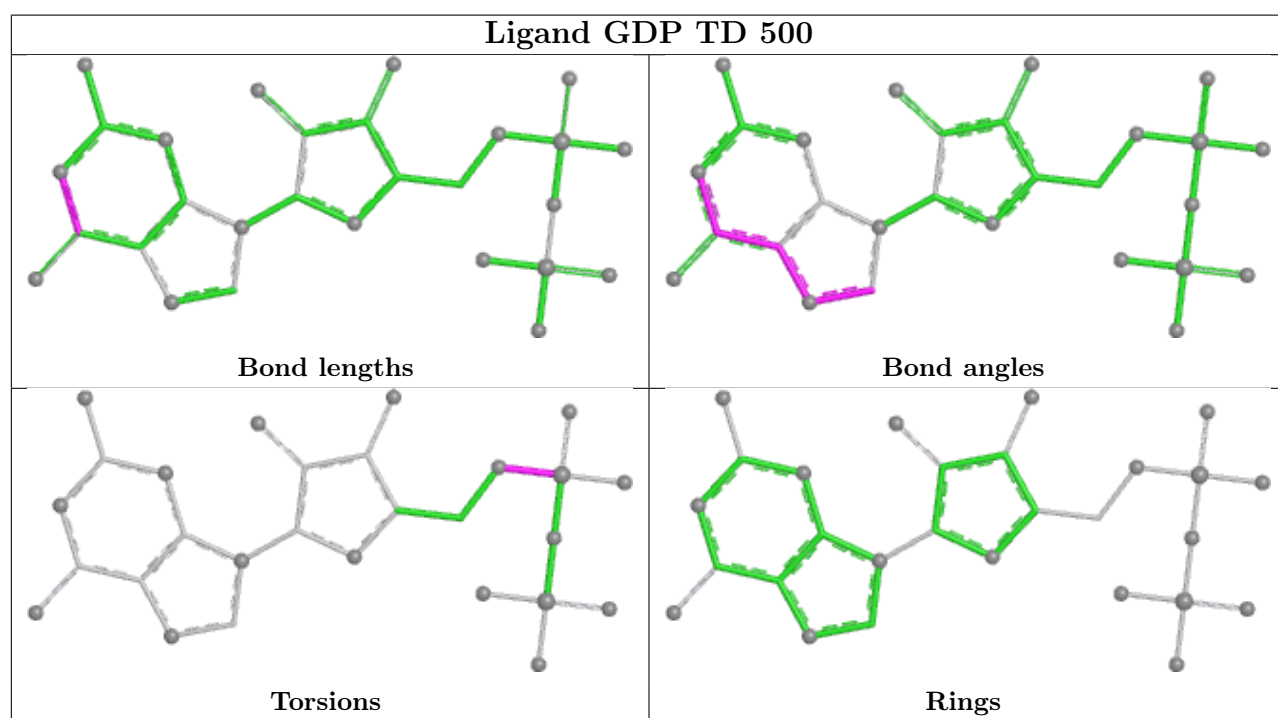
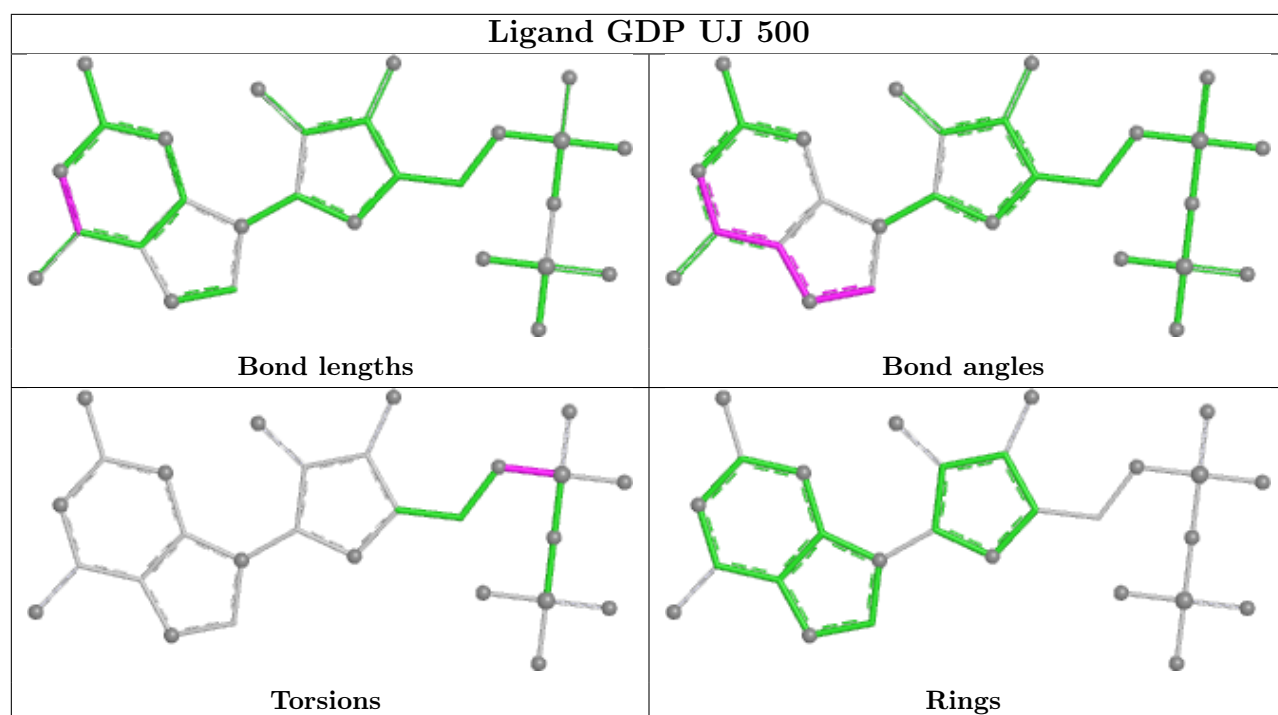






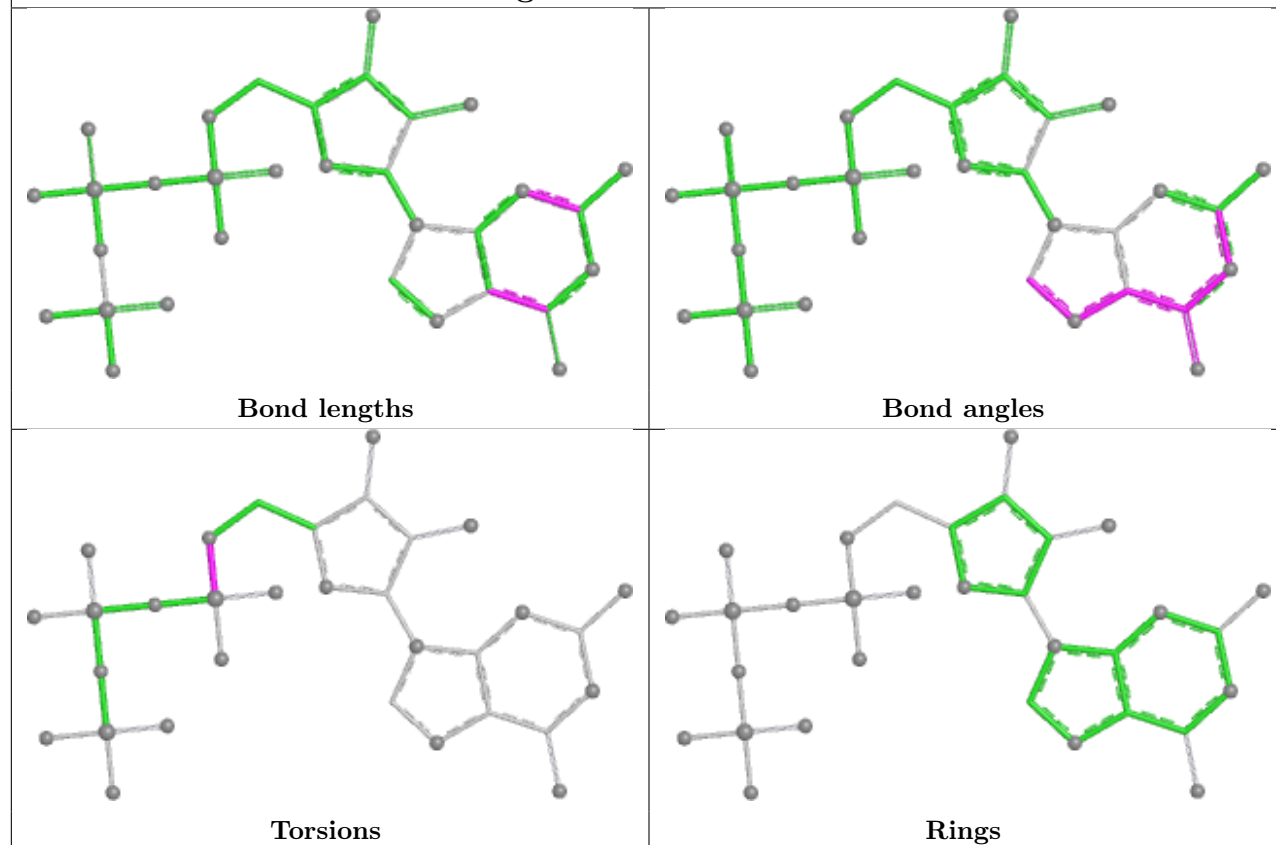




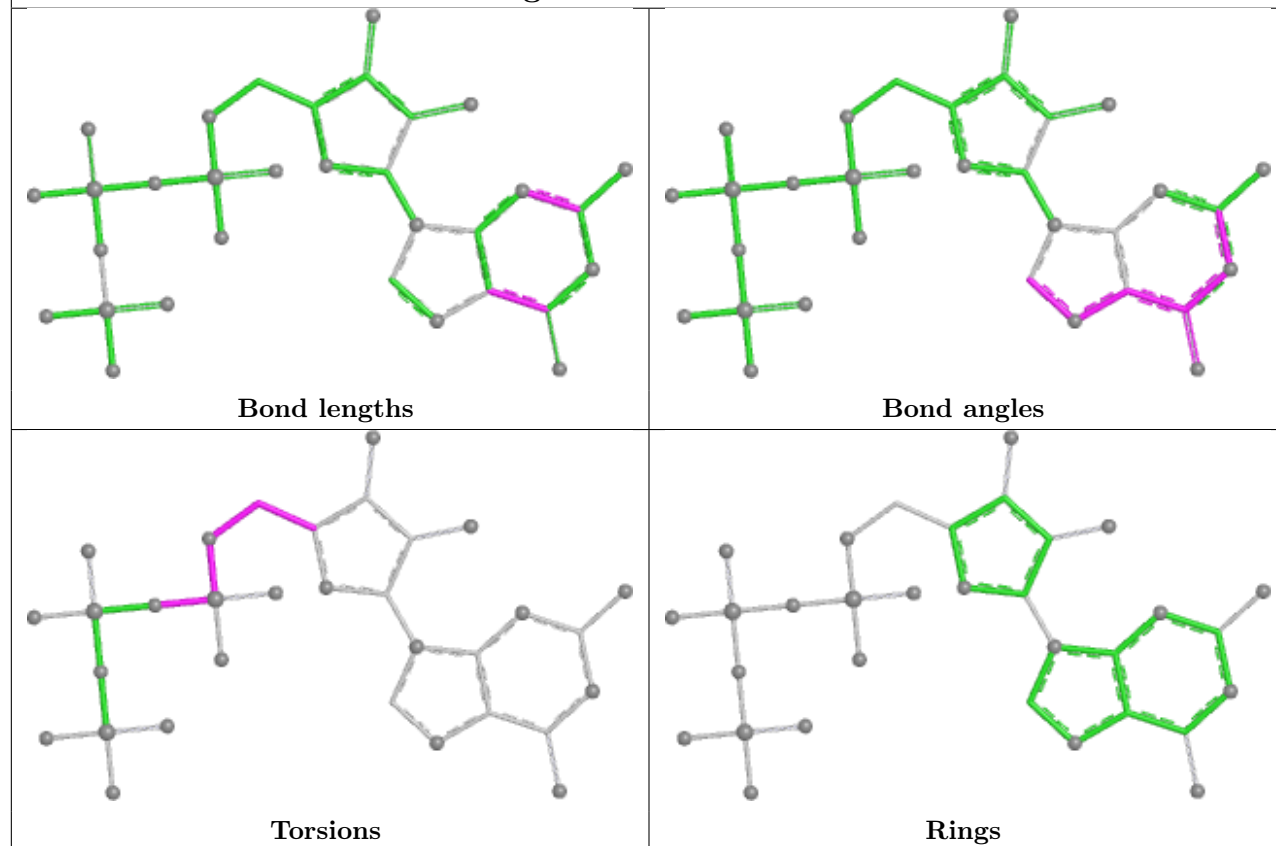




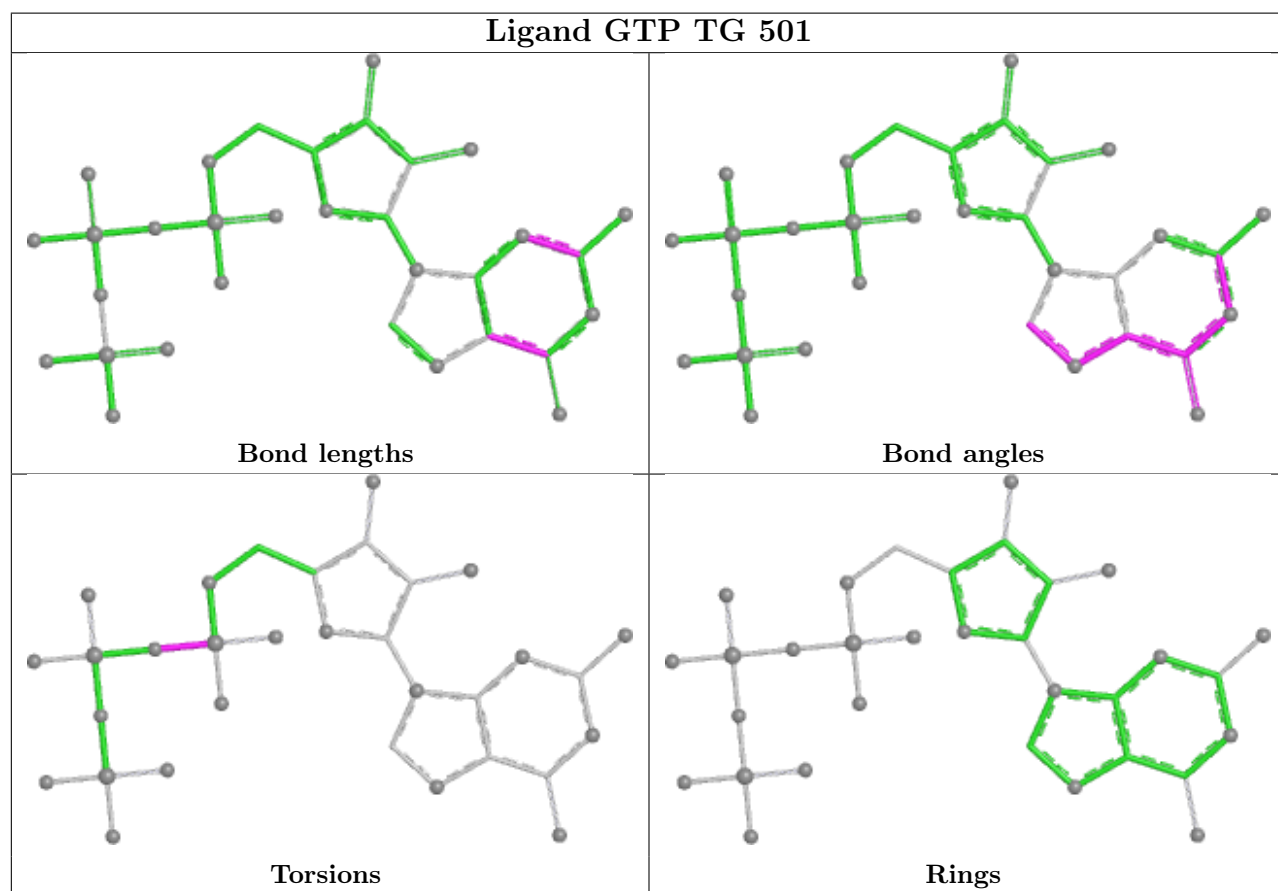
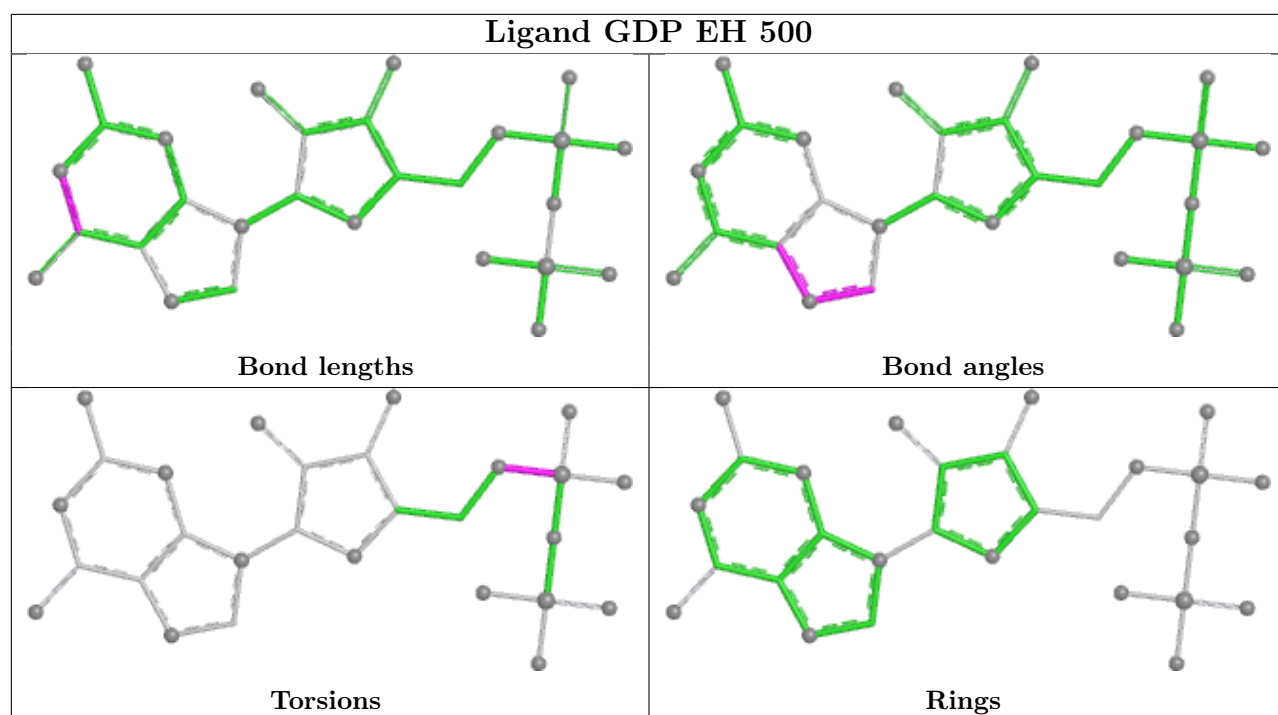
## Ligand GTP NC 501



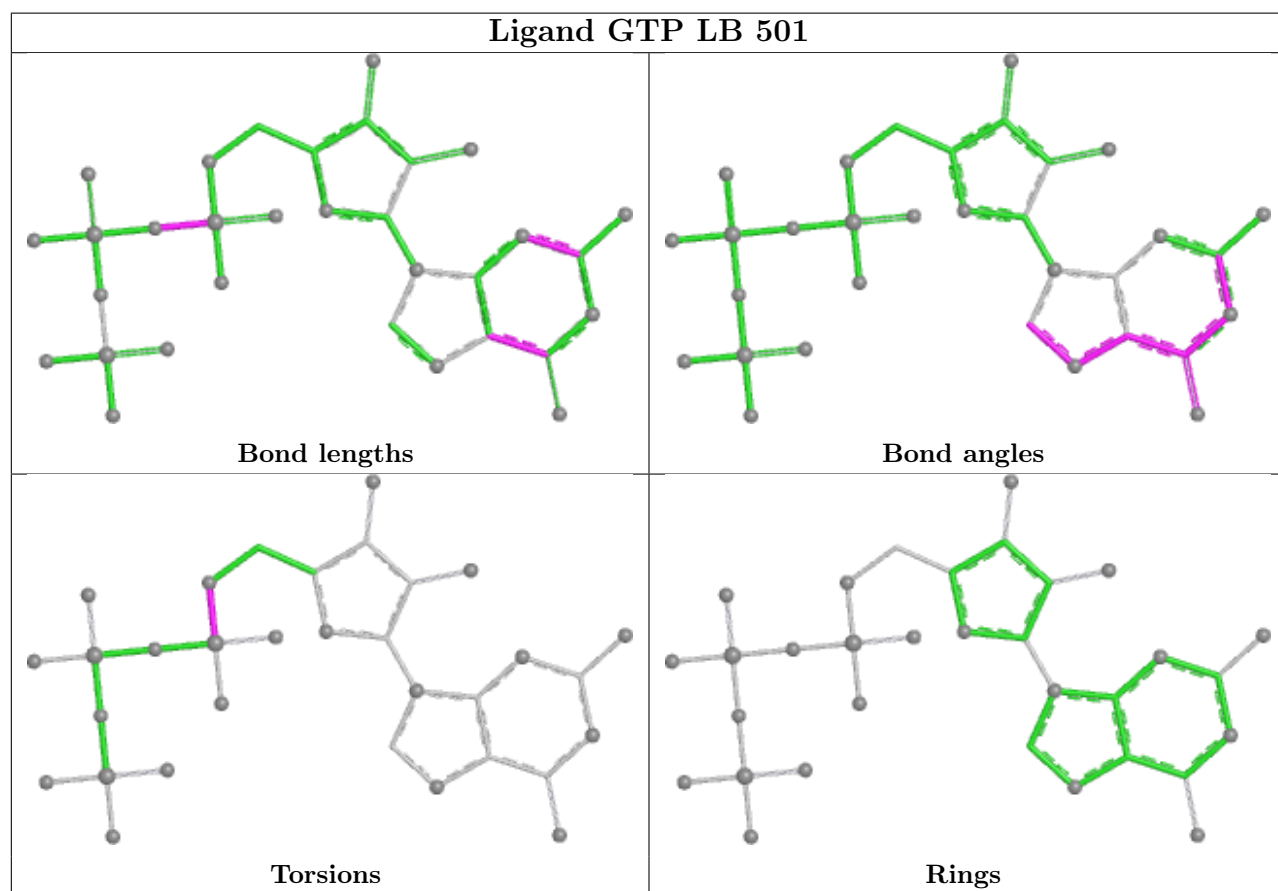
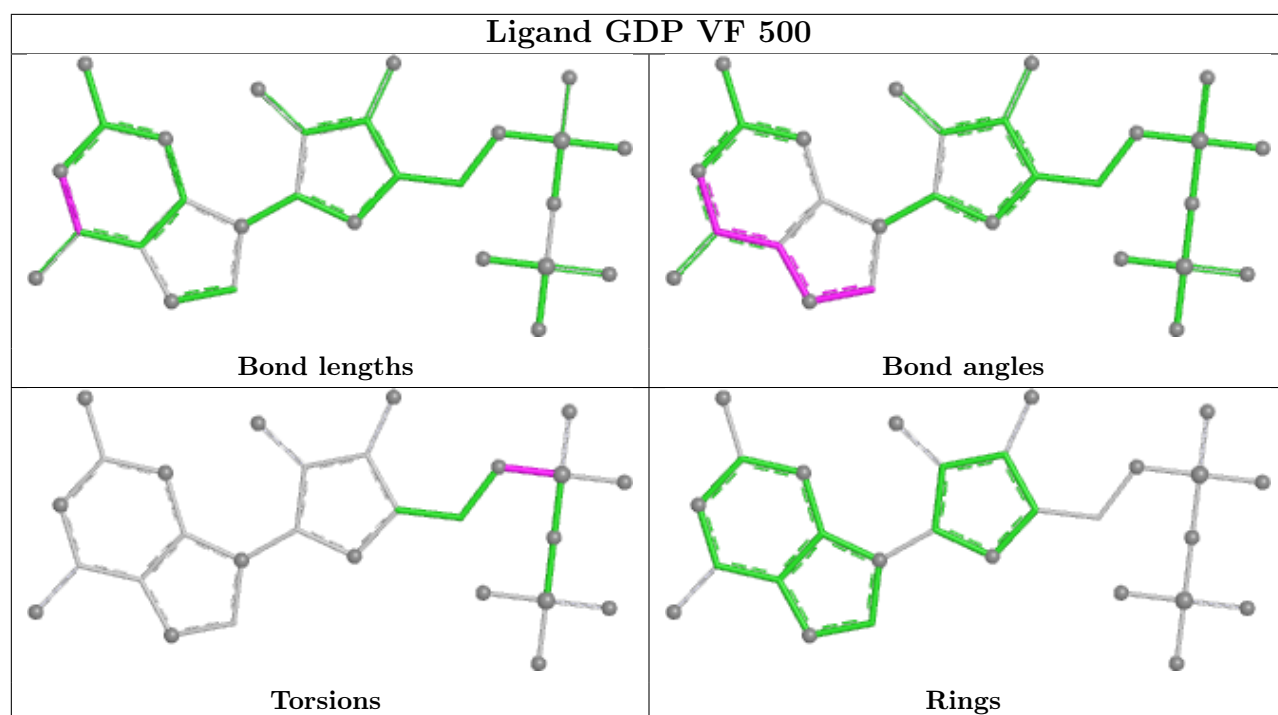
## Ligand GTP IA 501



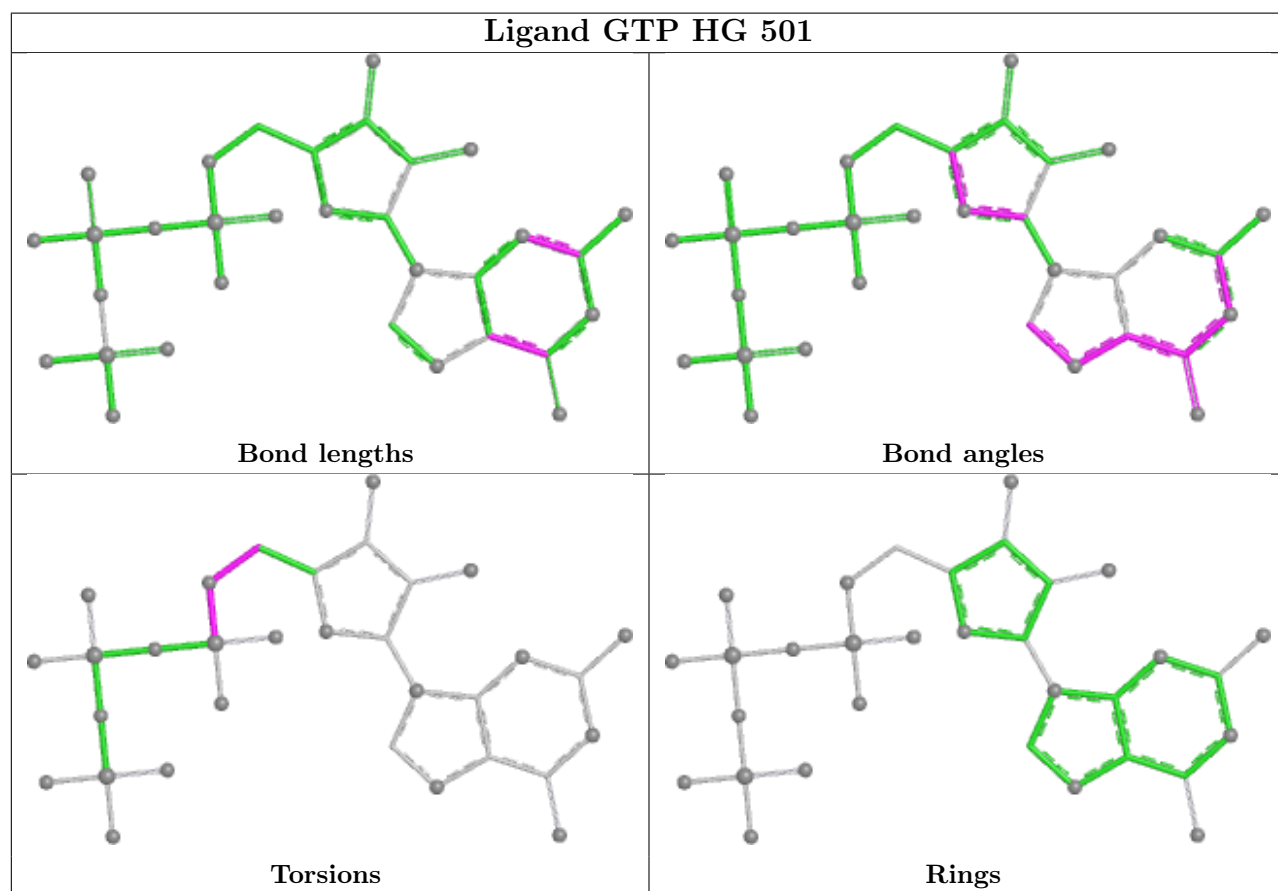
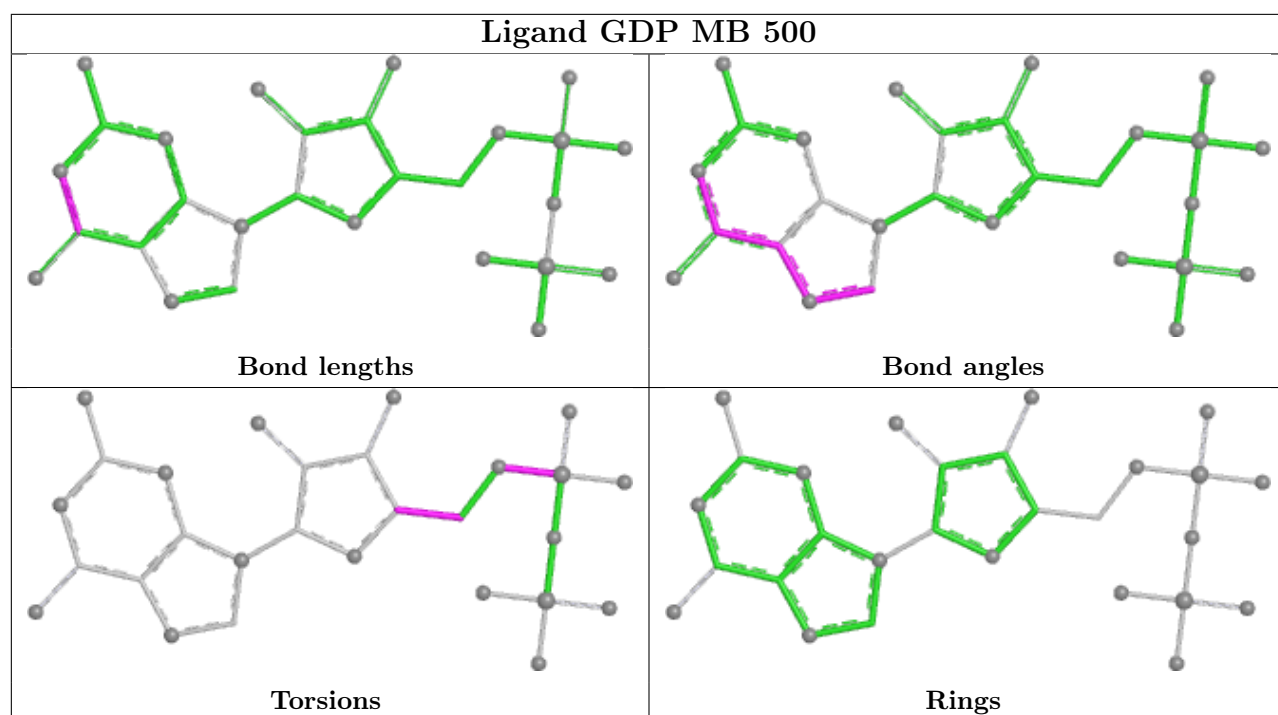






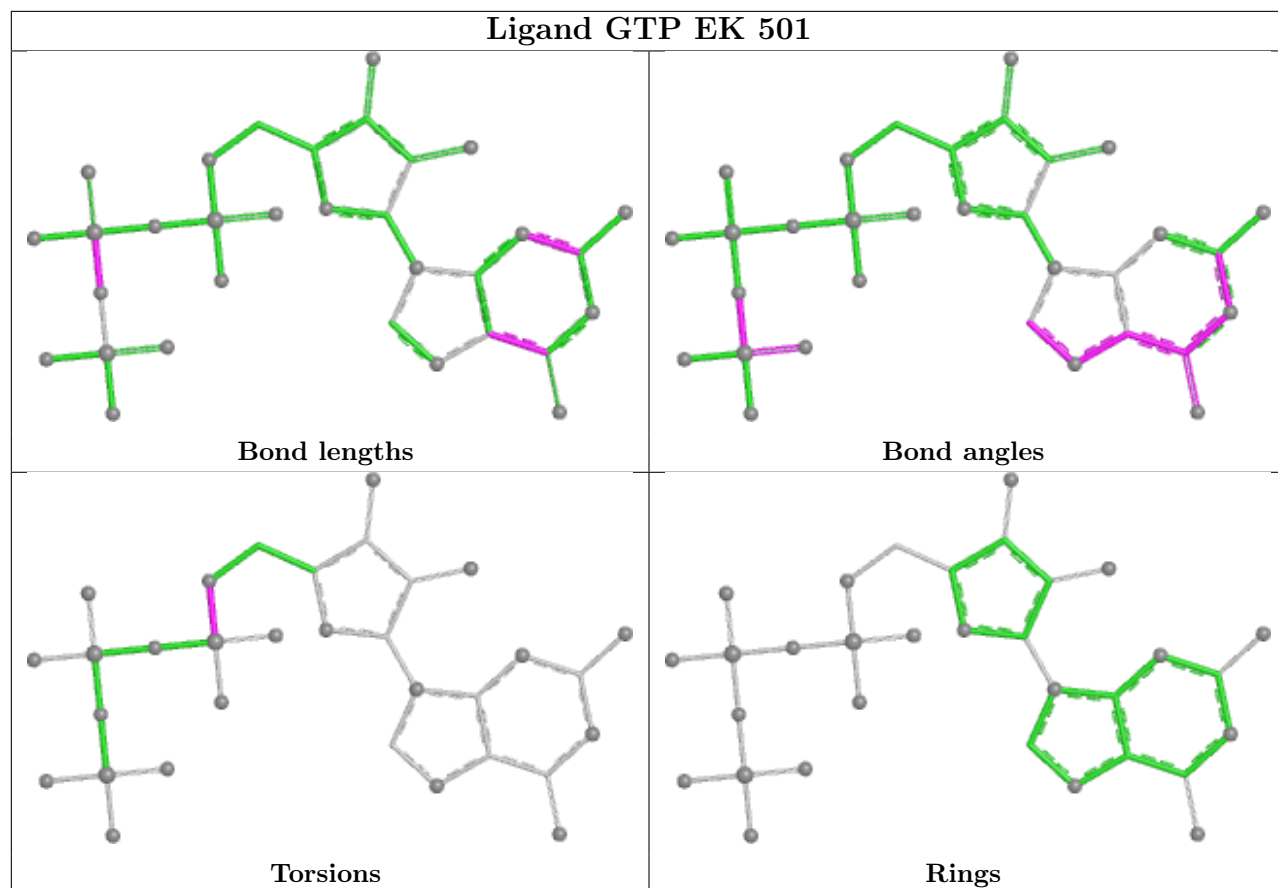




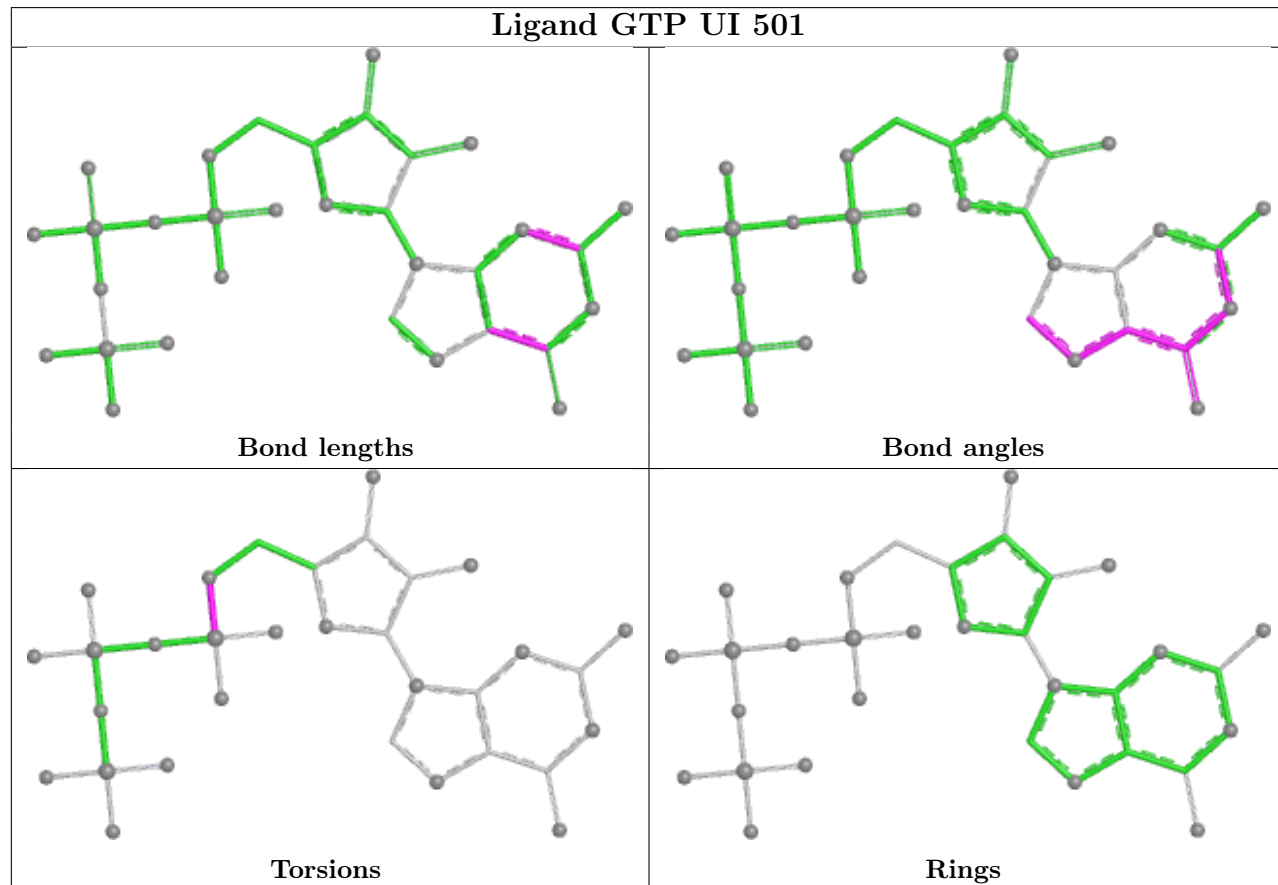




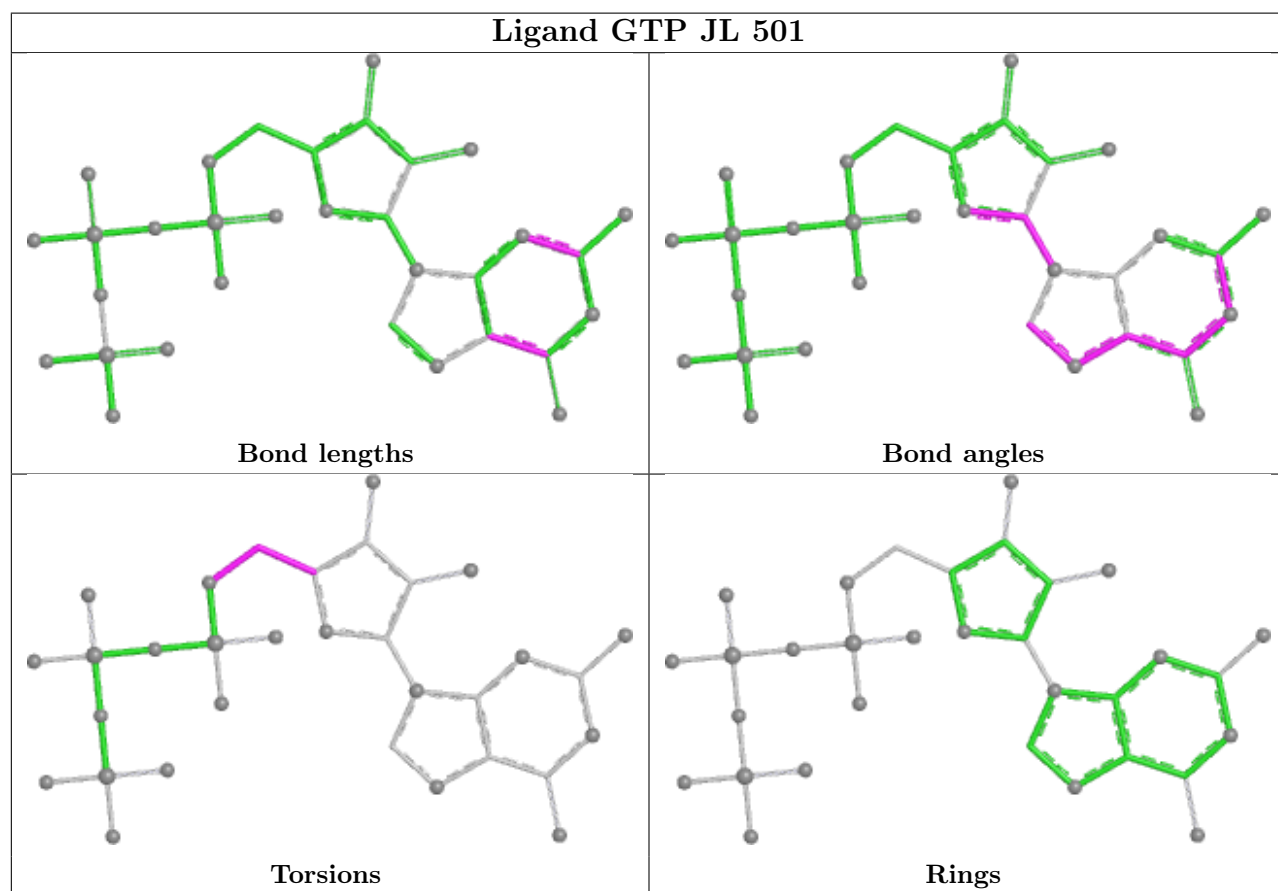
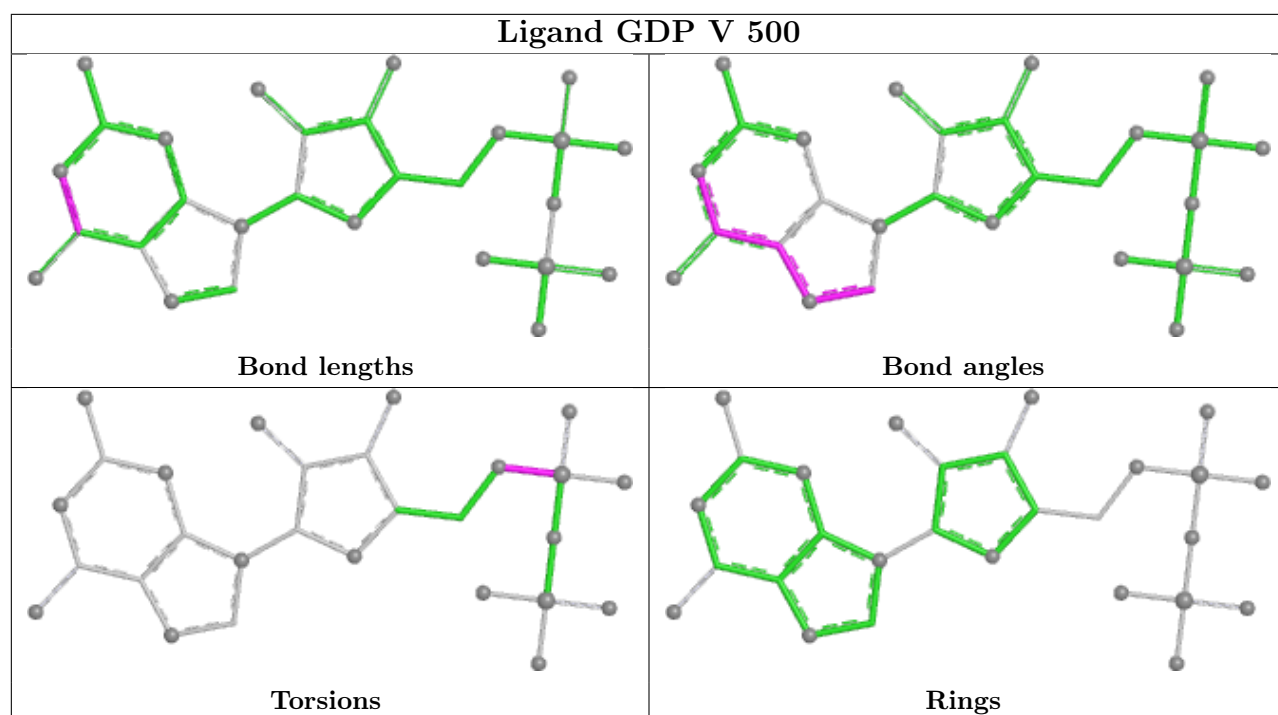
## Ligand GTP EK 501



## Ligand GTP UI 501

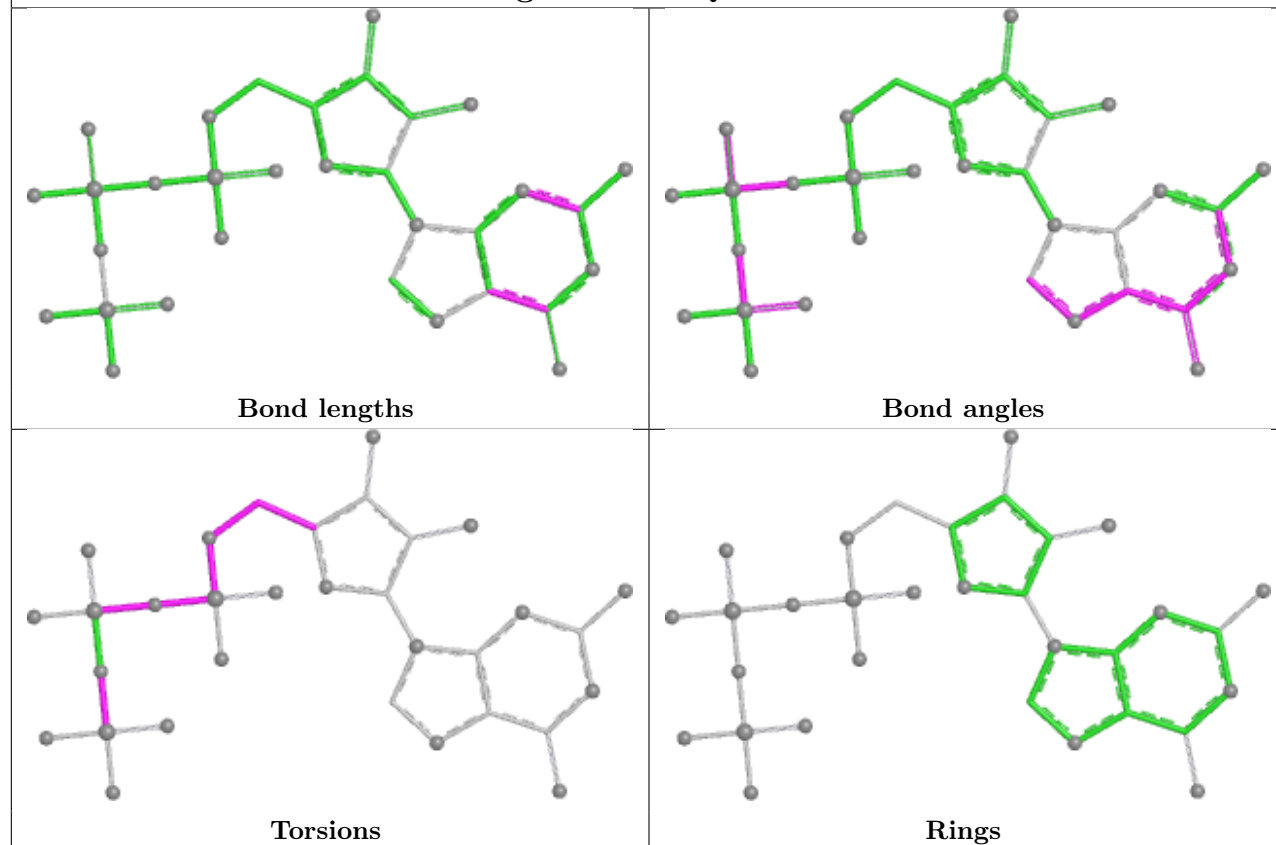




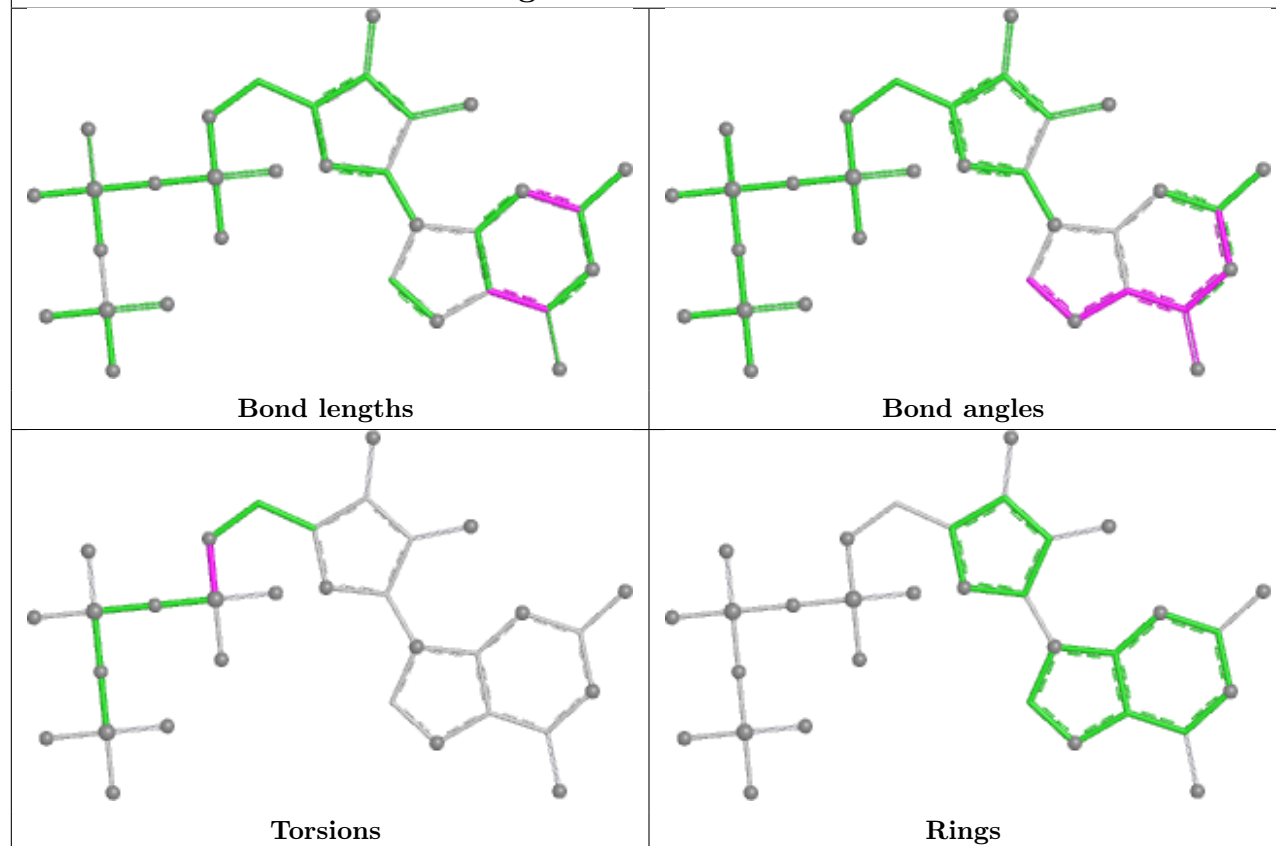




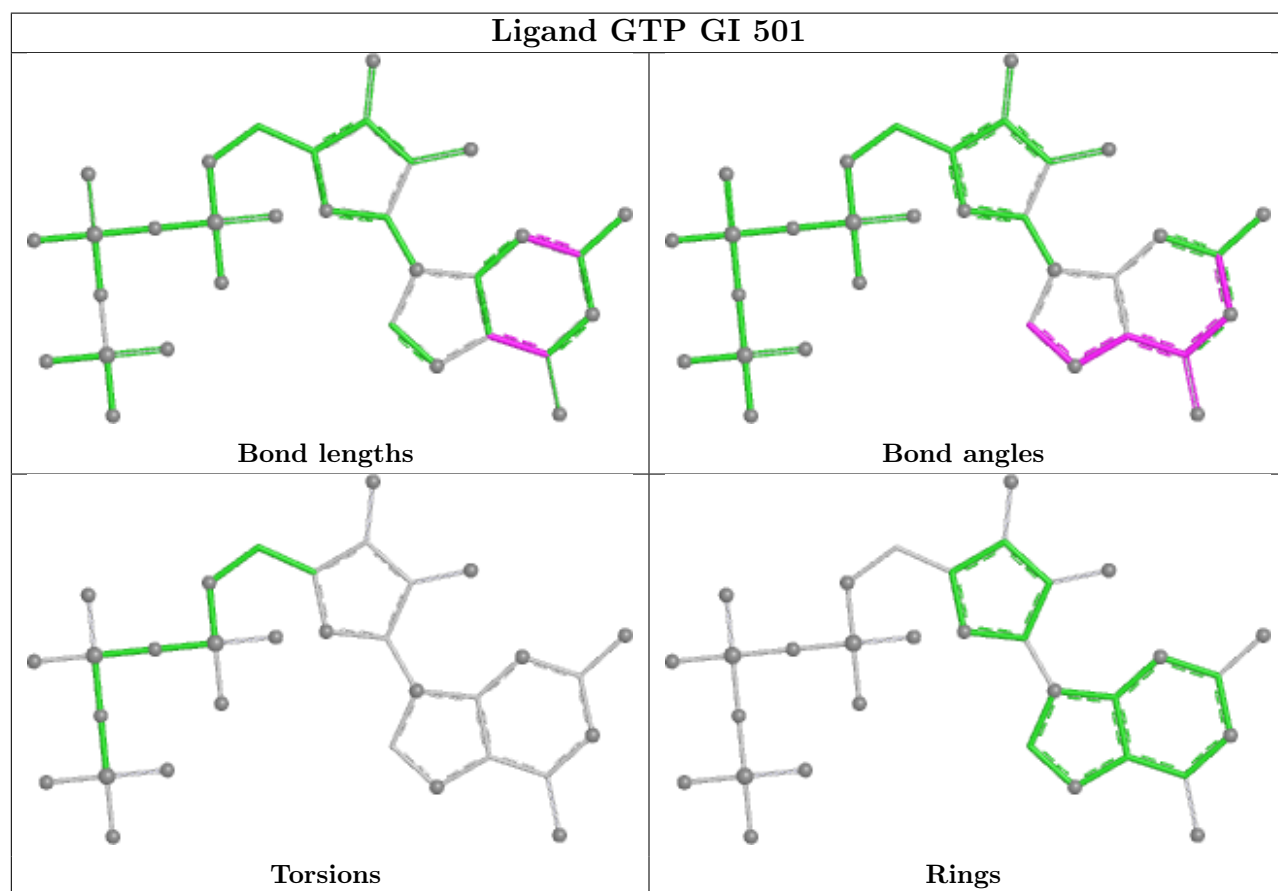
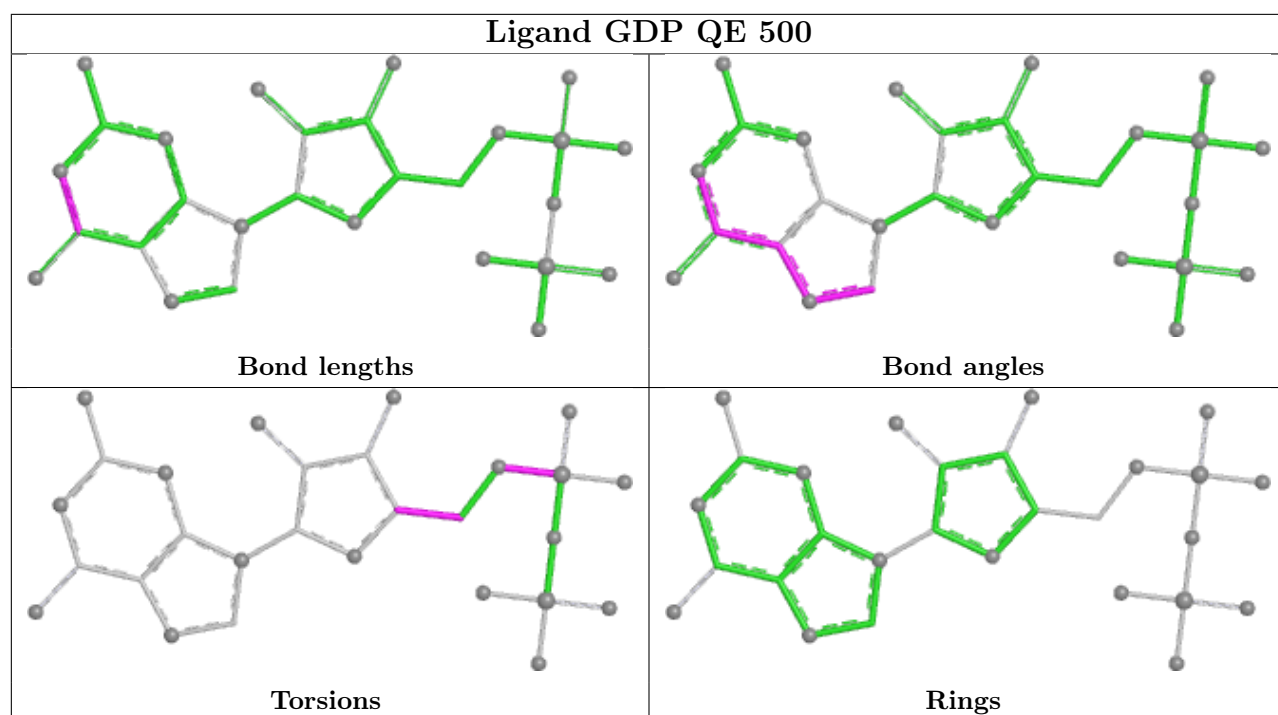
## Ligand GTP QH 501



## Ligand GTP WI 501

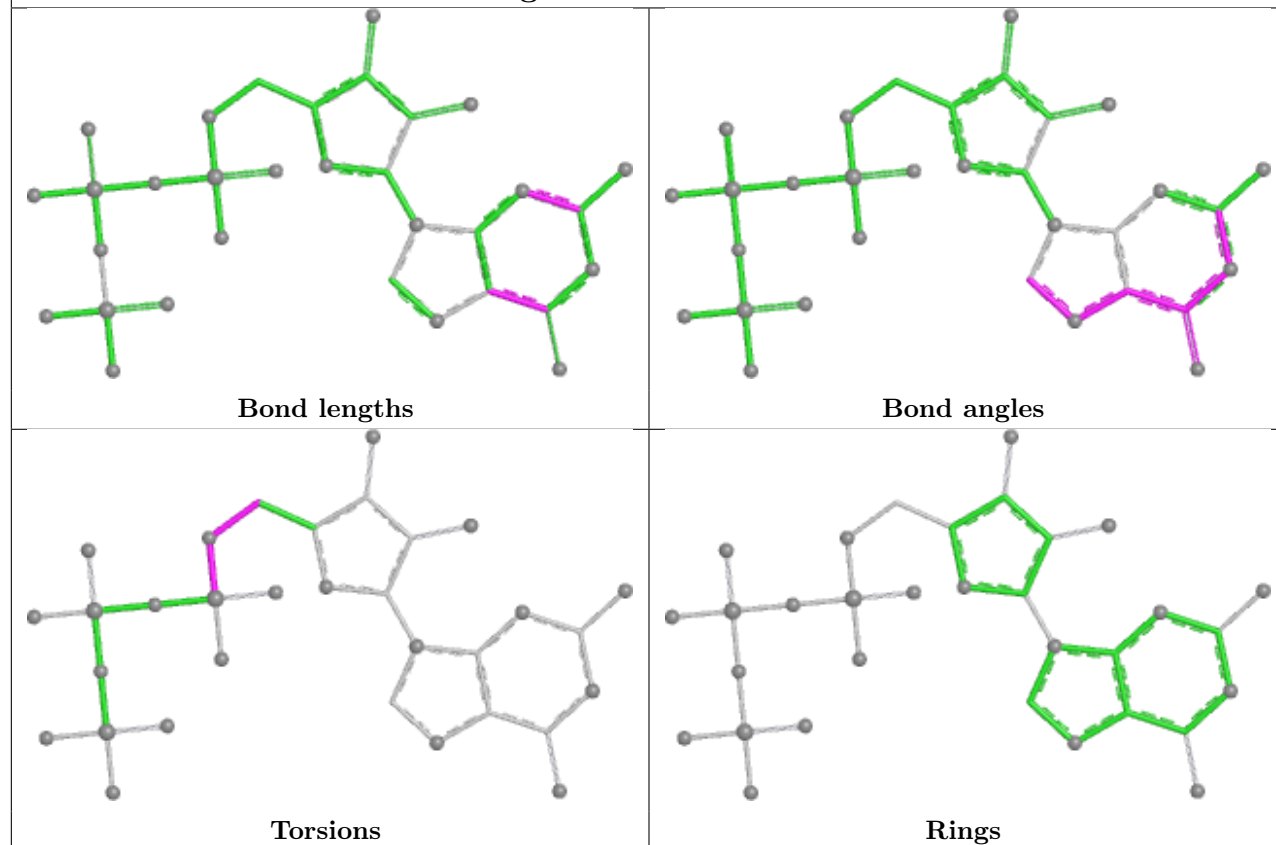




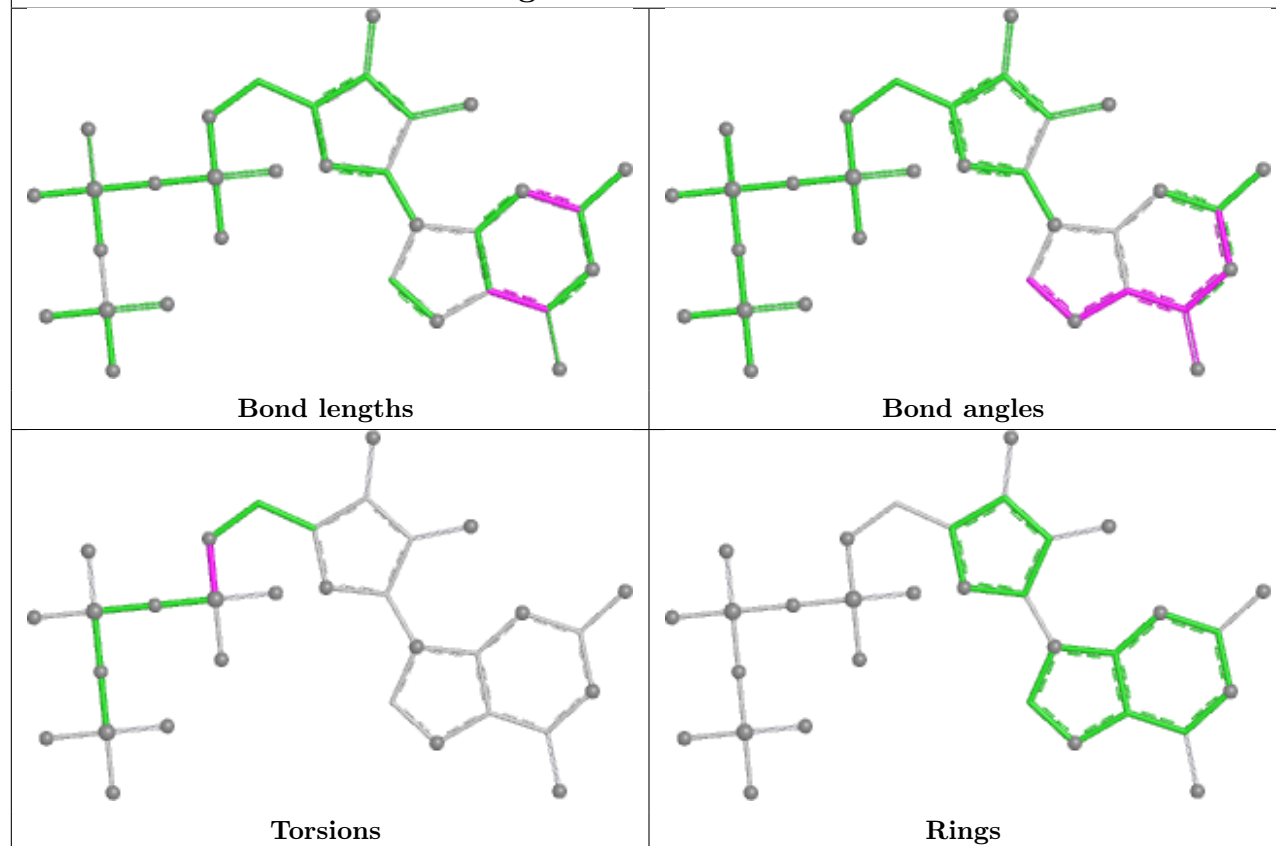




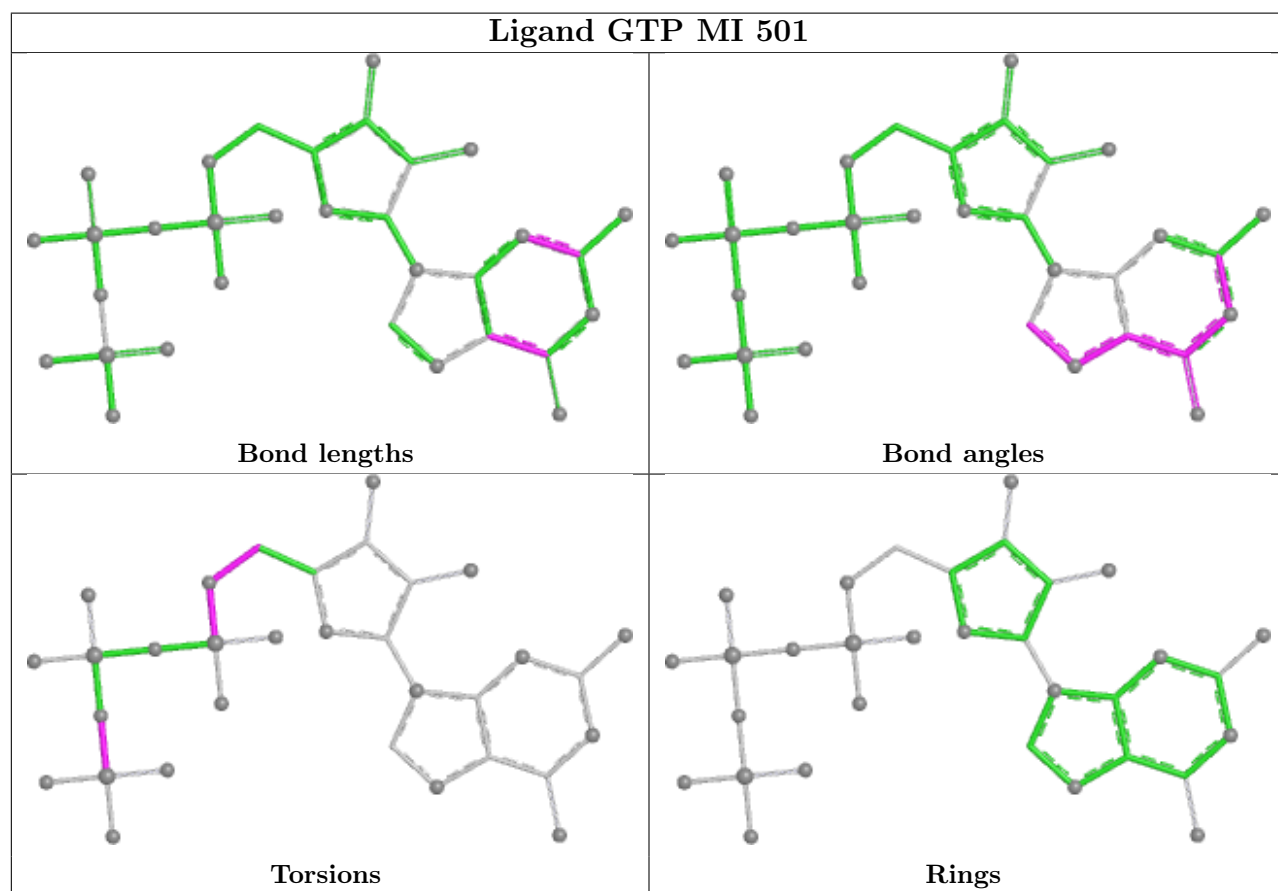
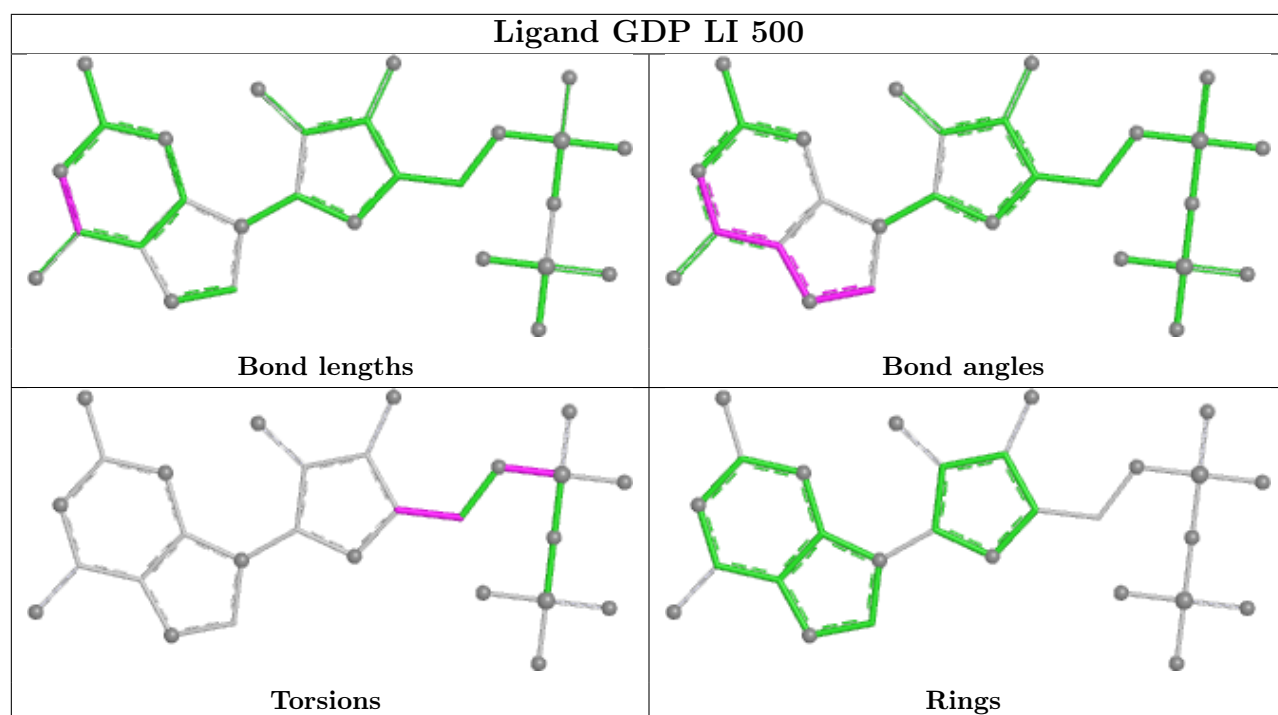
## Ligand GTP SA 501



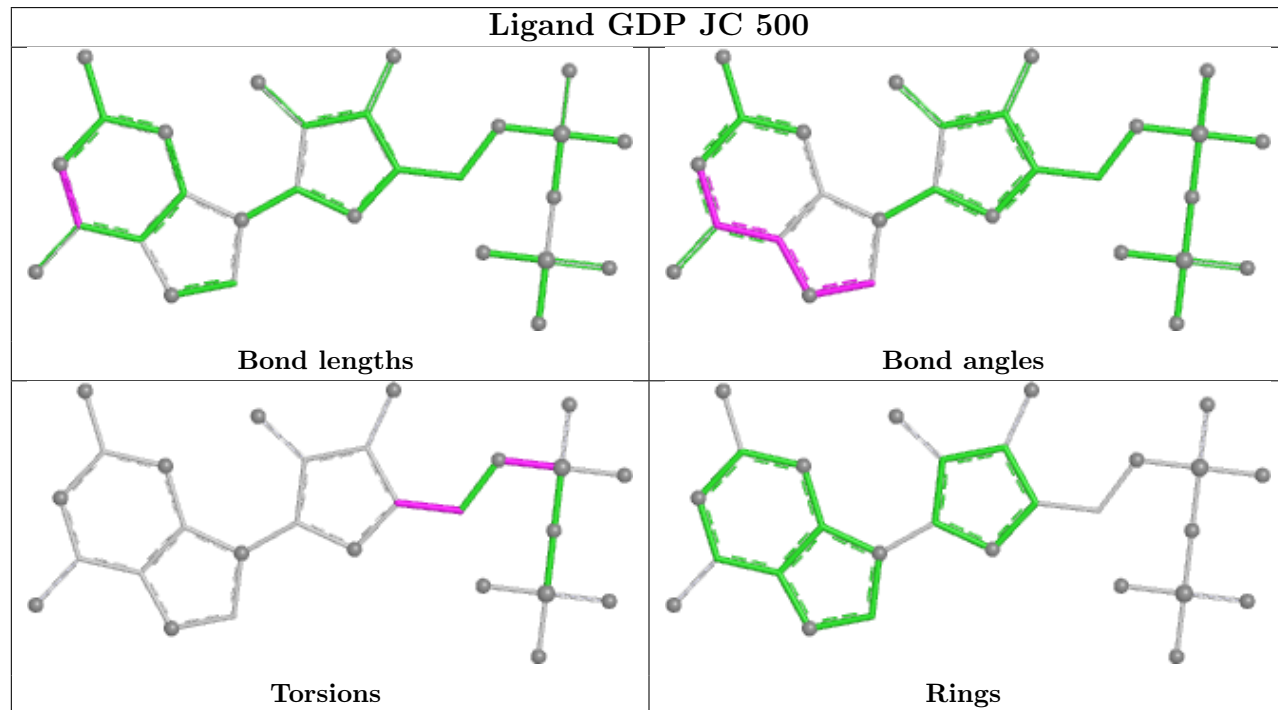
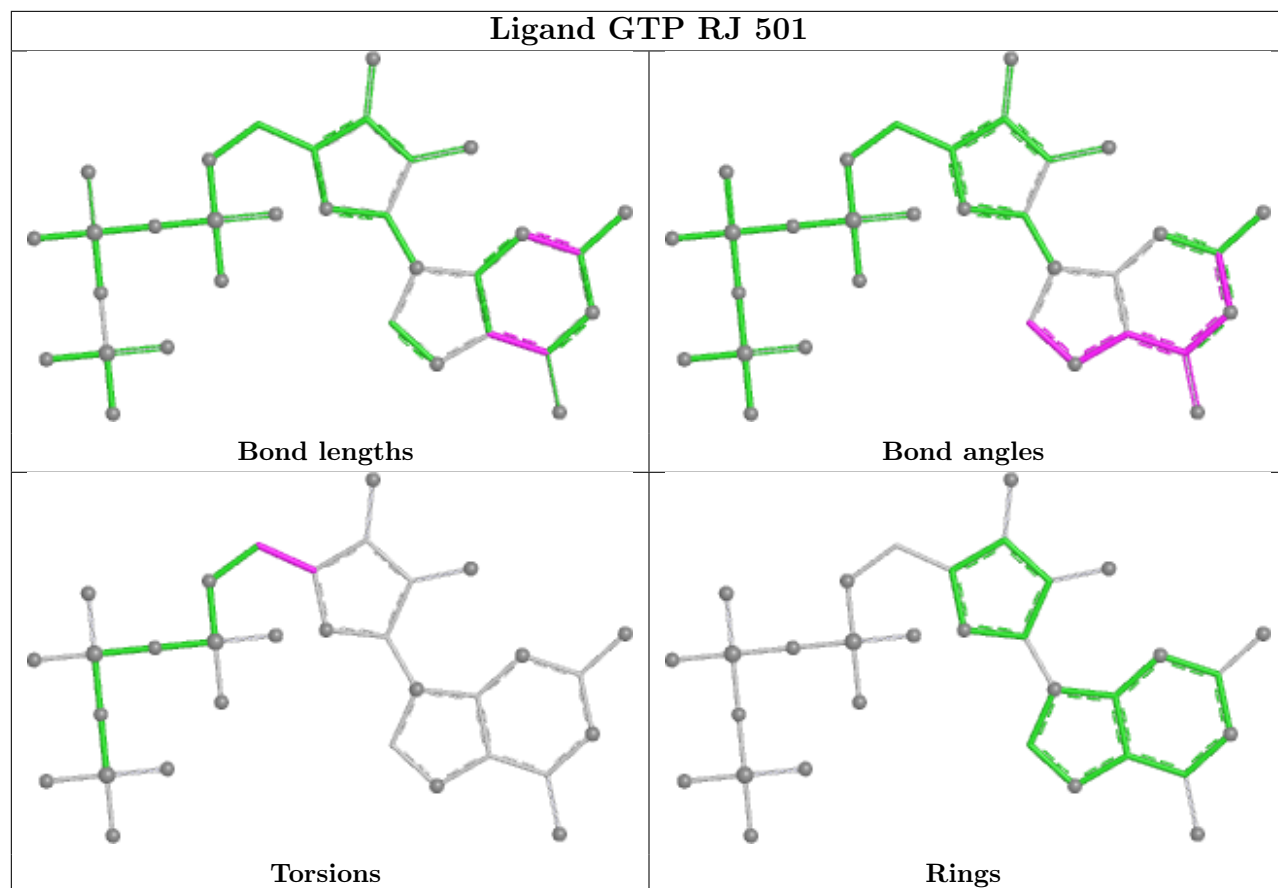
## Ligand GTP PC 501



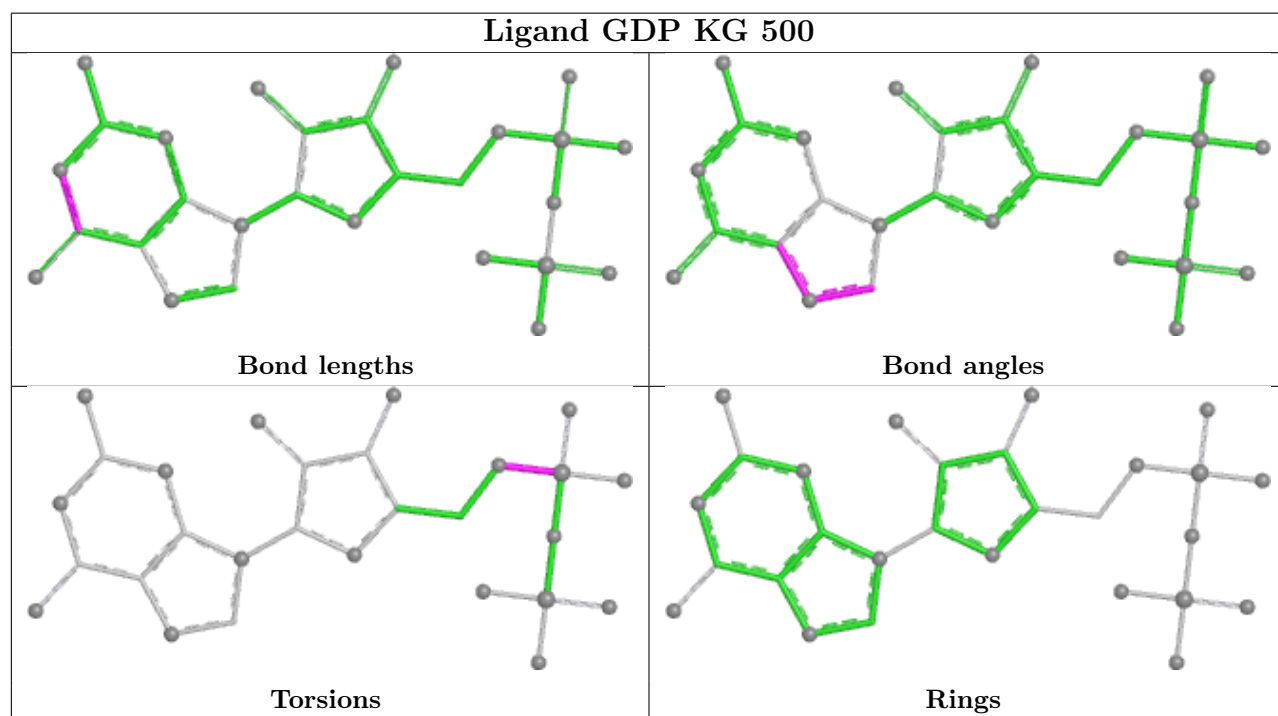
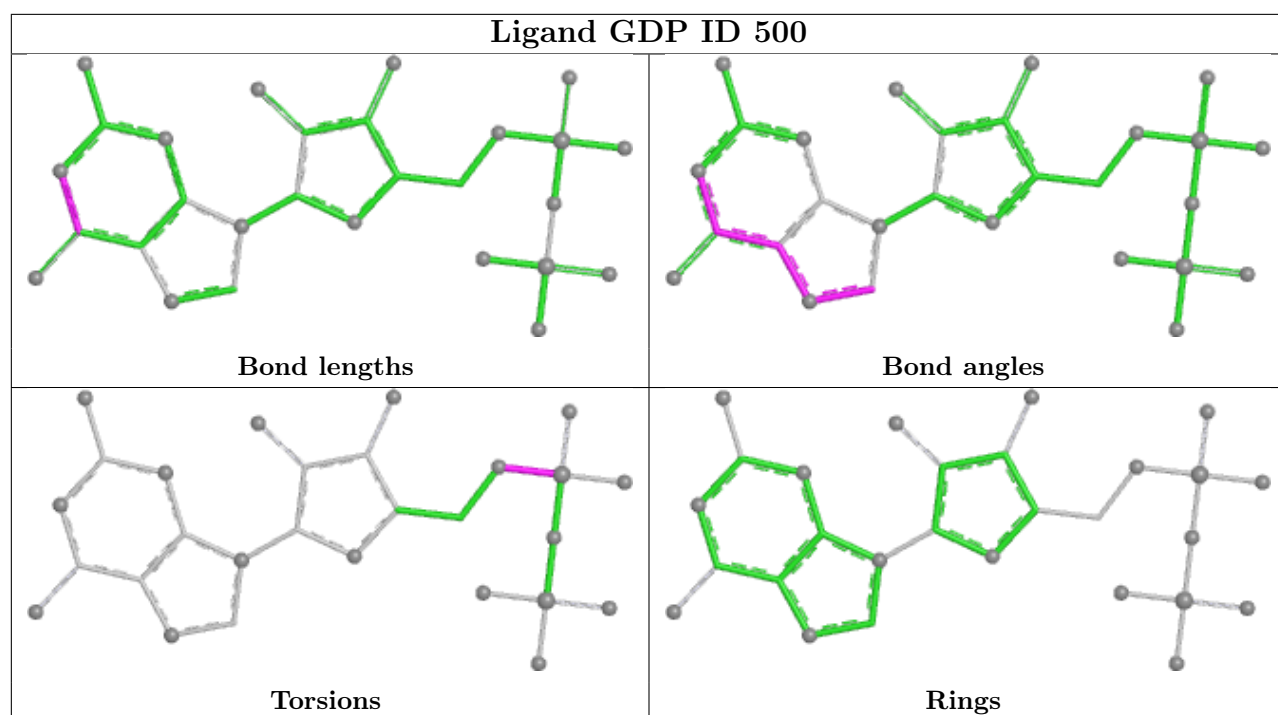




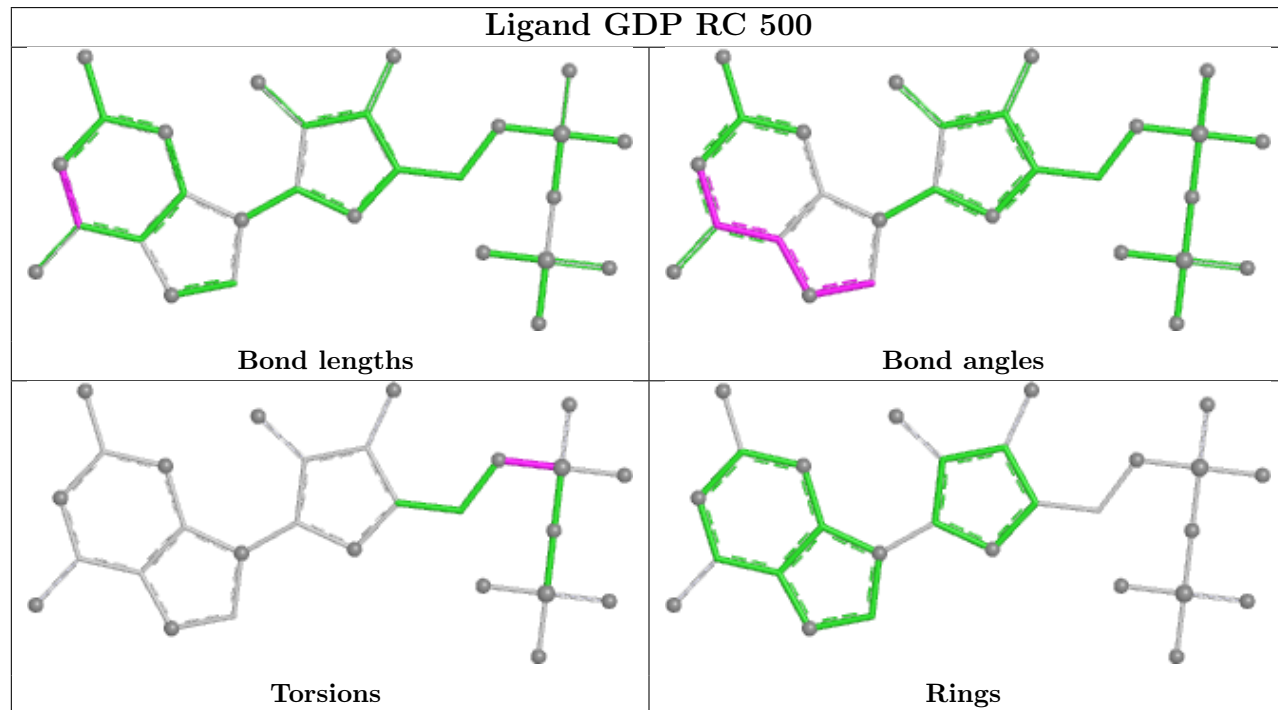
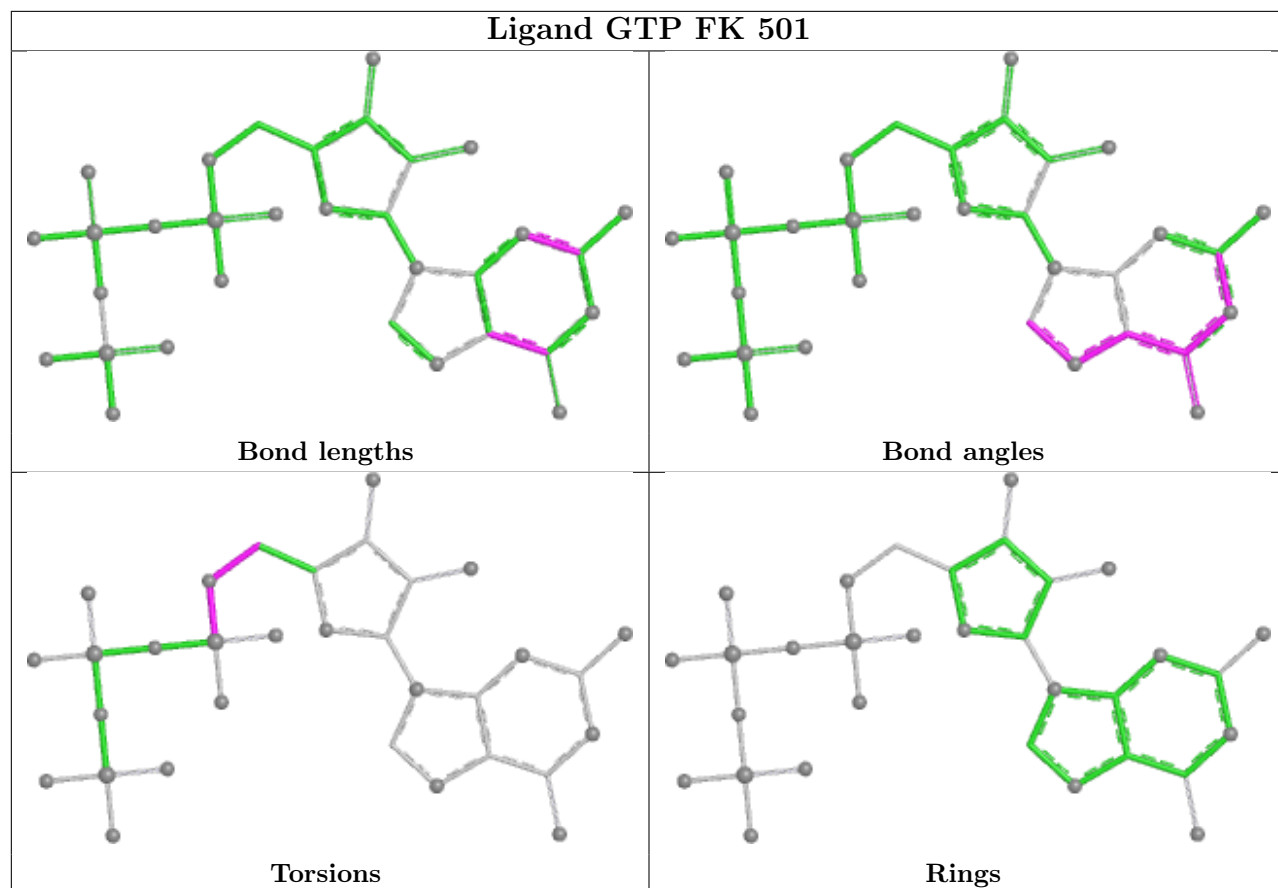




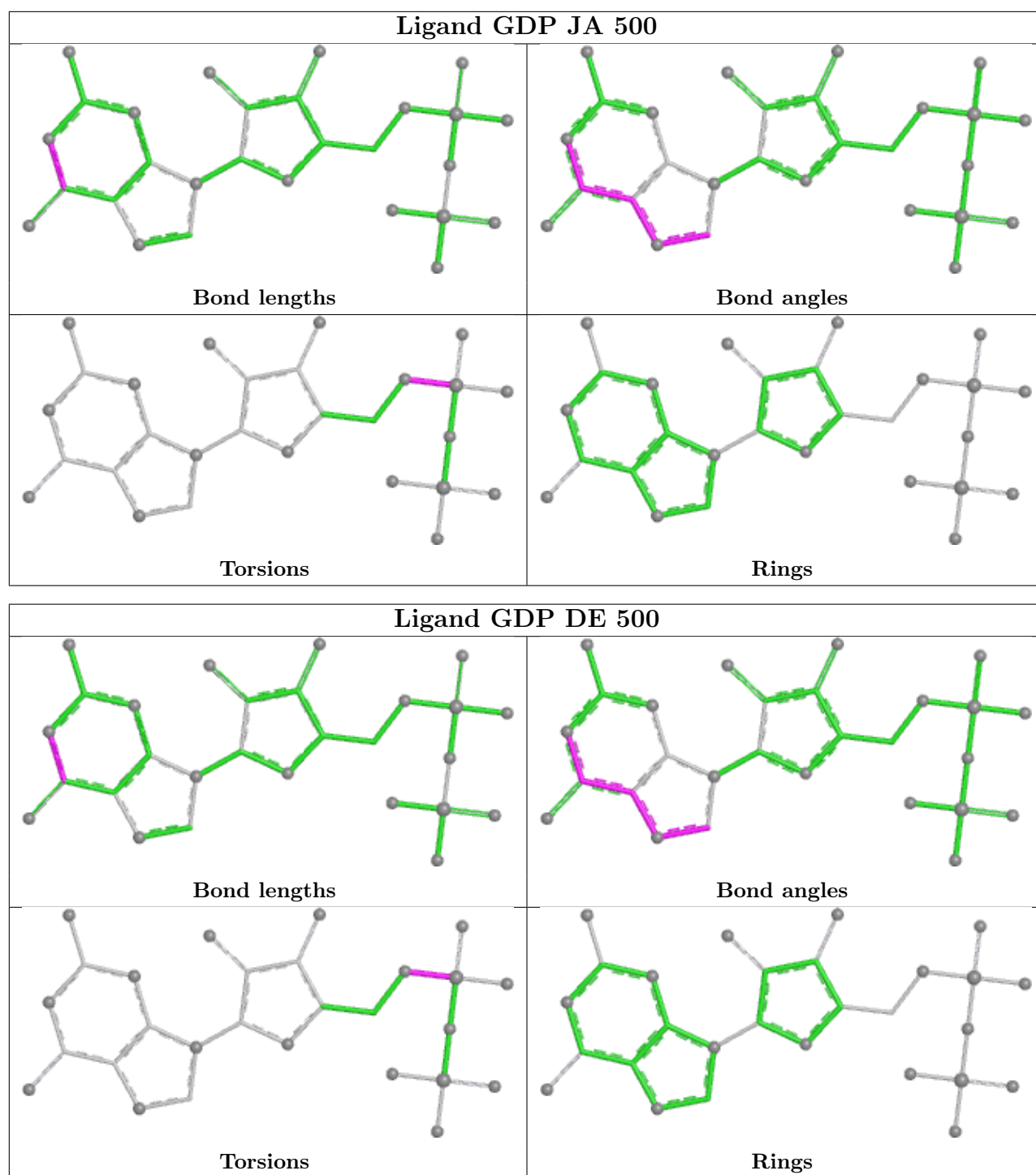






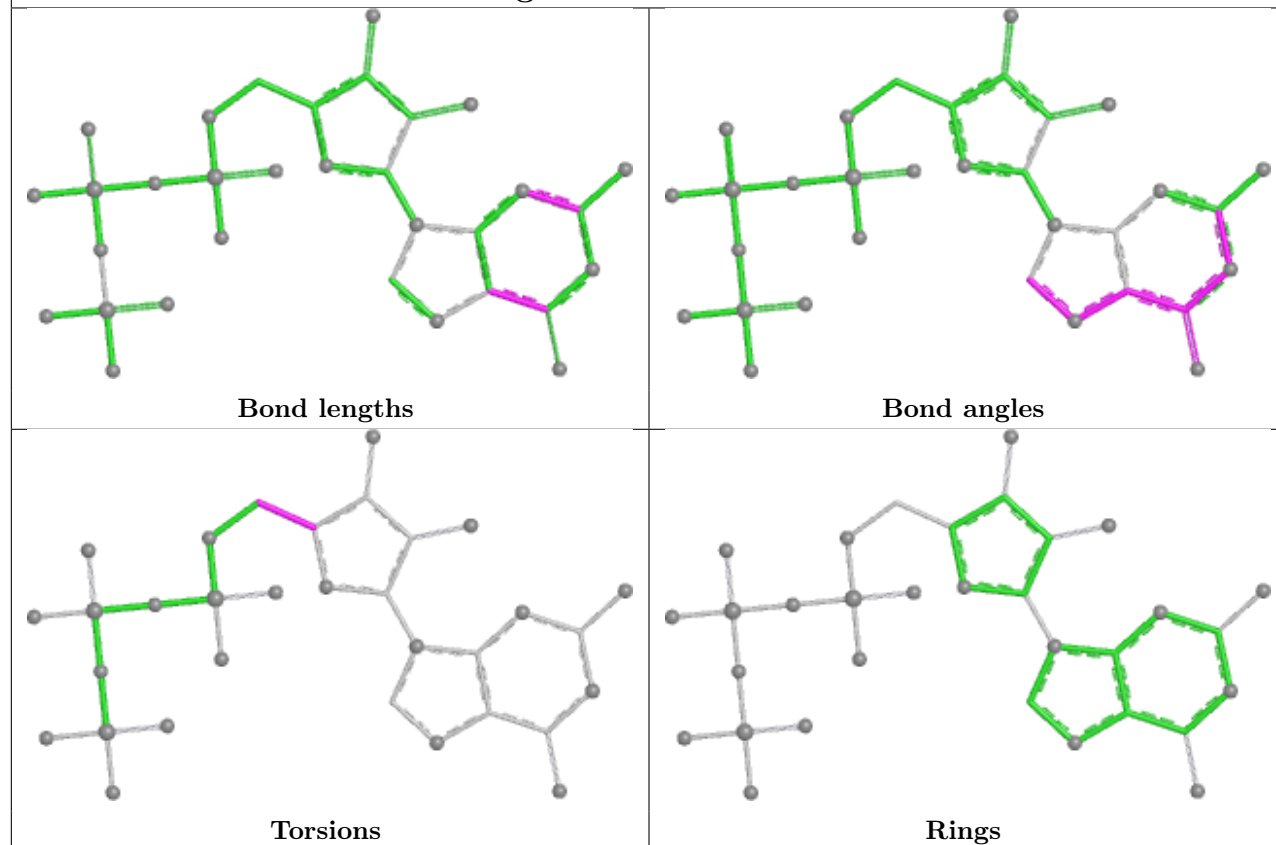




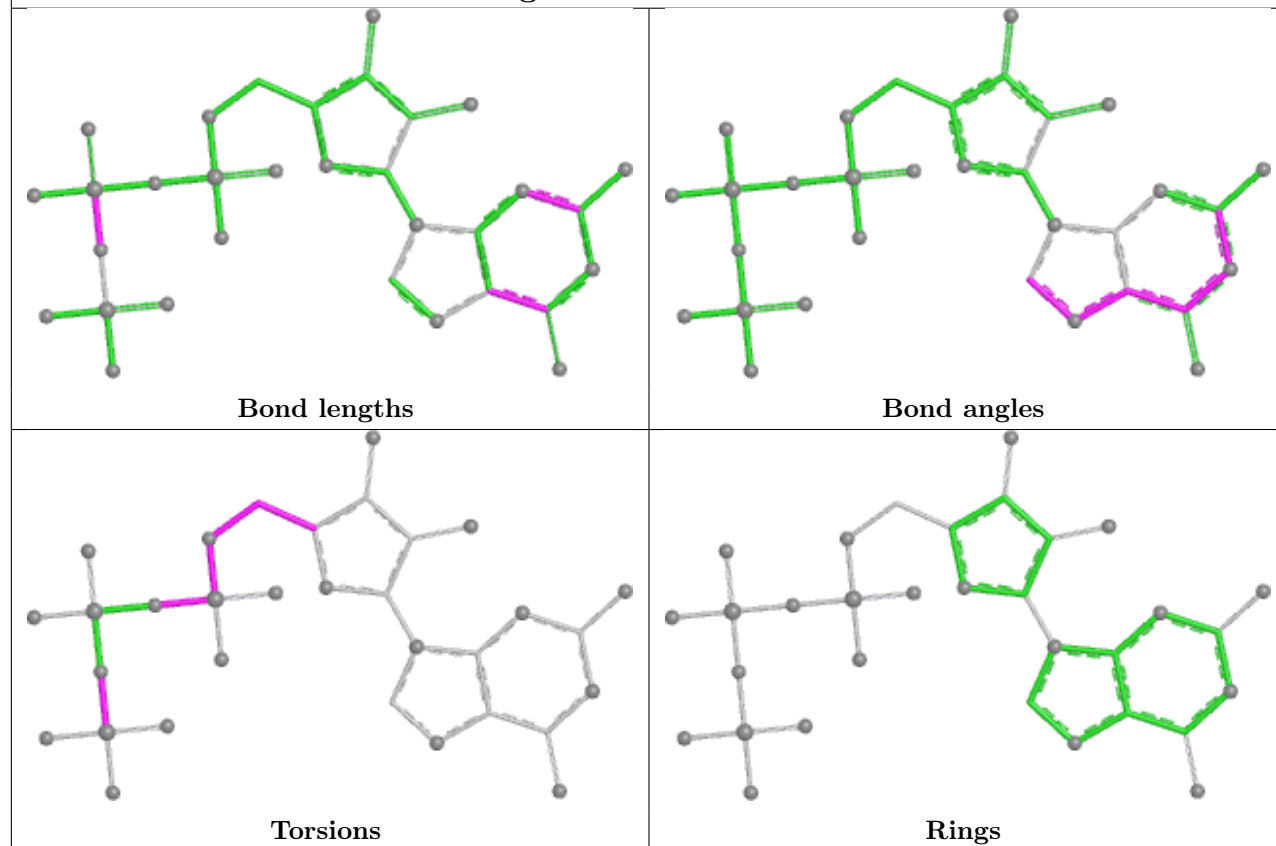




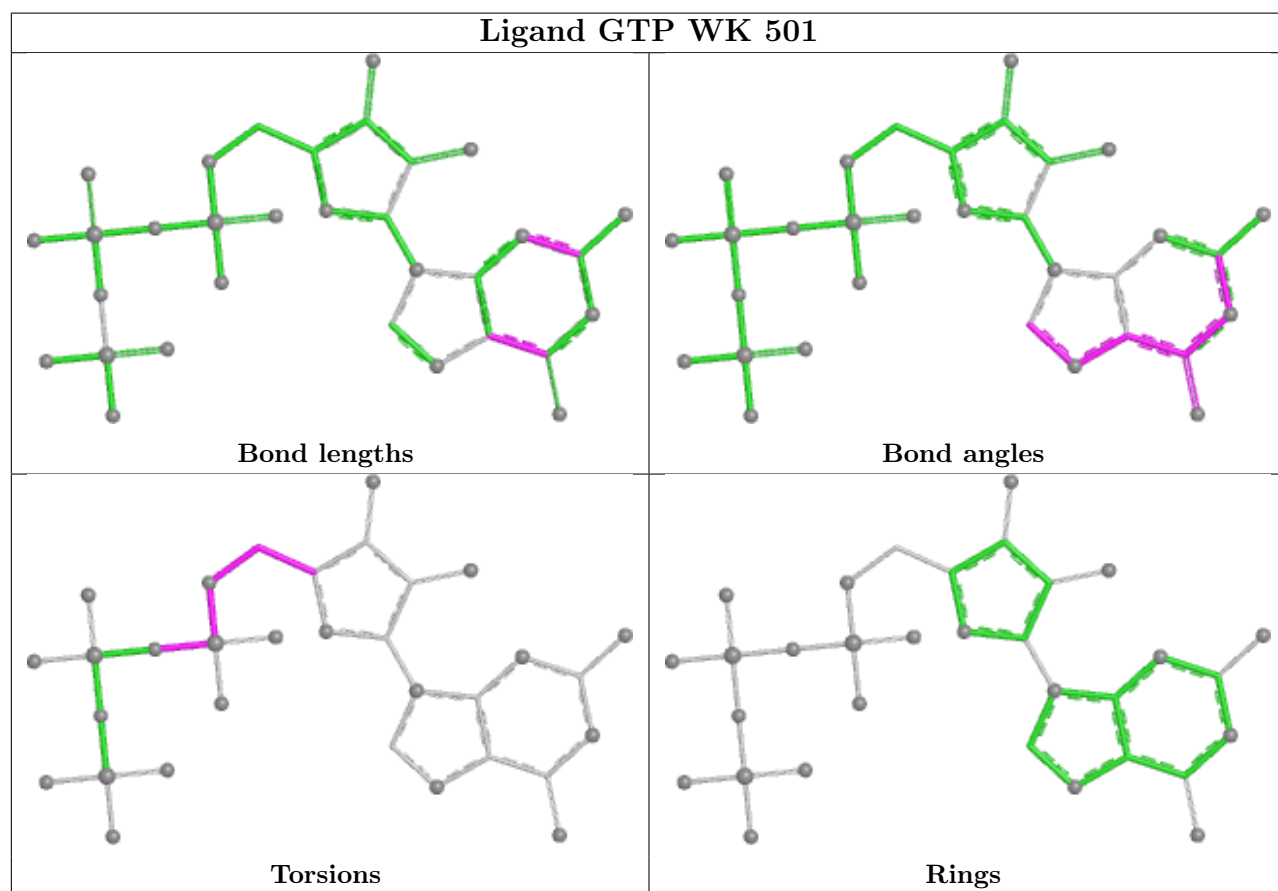
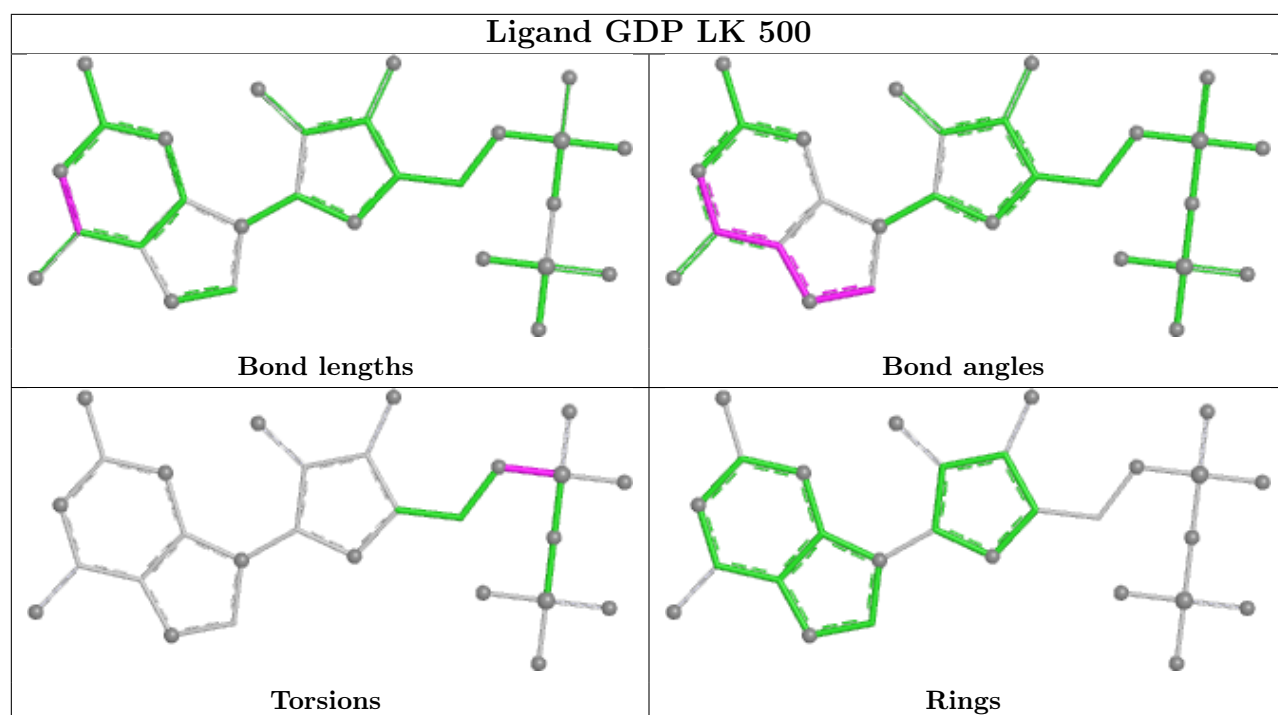
## Ligand GTP RH 501



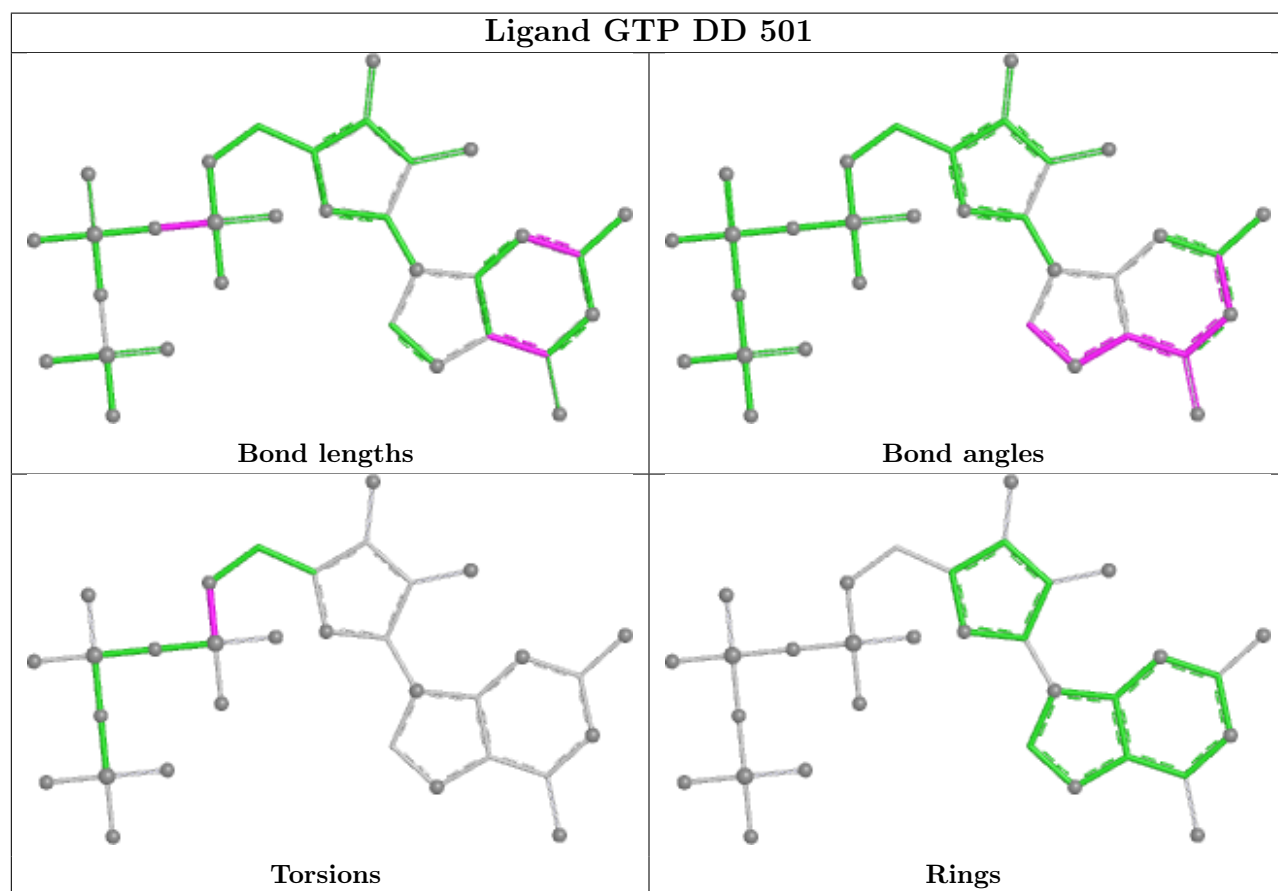
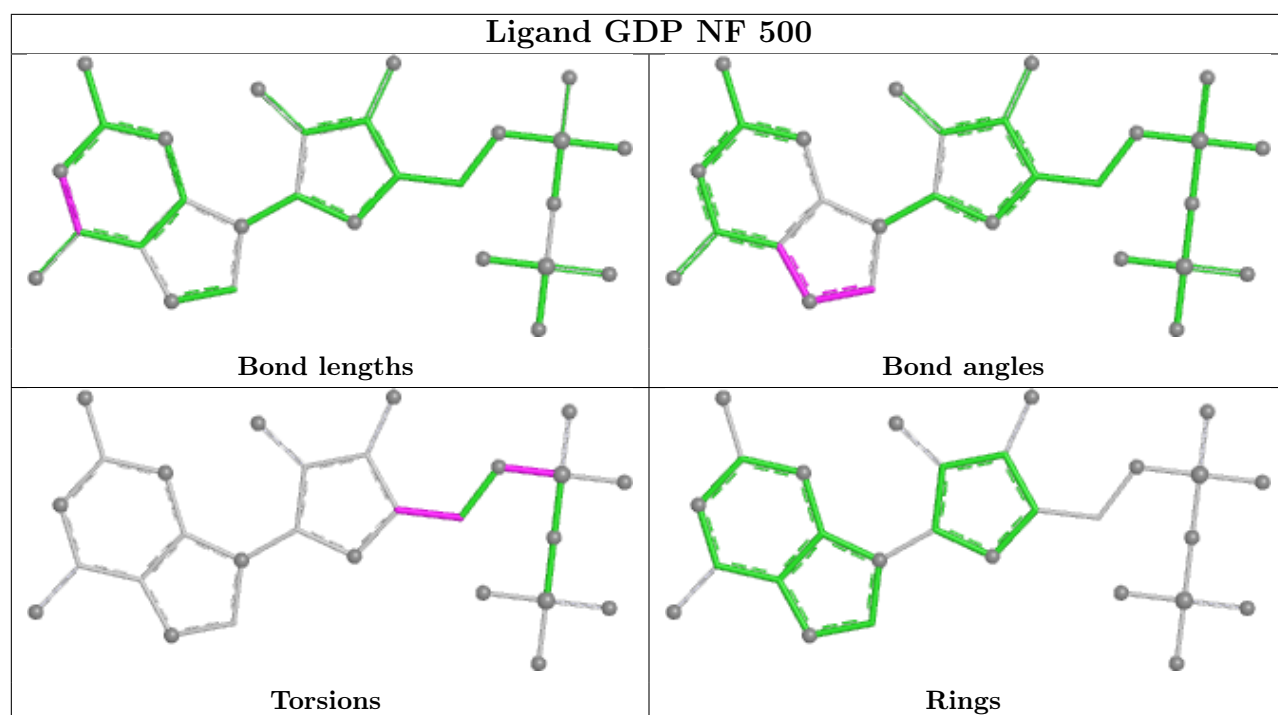
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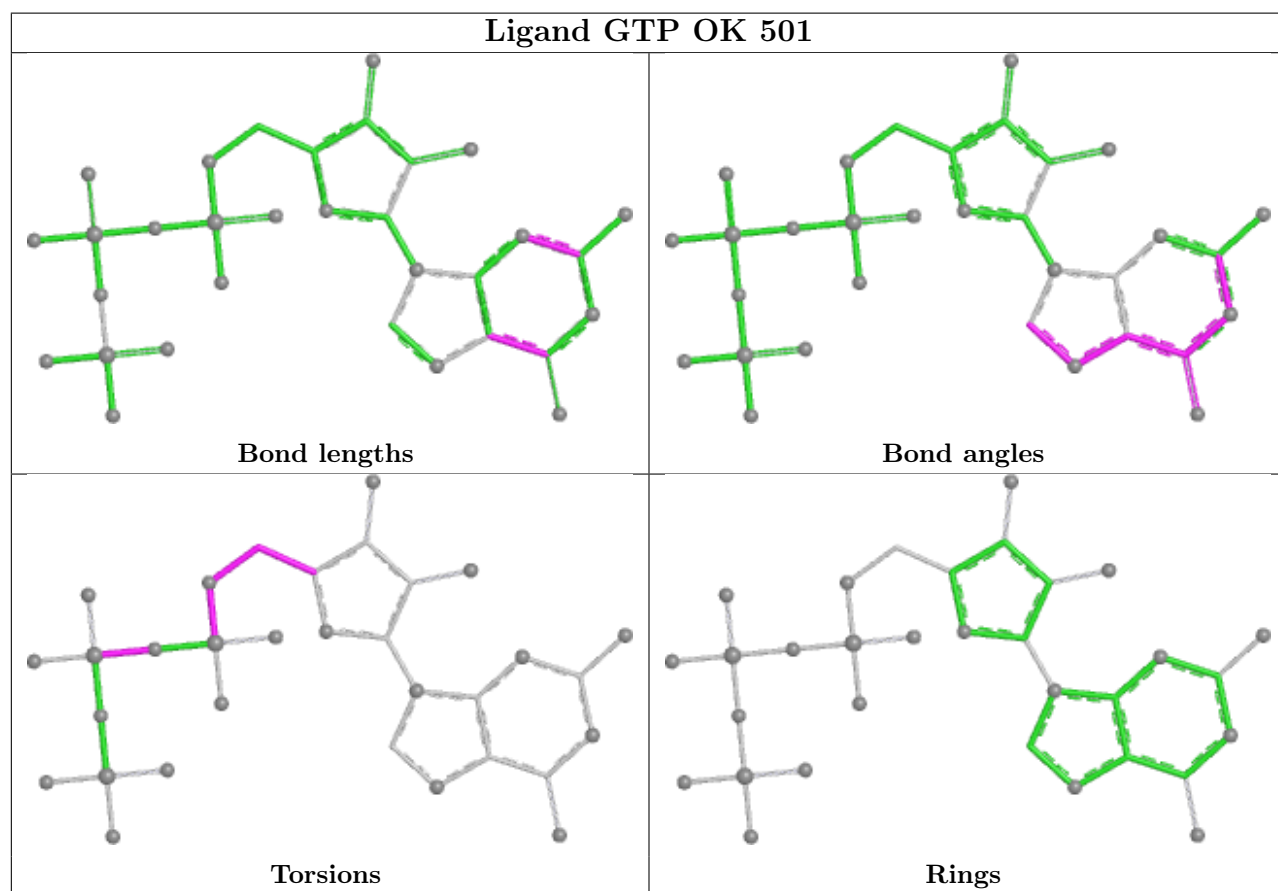
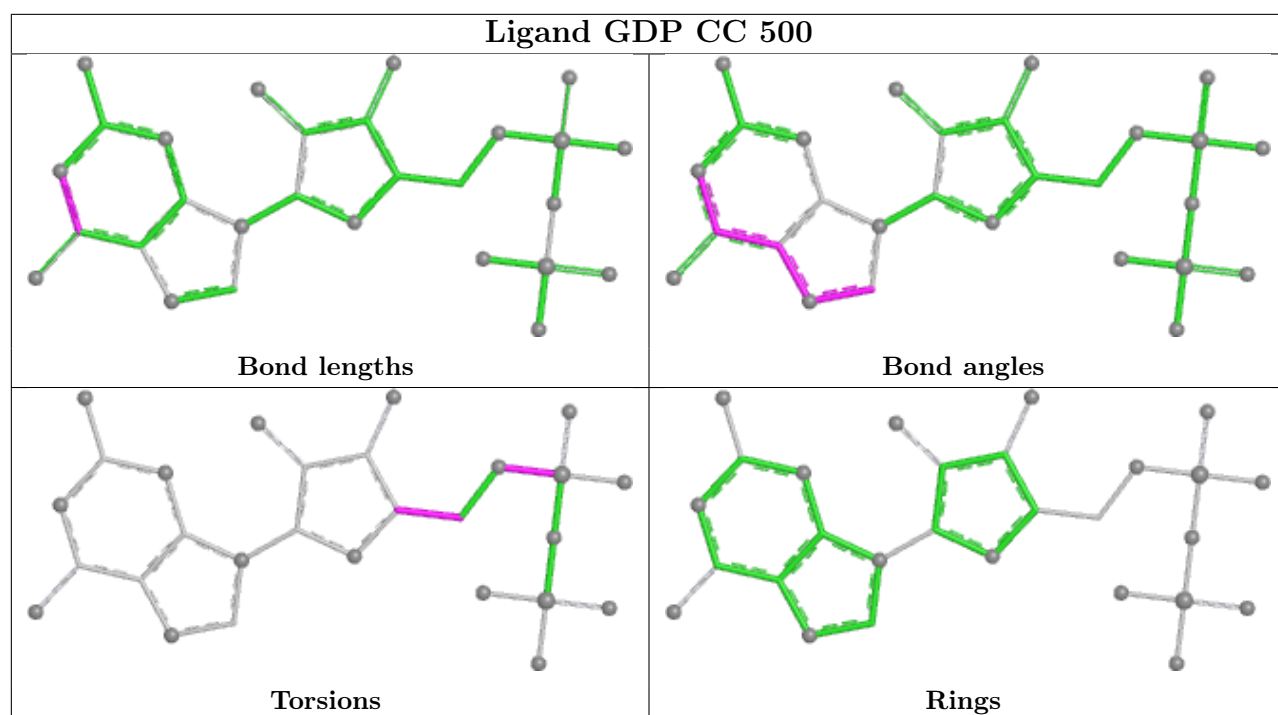




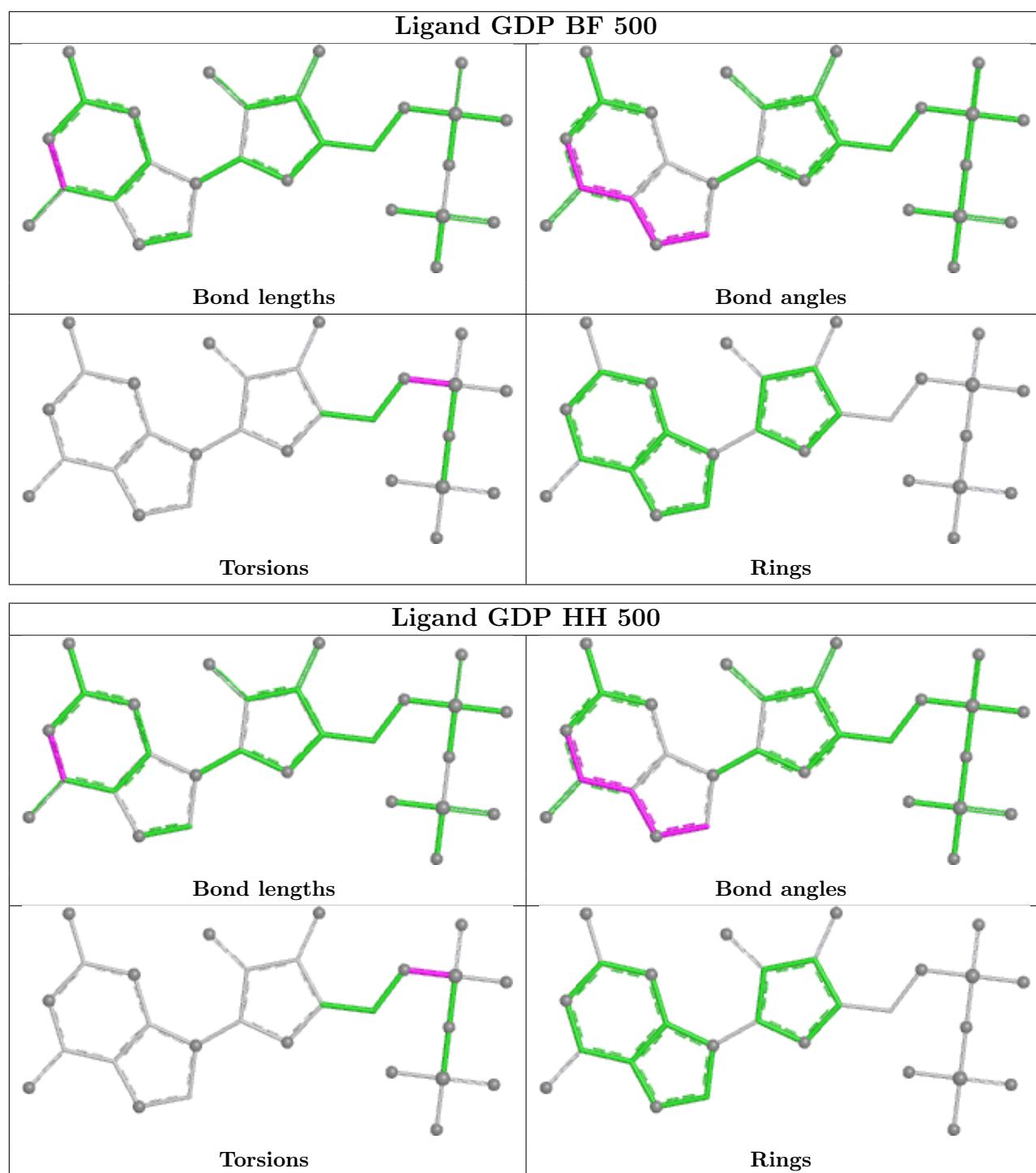






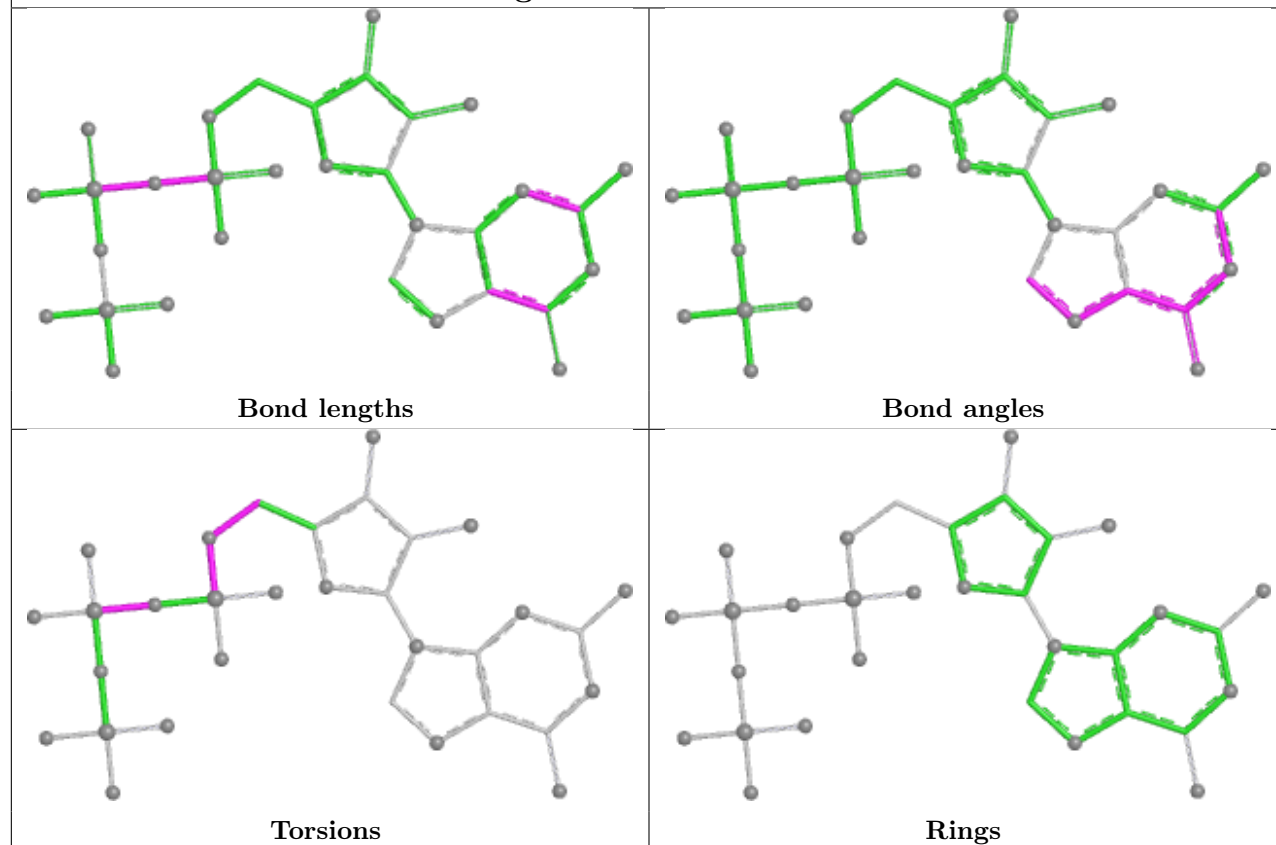




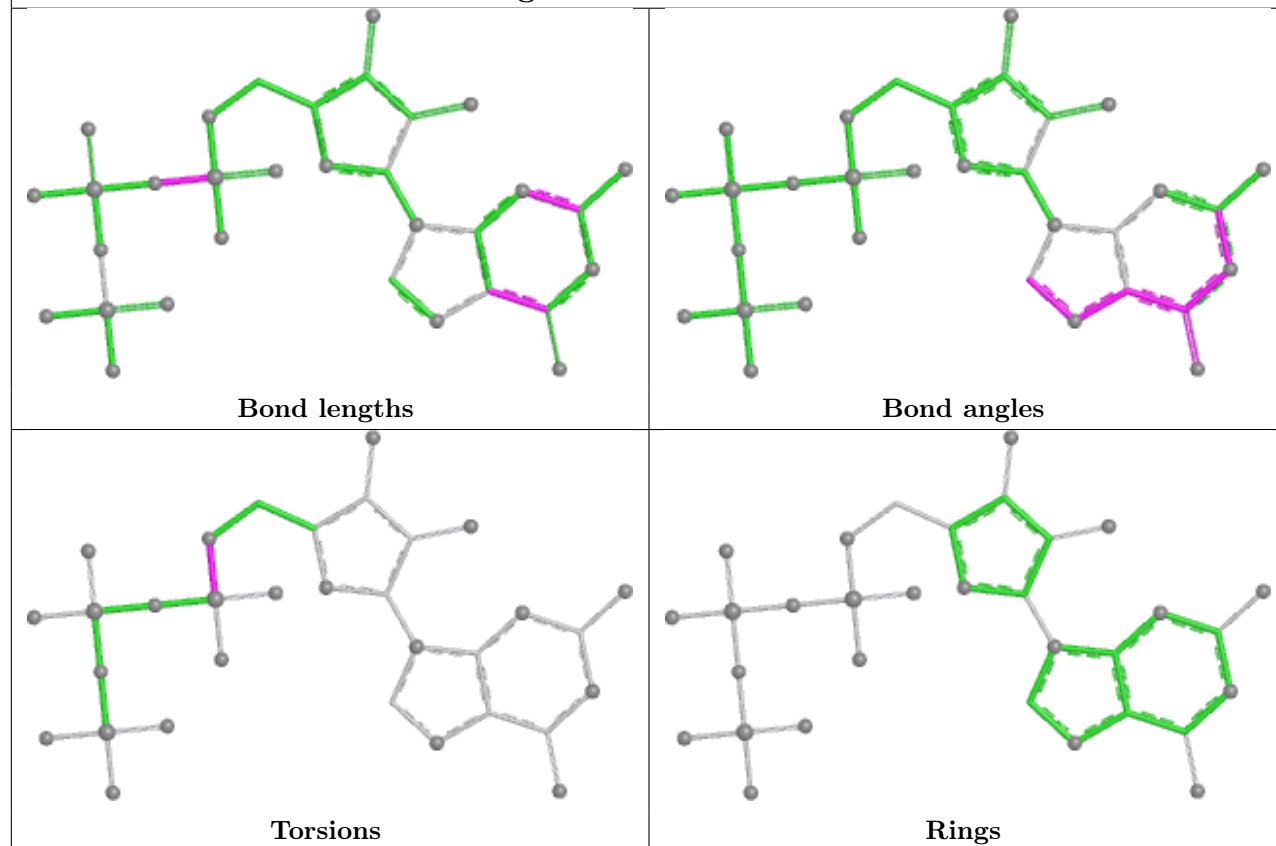




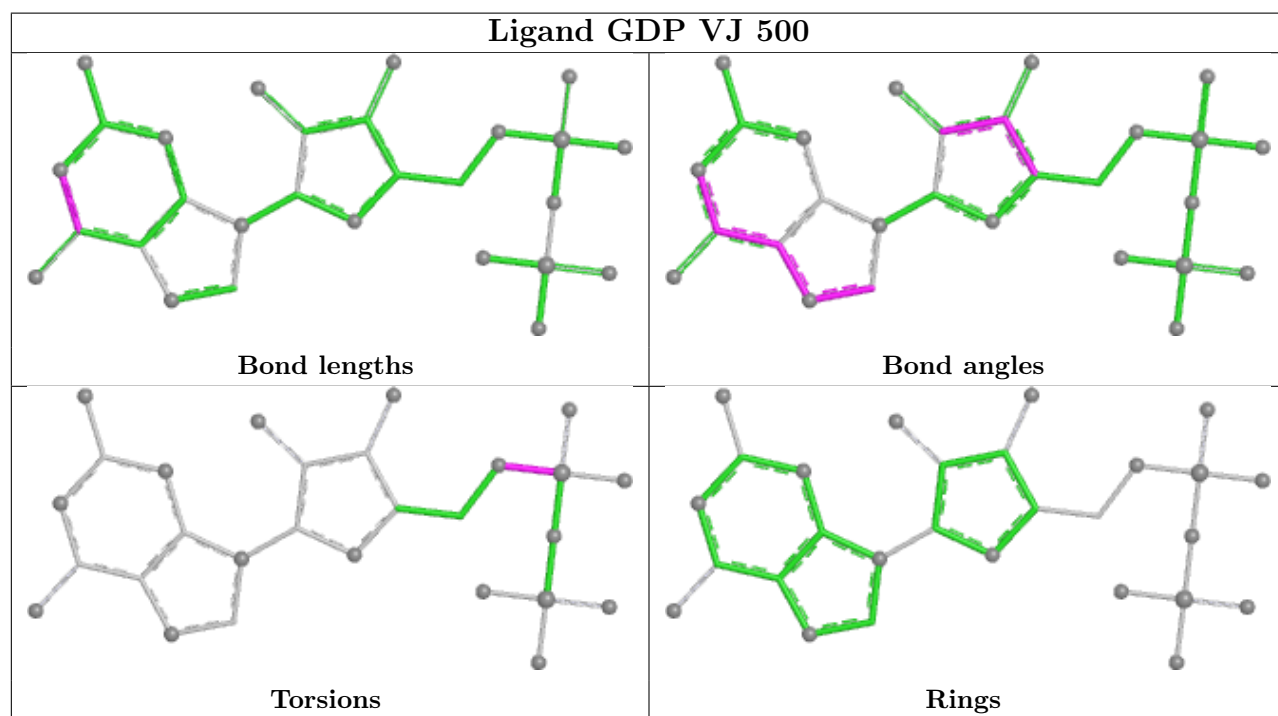
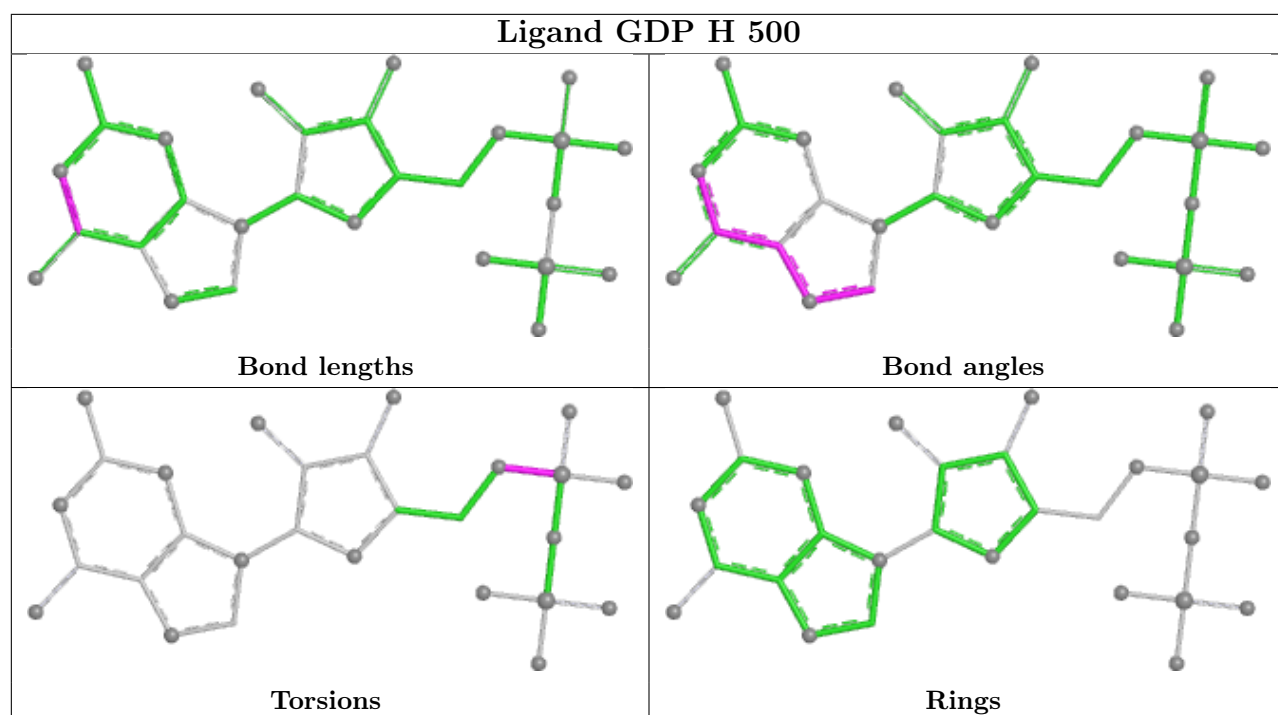
## Ligand GTP ME 501



## Ligand GTP RB 501

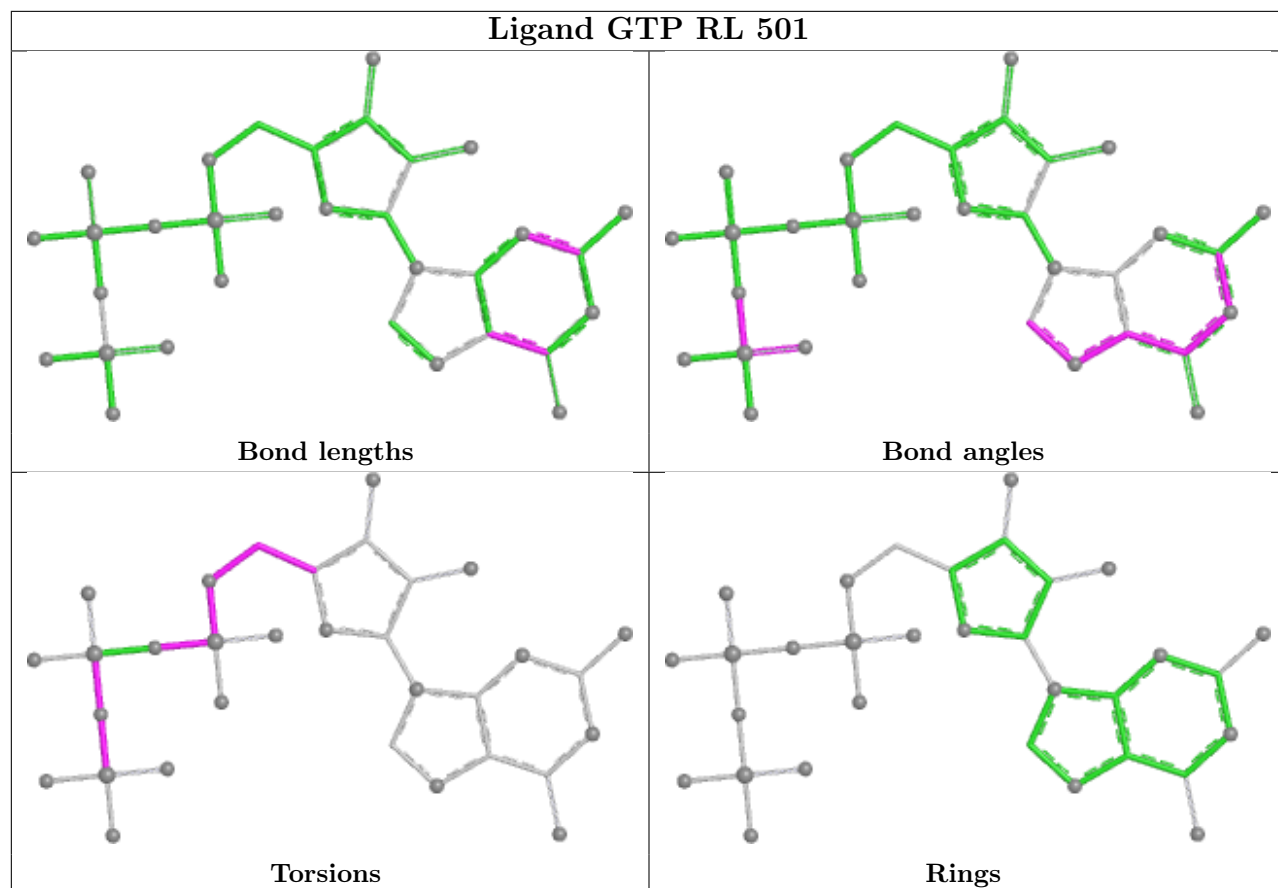




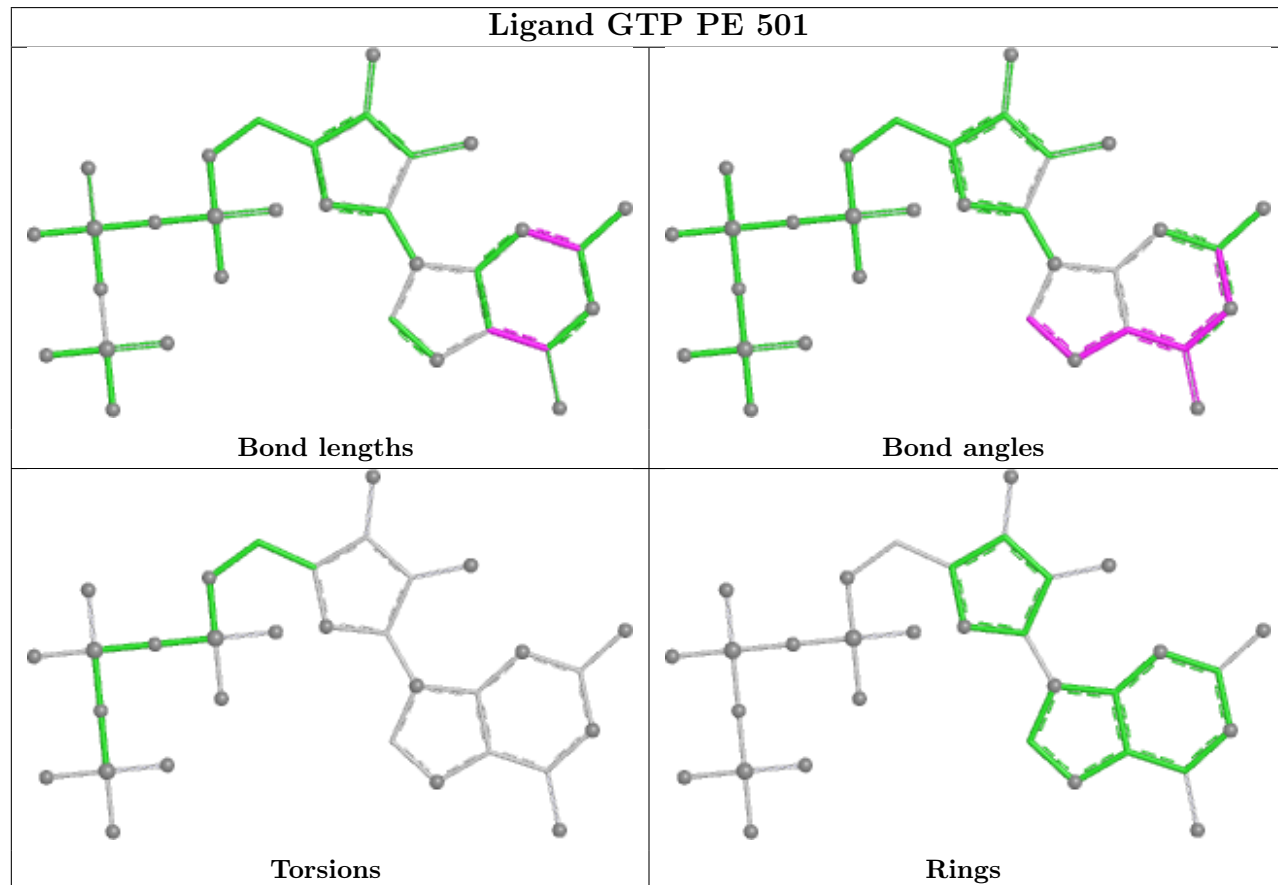




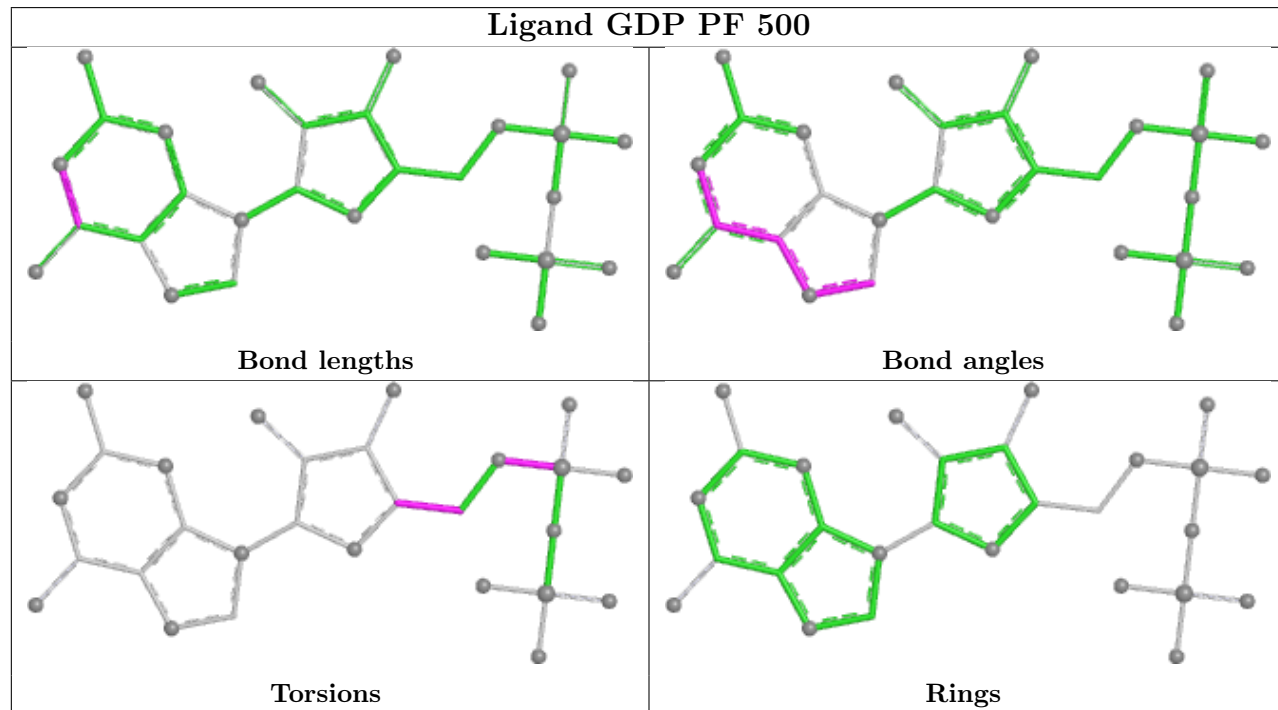
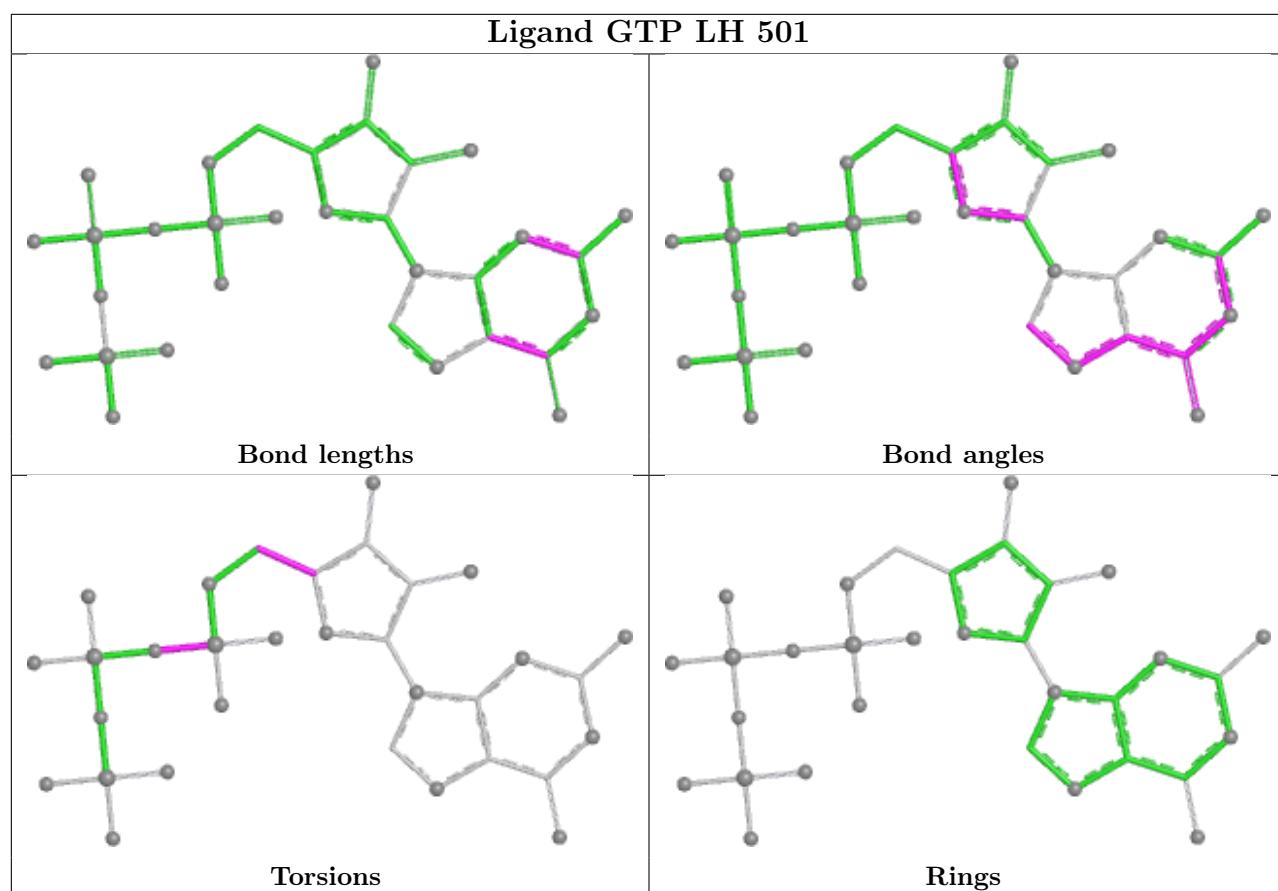
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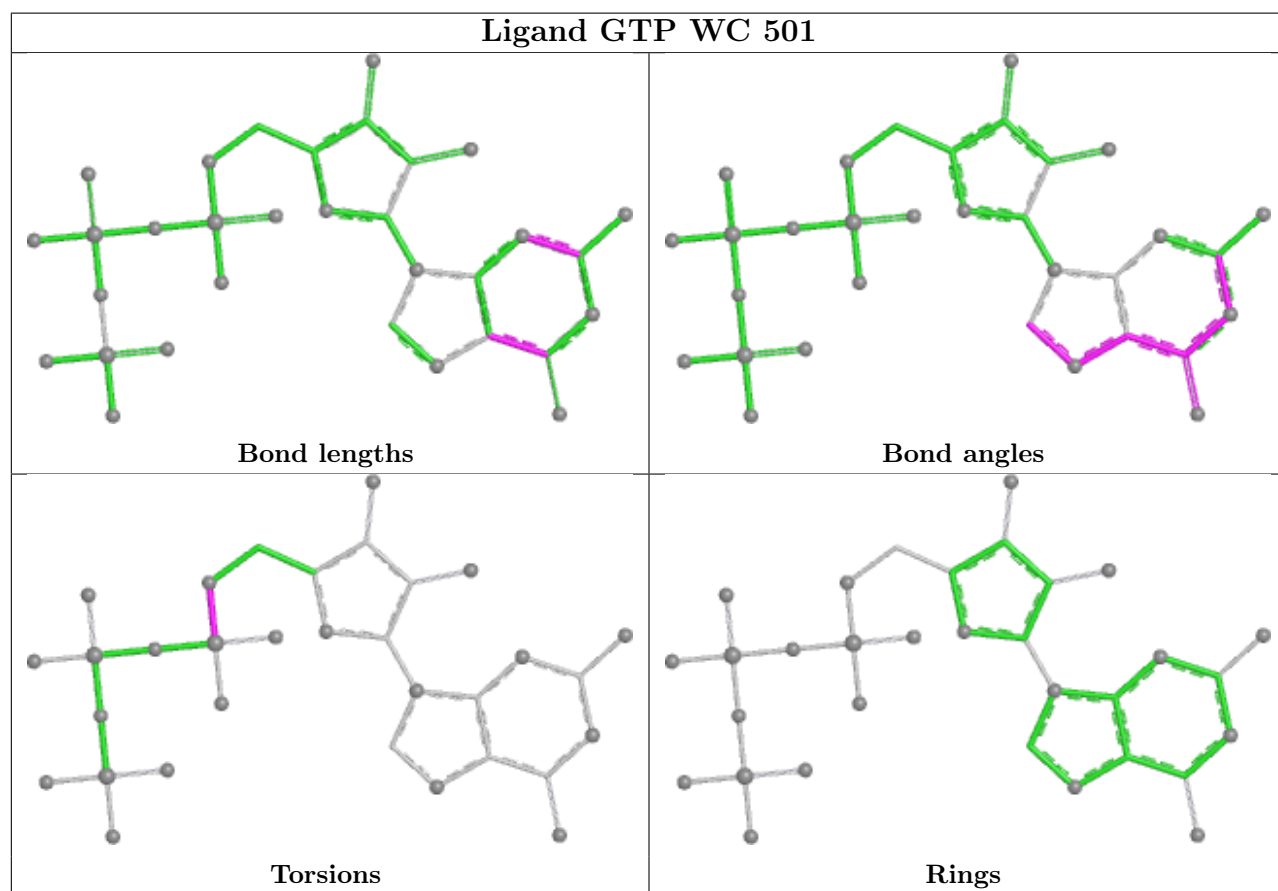
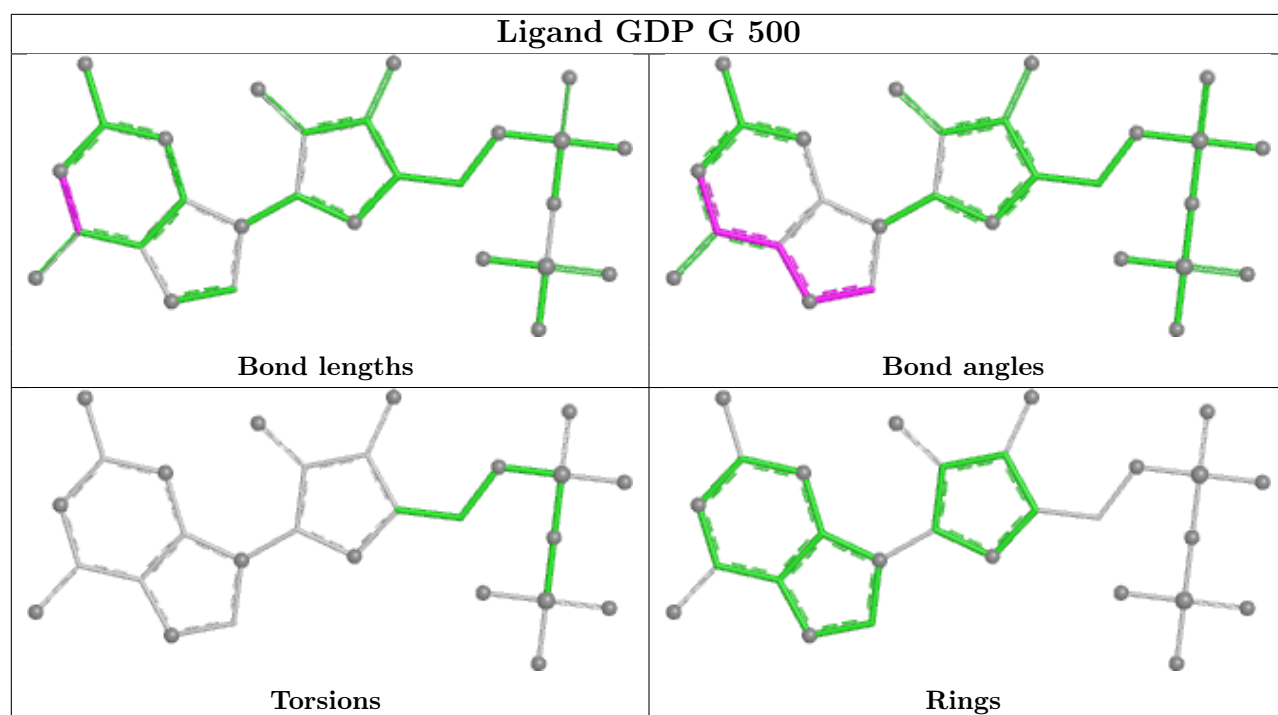
## Ligand GTP PE 501



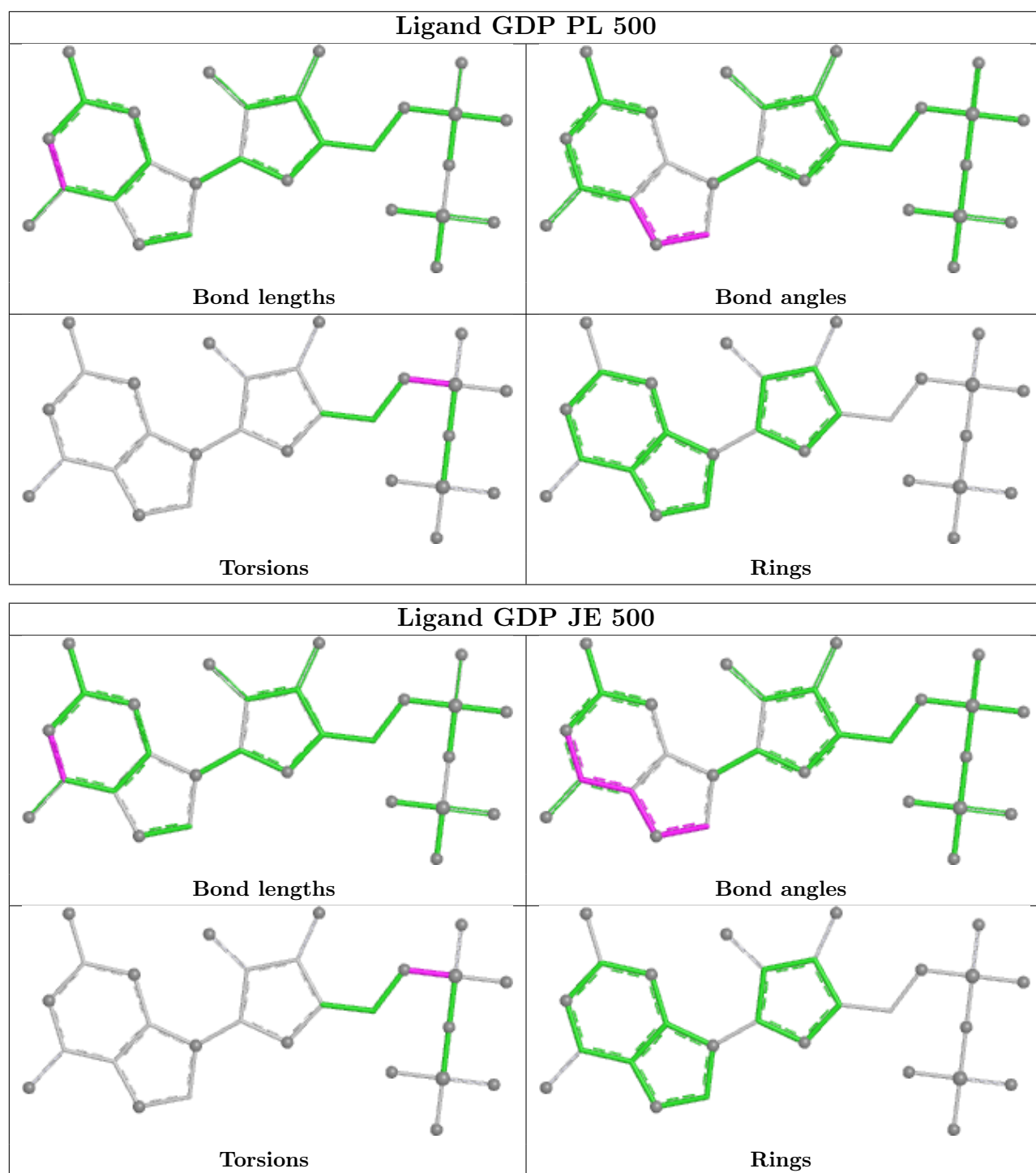




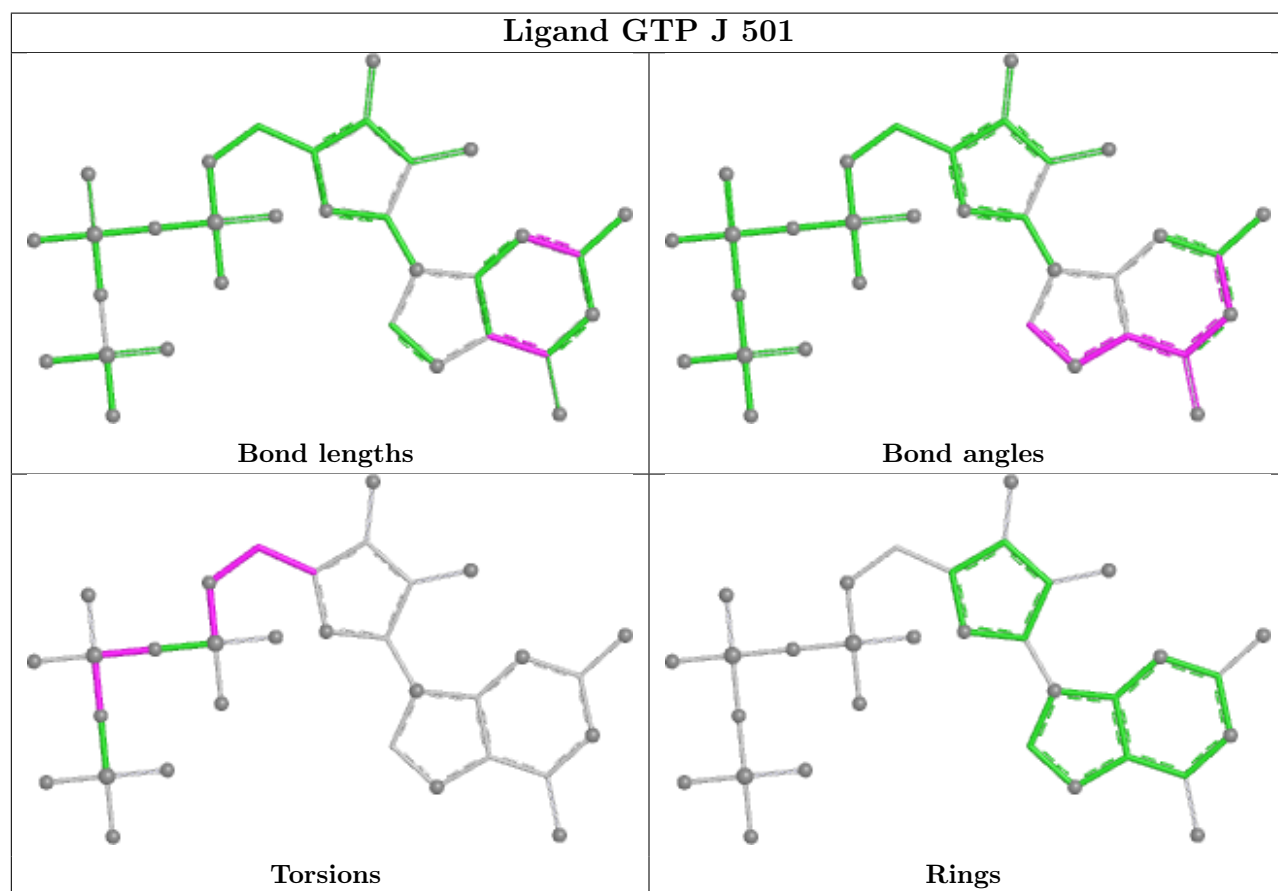
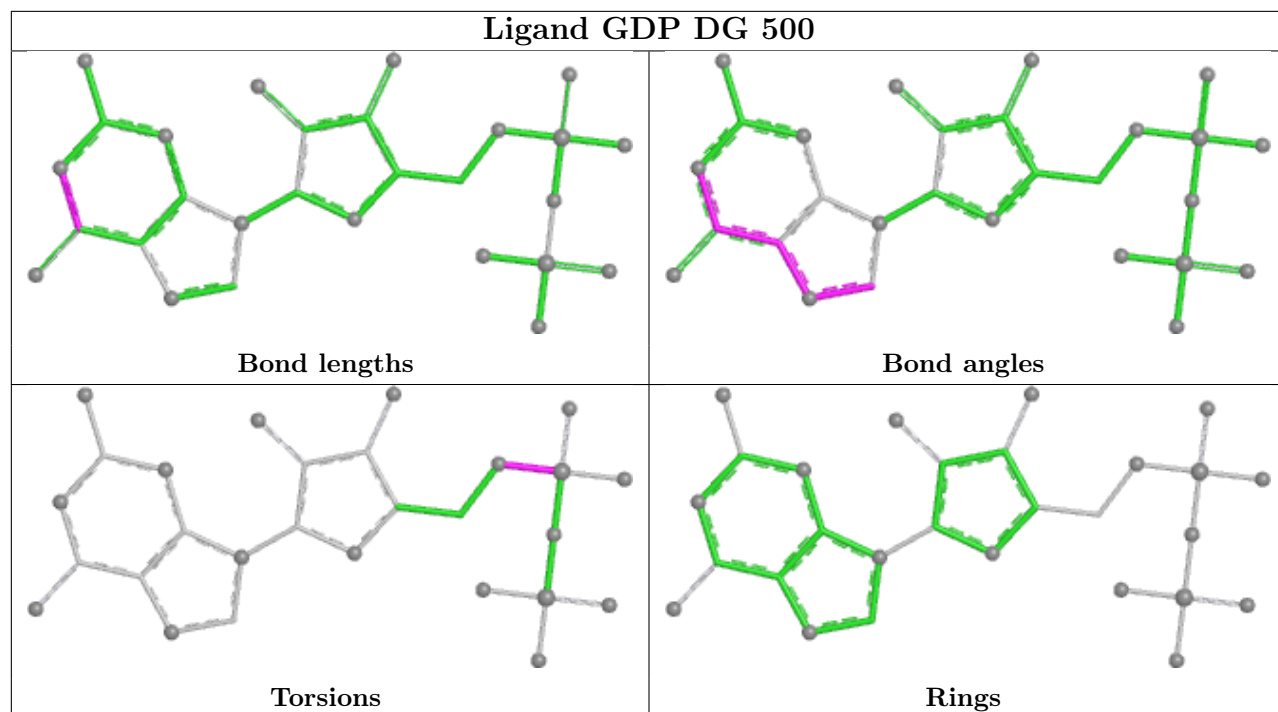




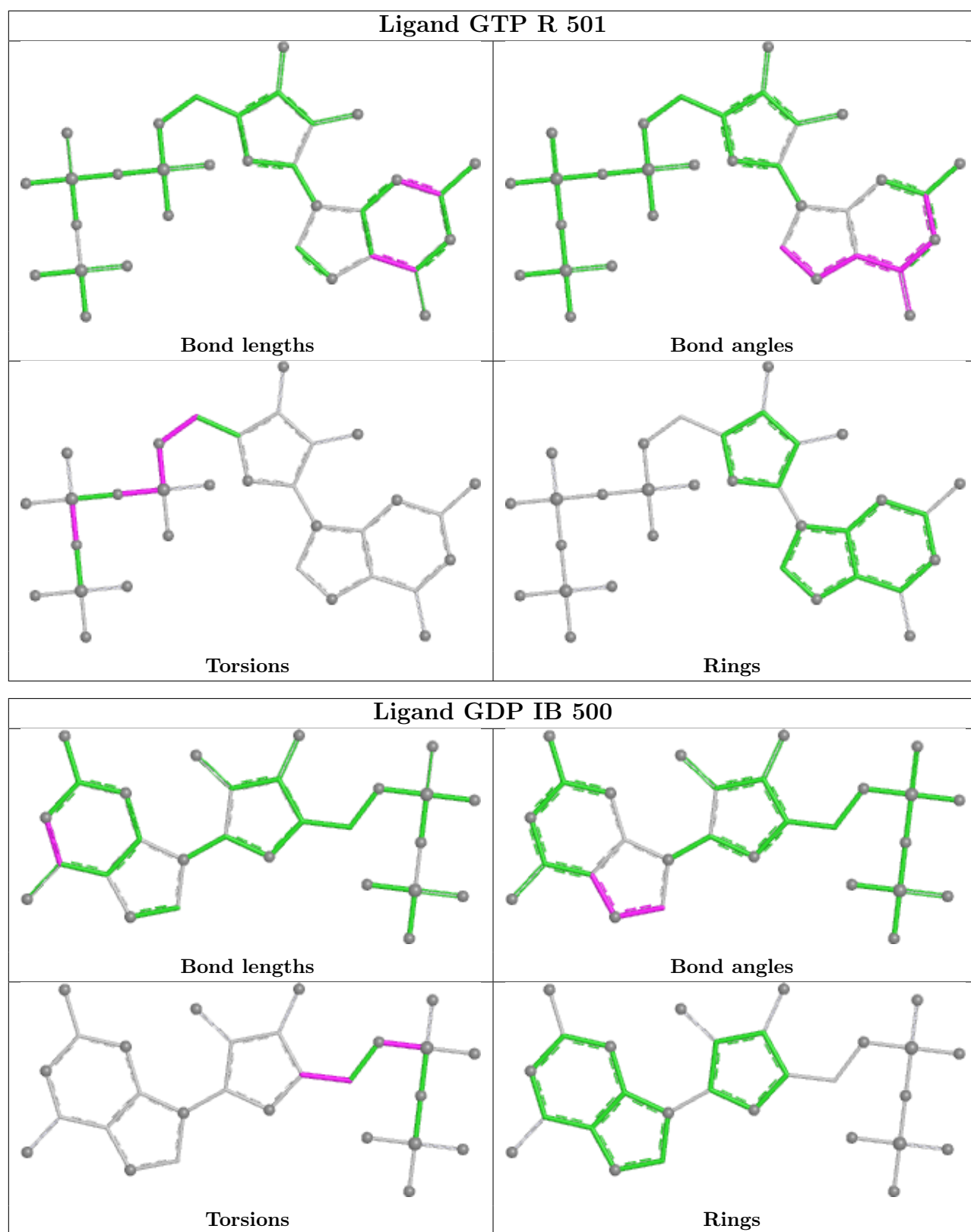






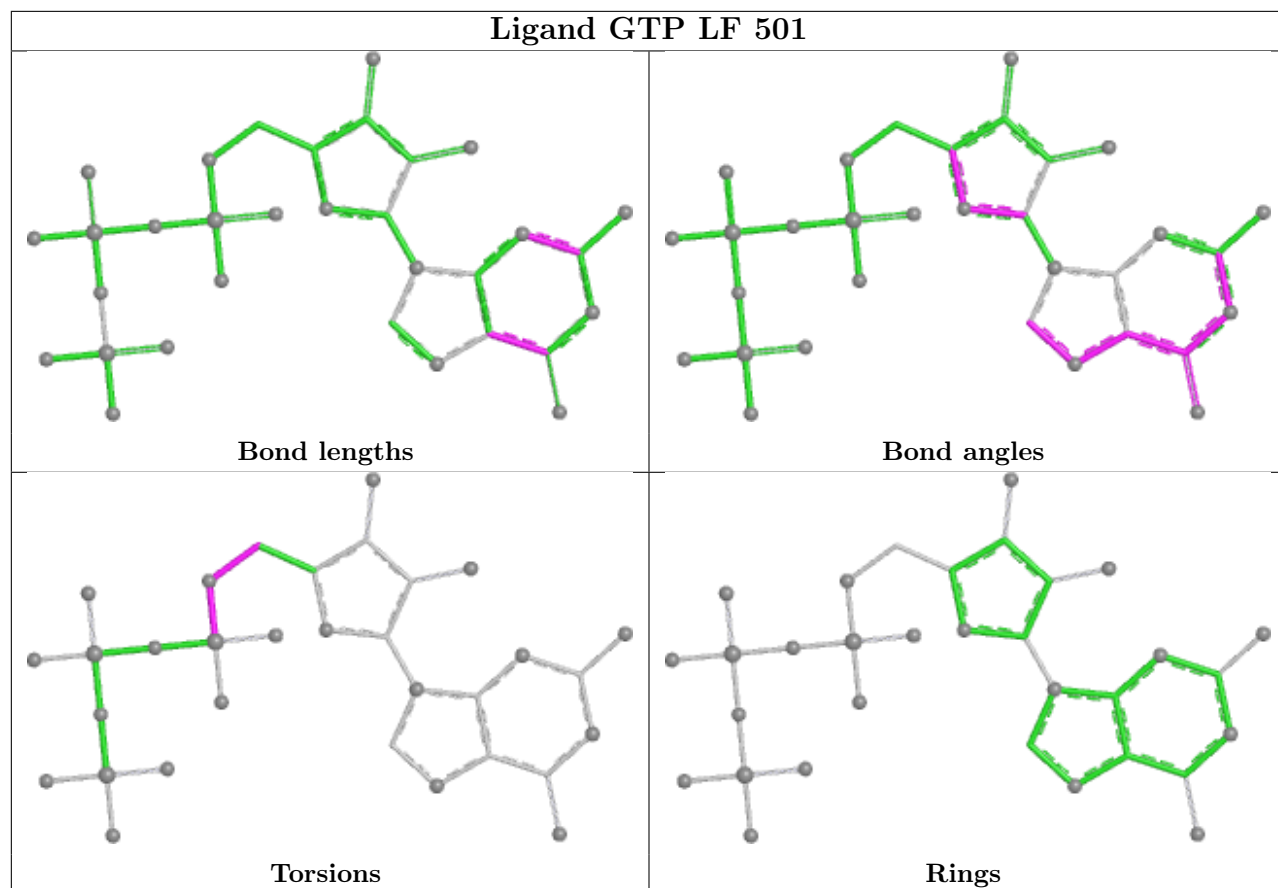




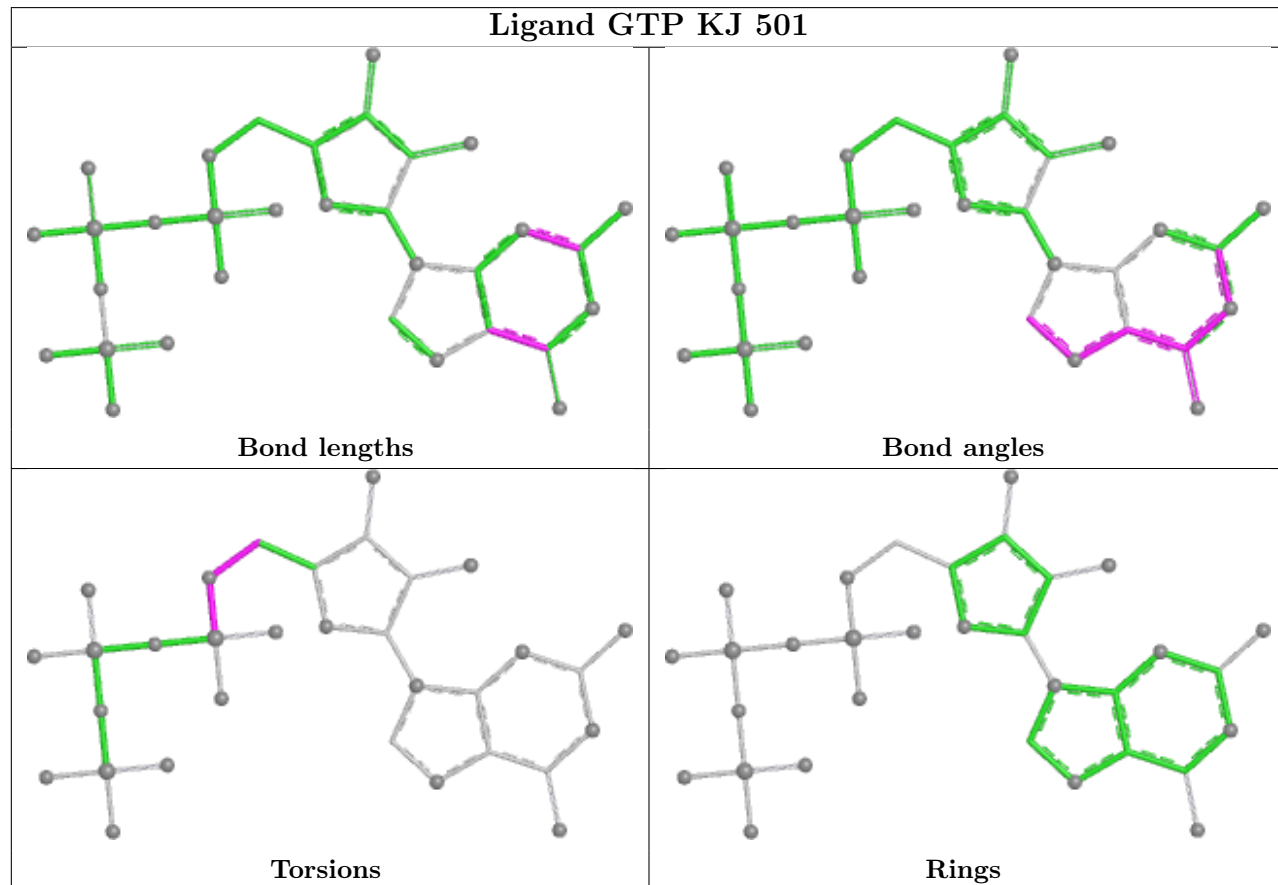




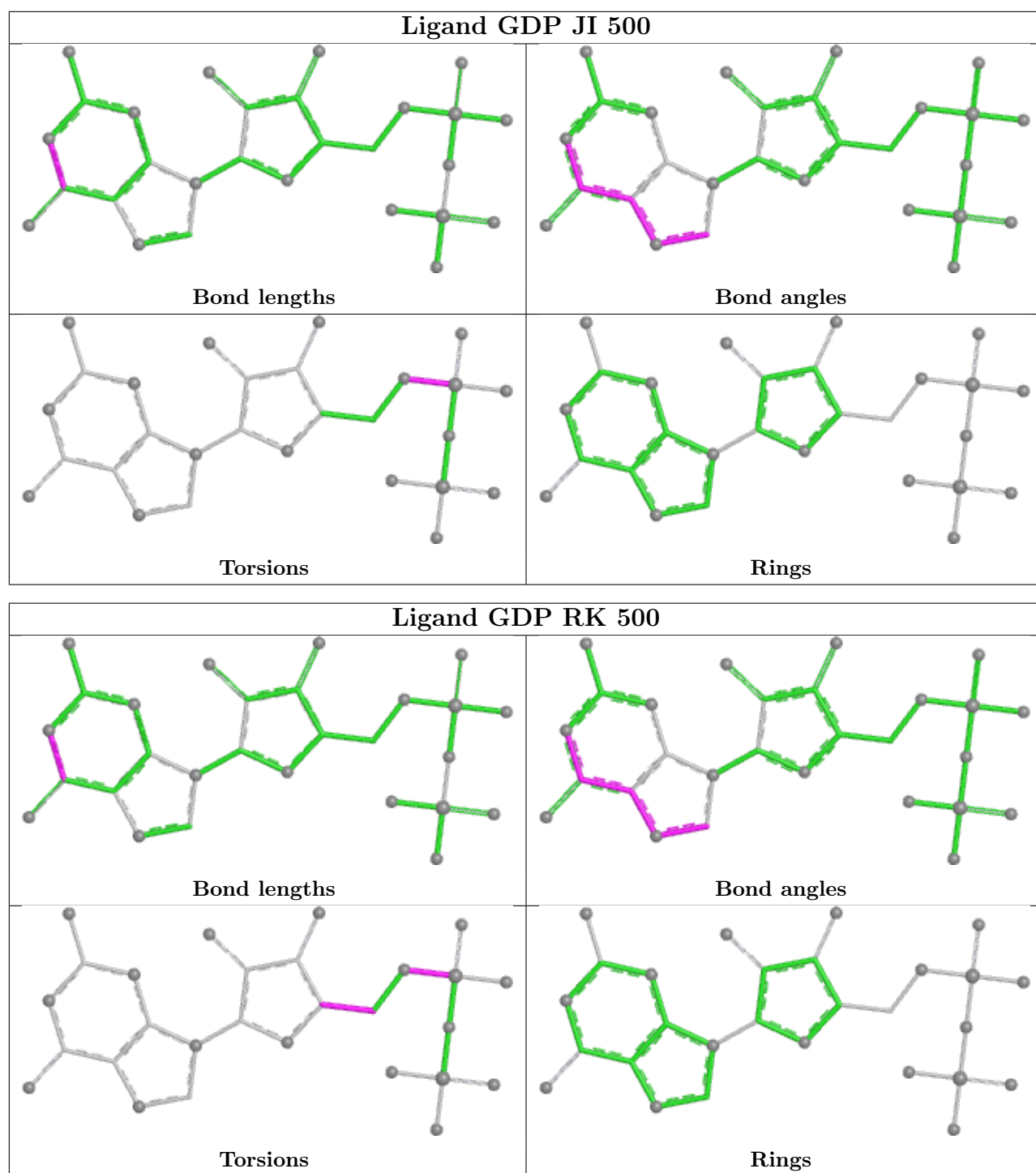
## Ligand GTP LF 501



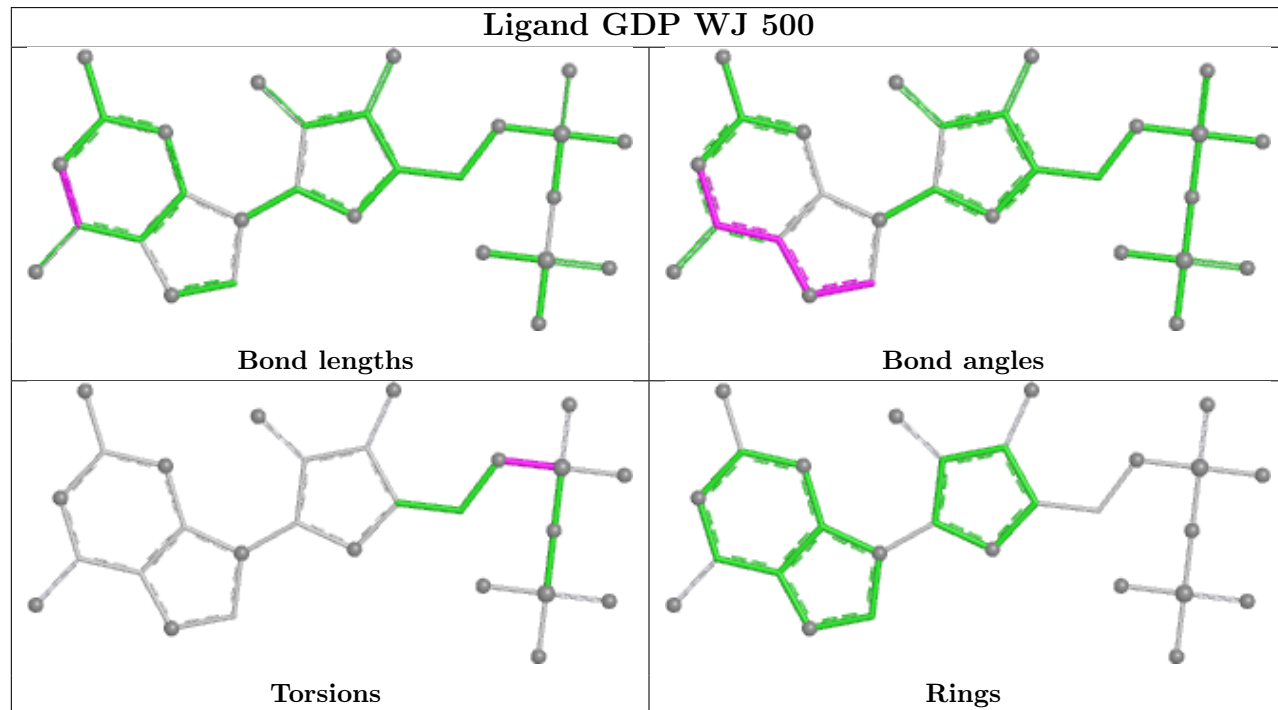
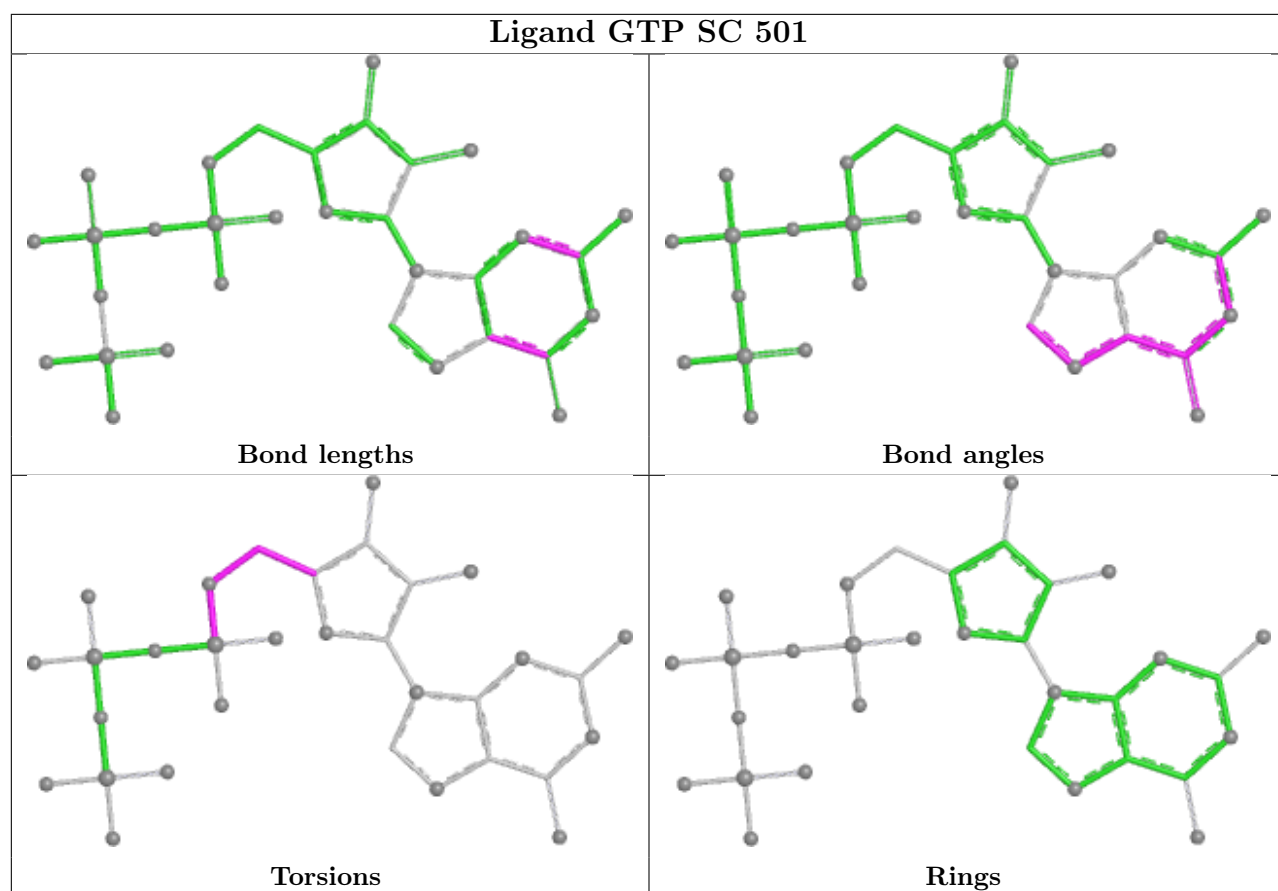
## Ligand GTP KJ 501



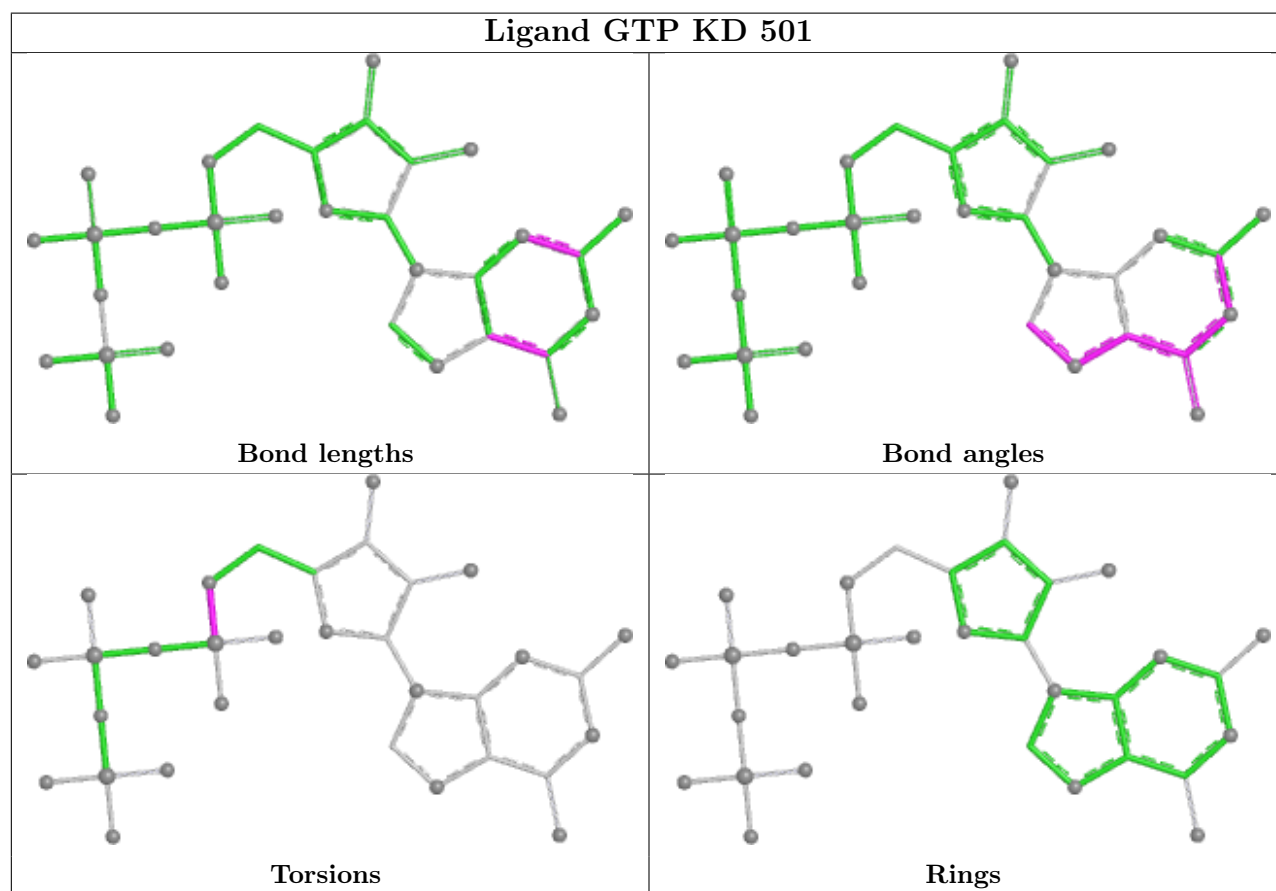
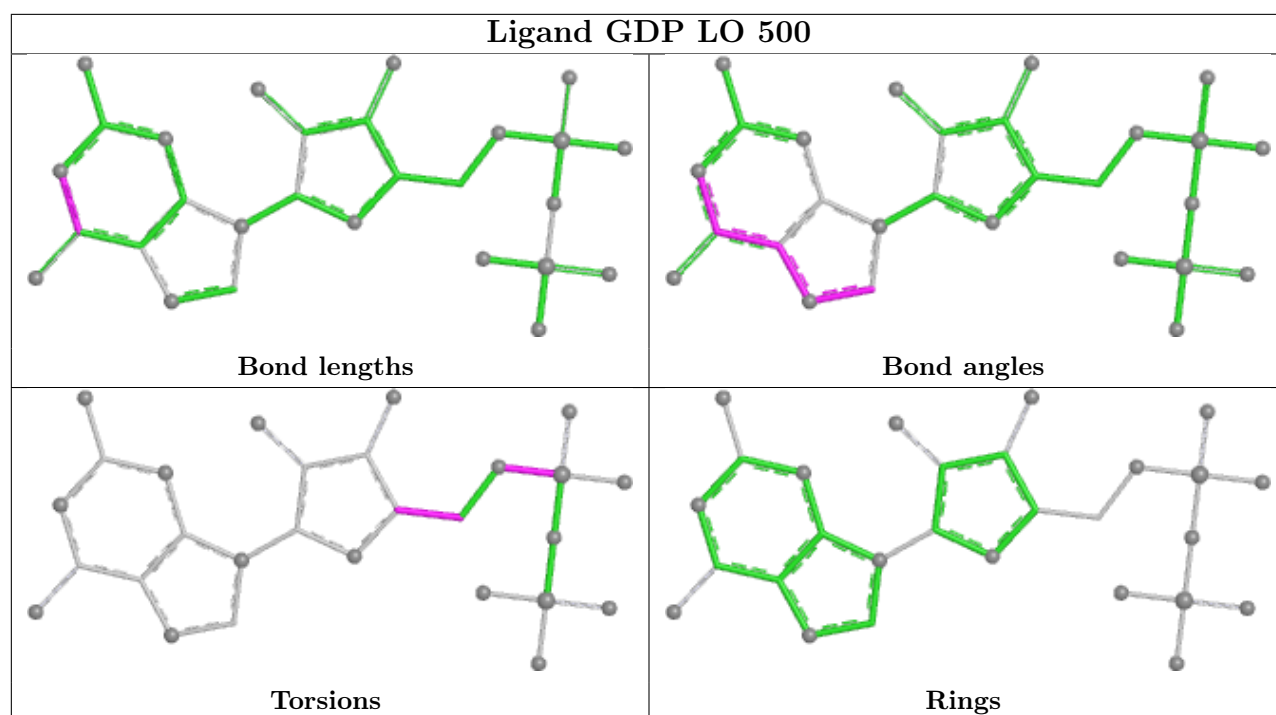




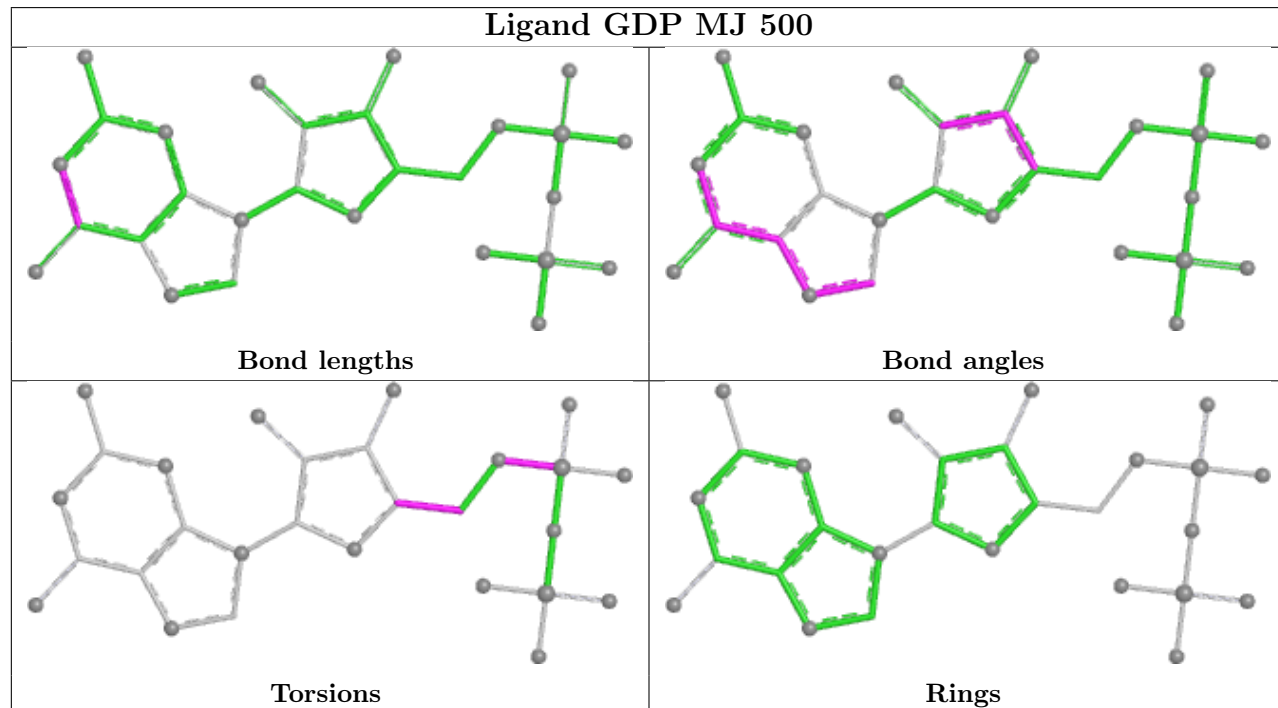
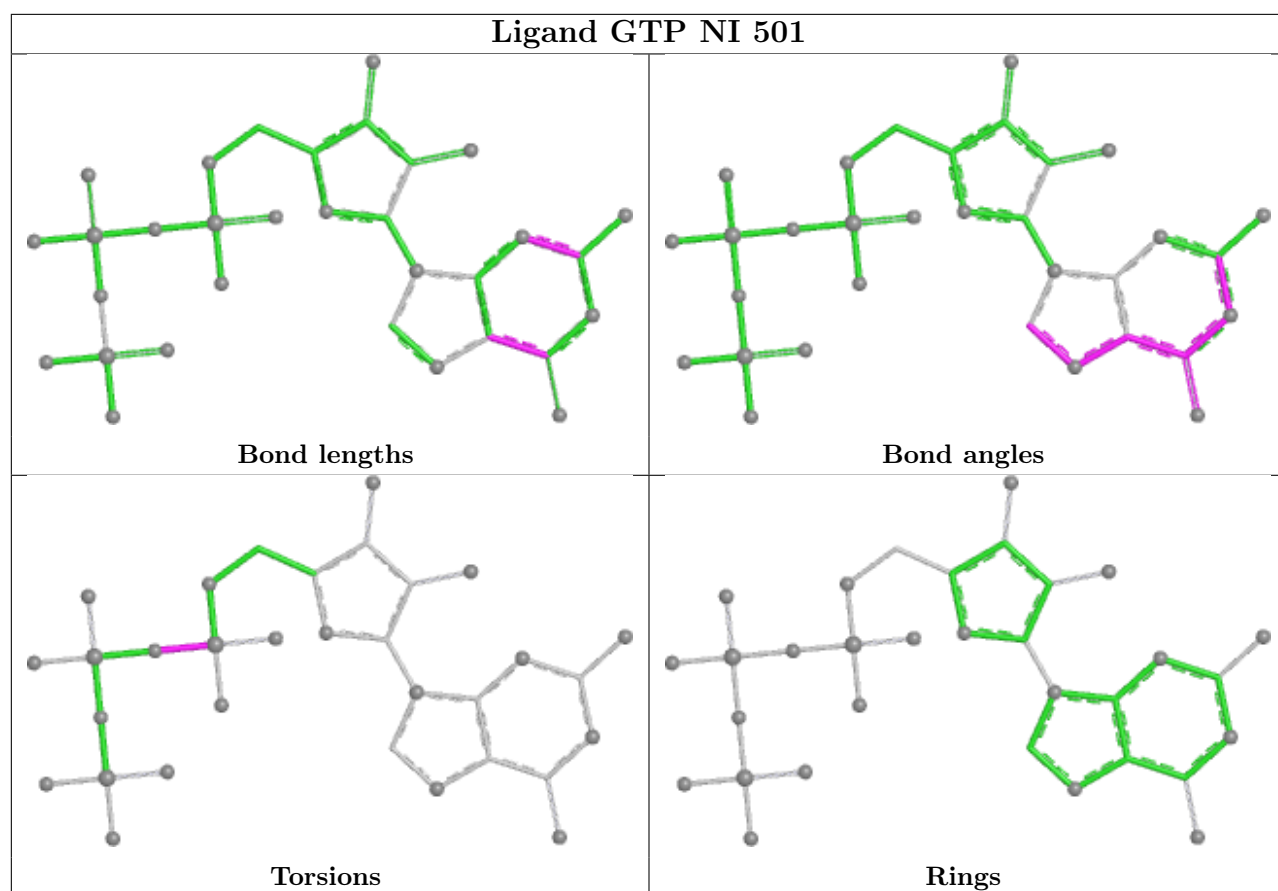




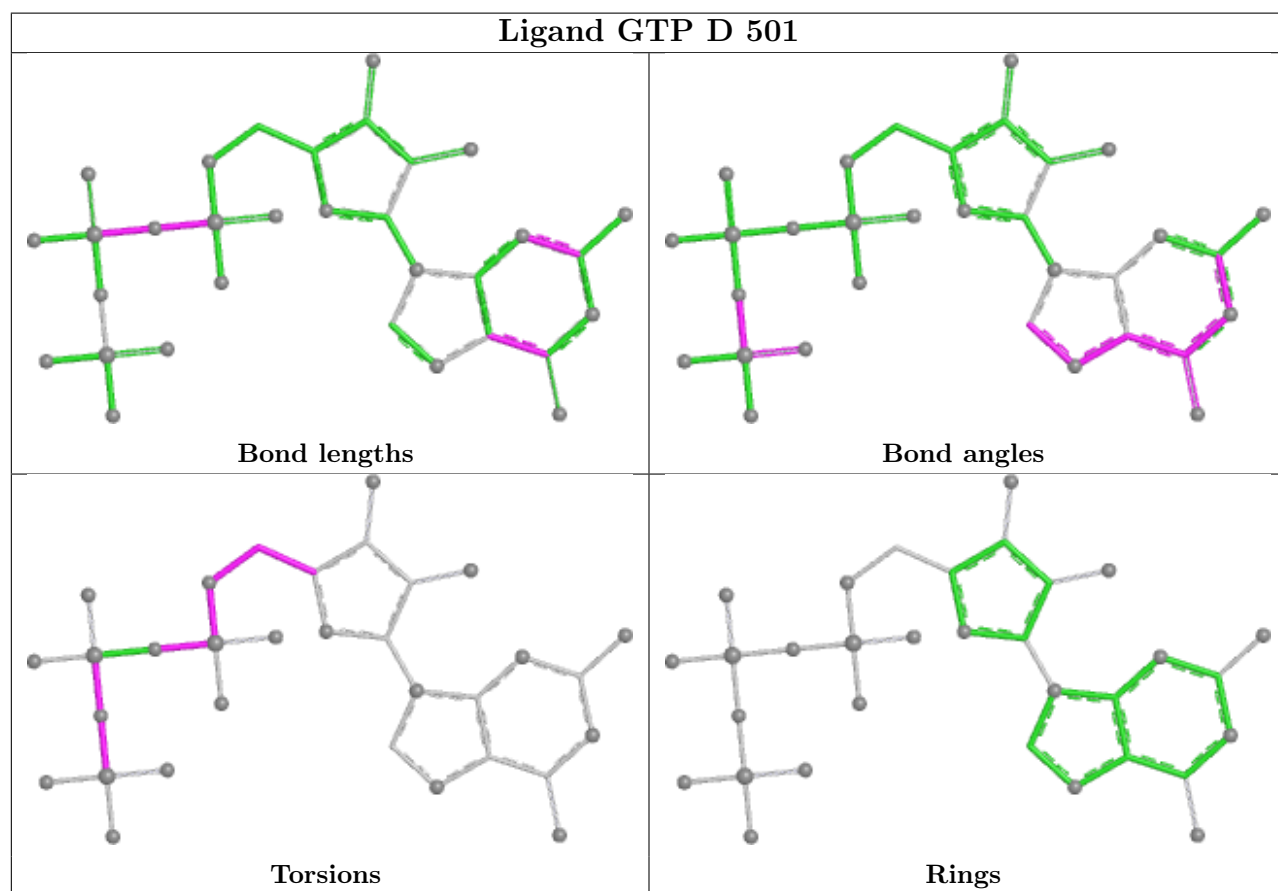
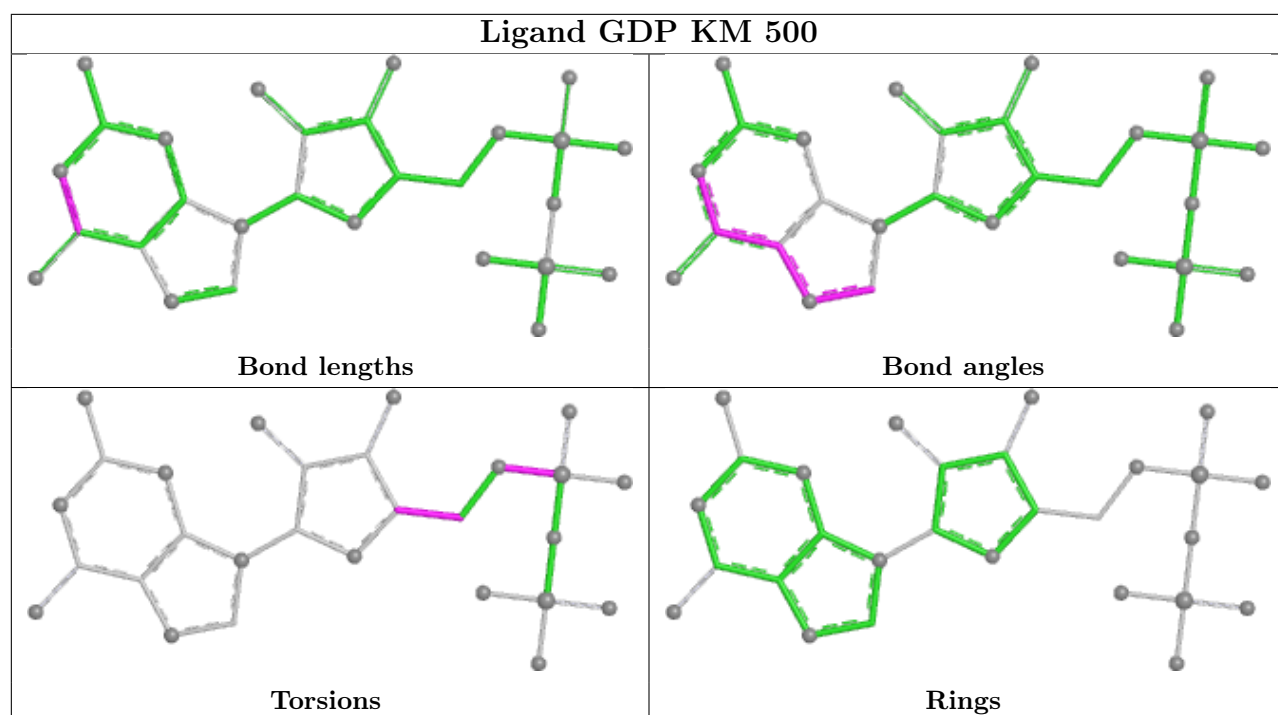




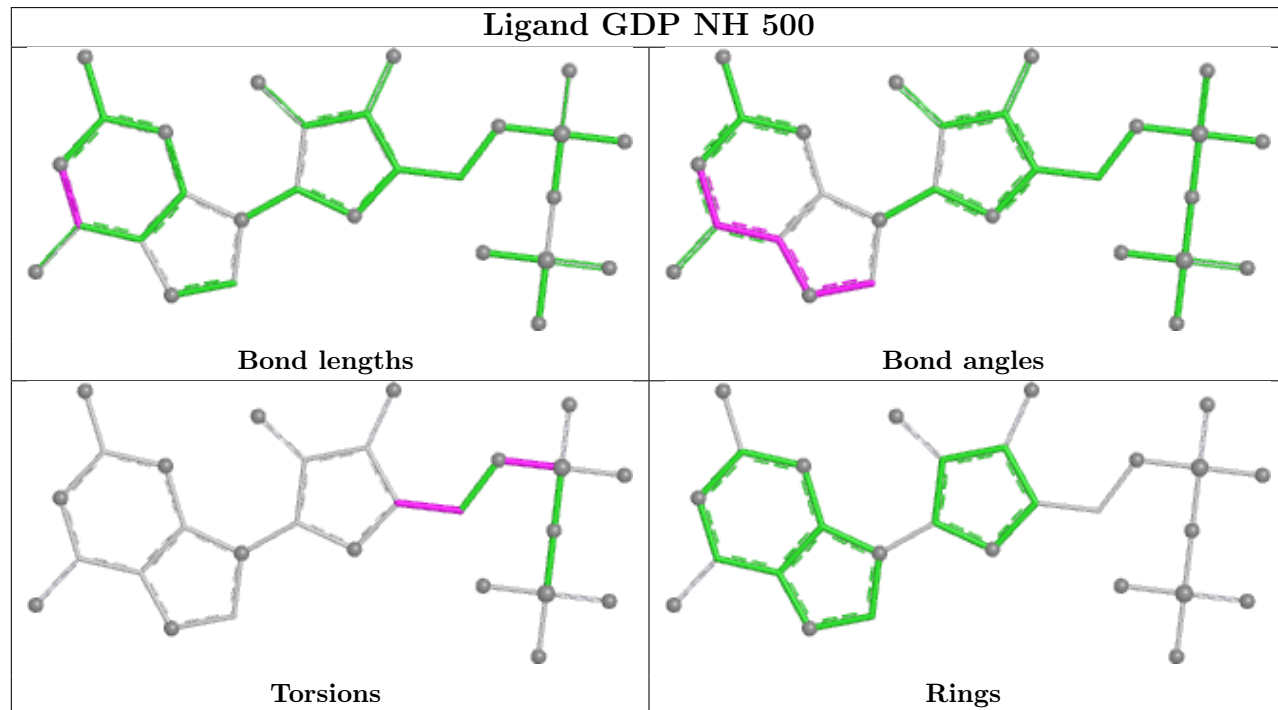
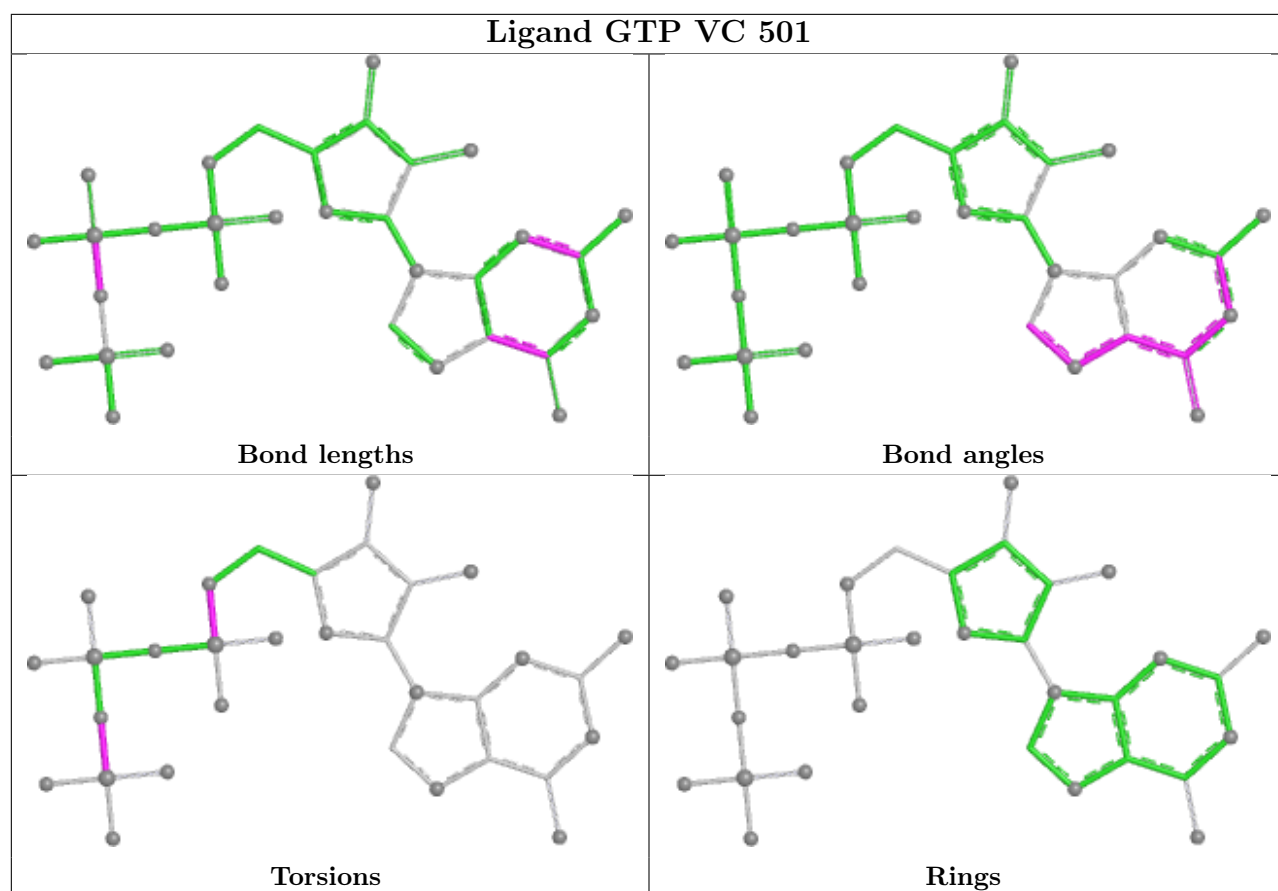




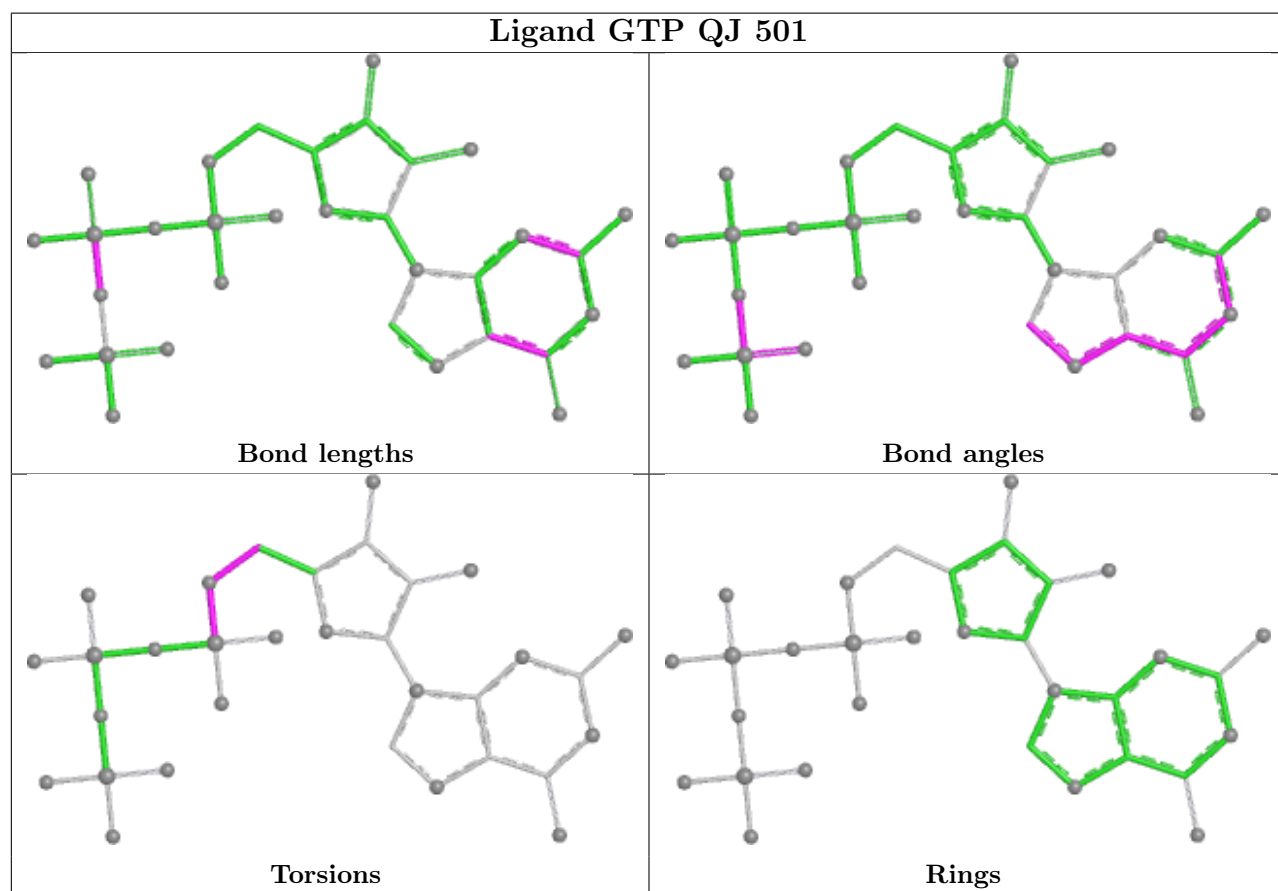
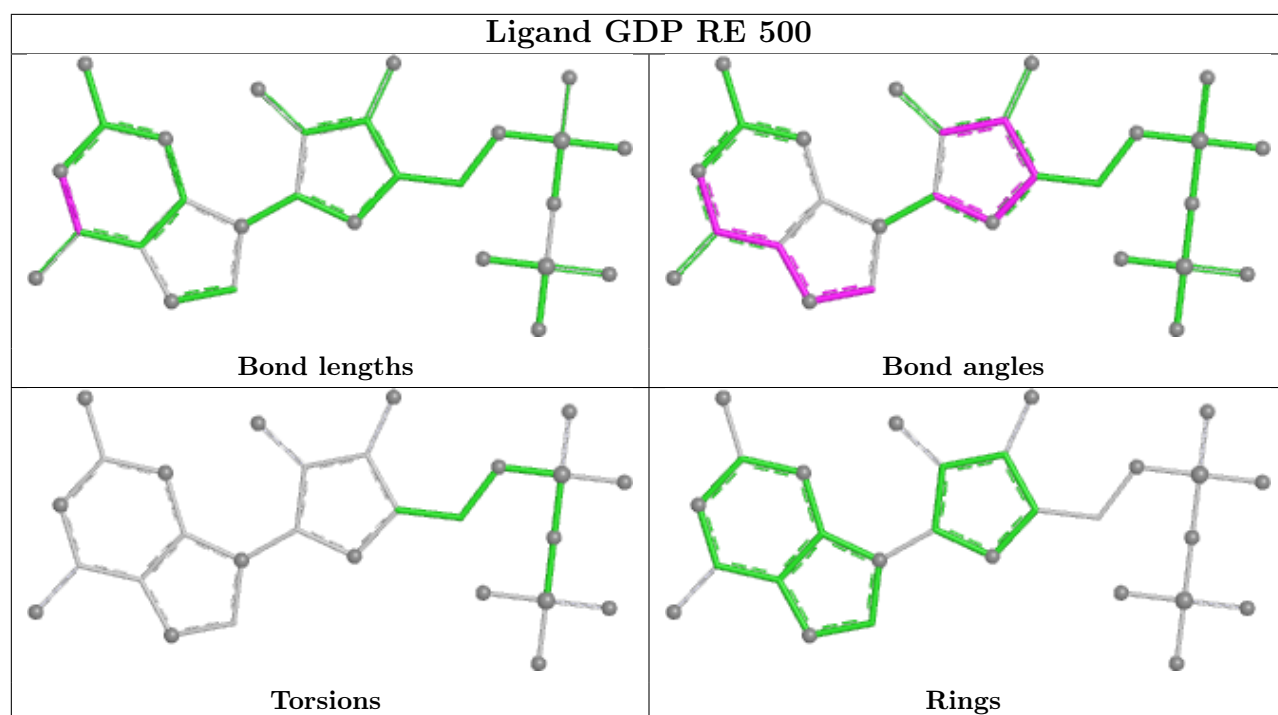






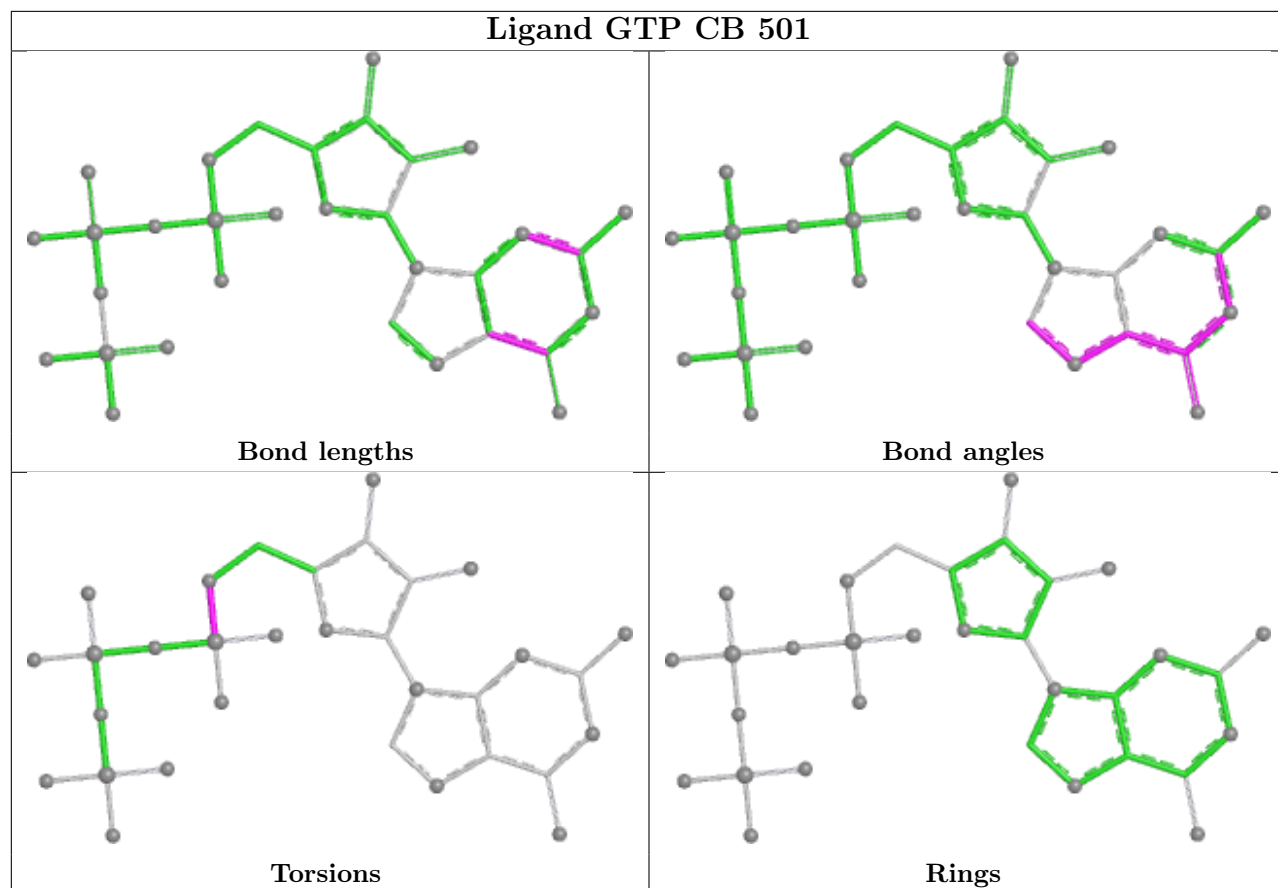




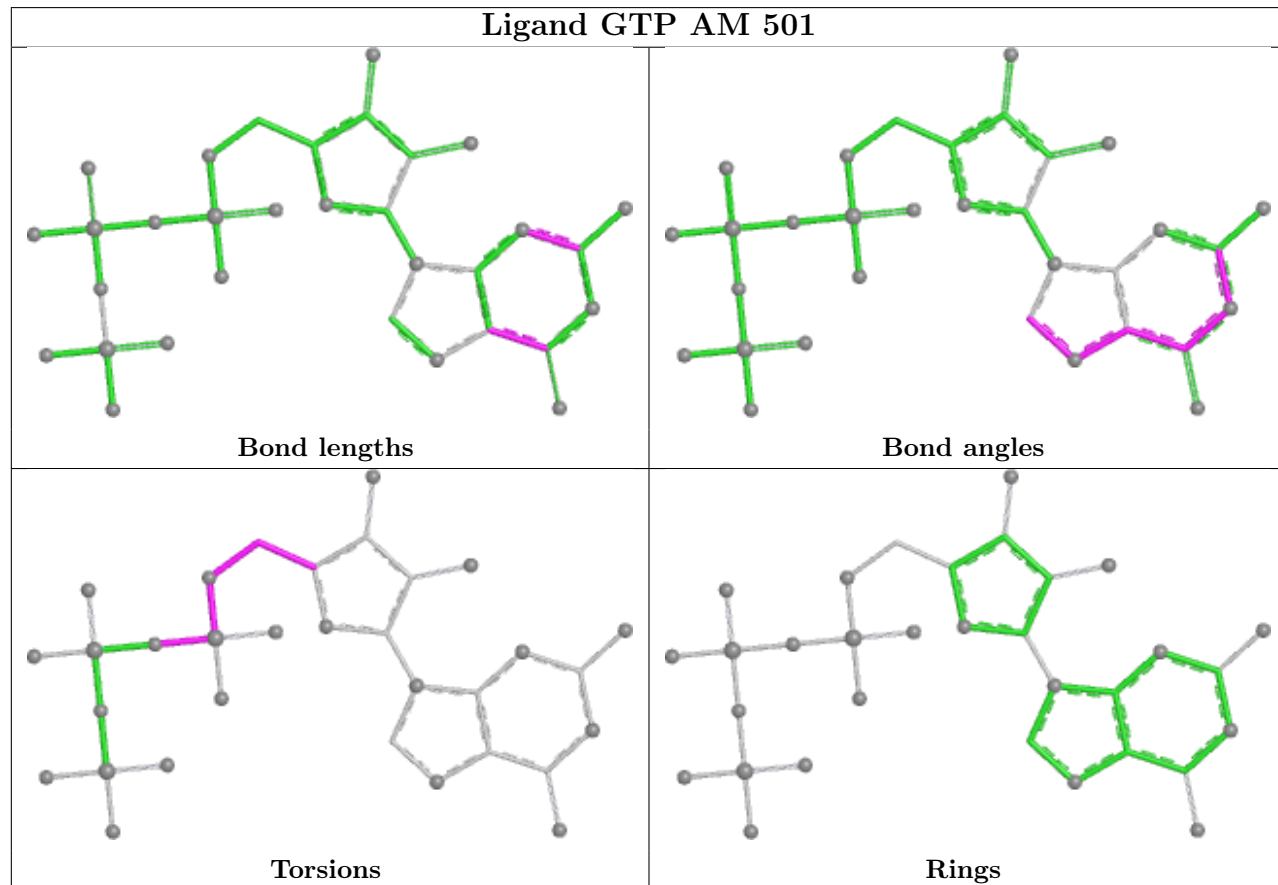




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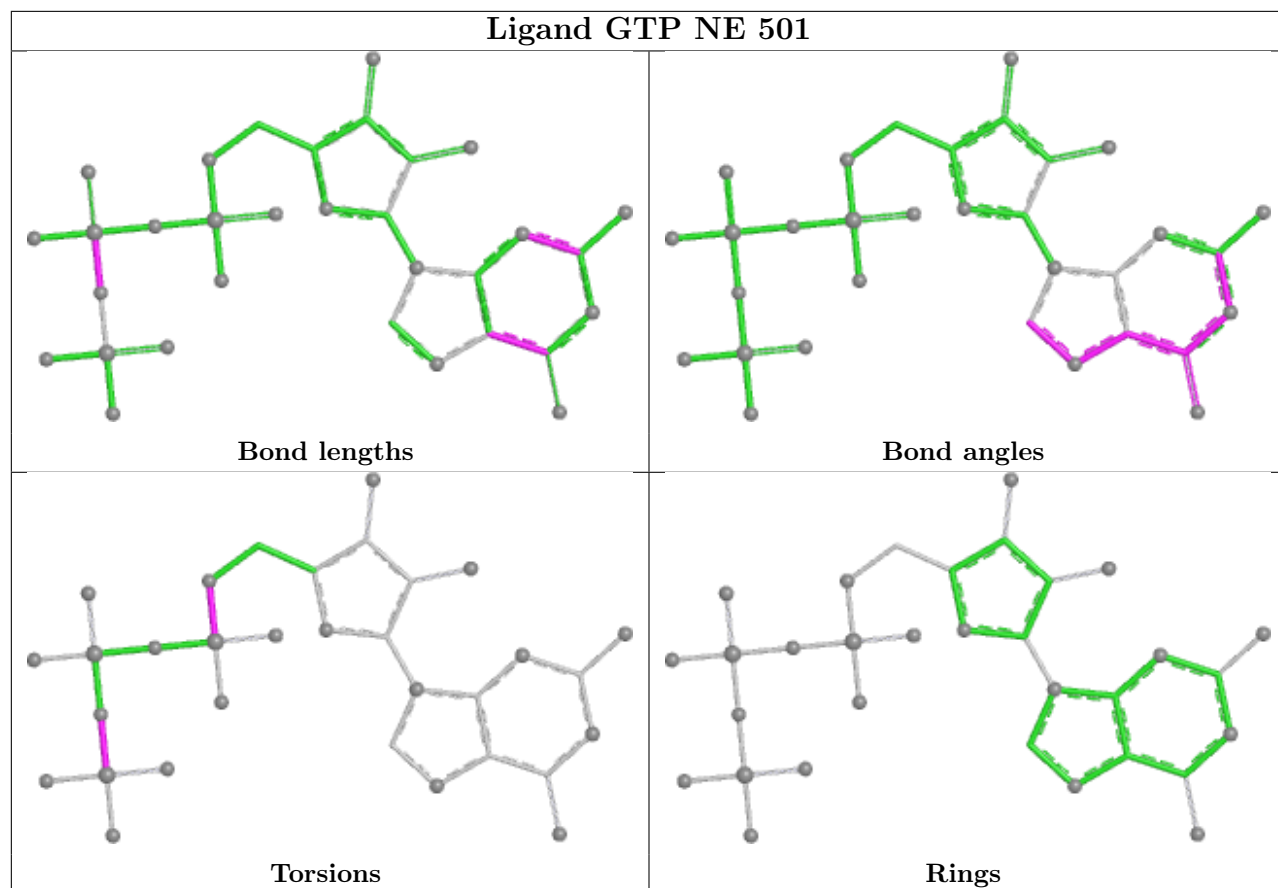


## Ligand GTP AM 501

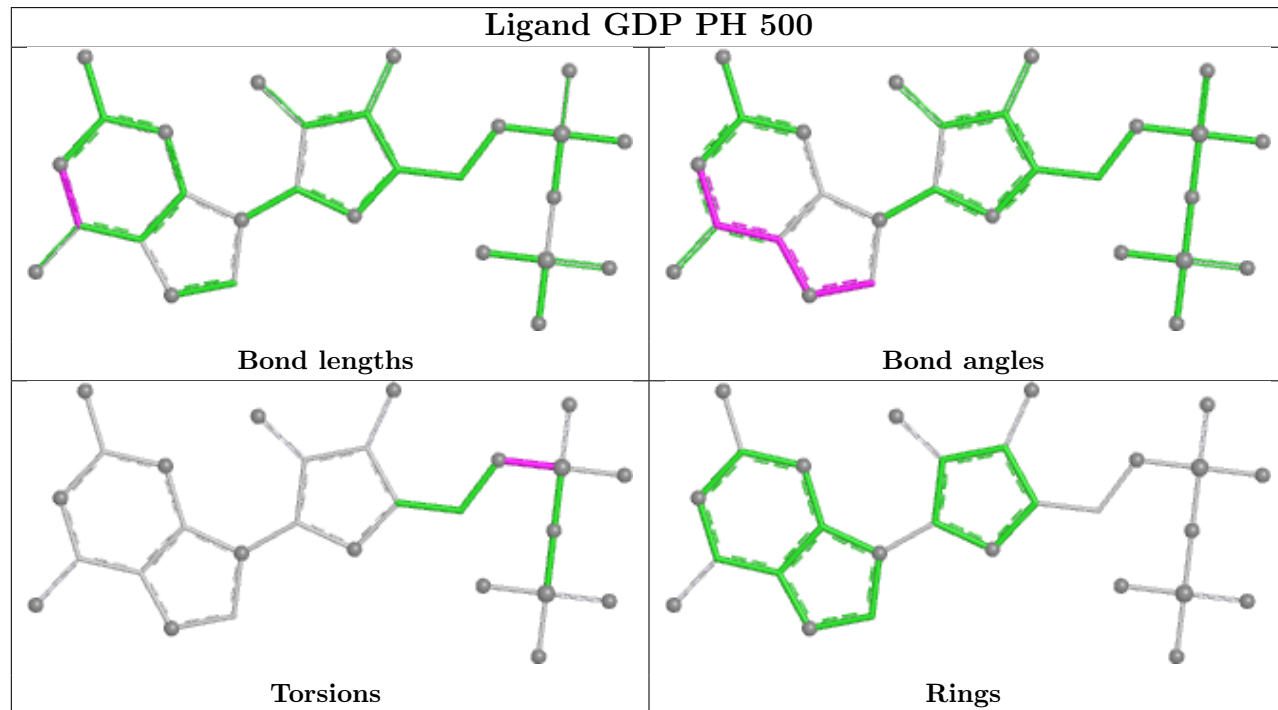




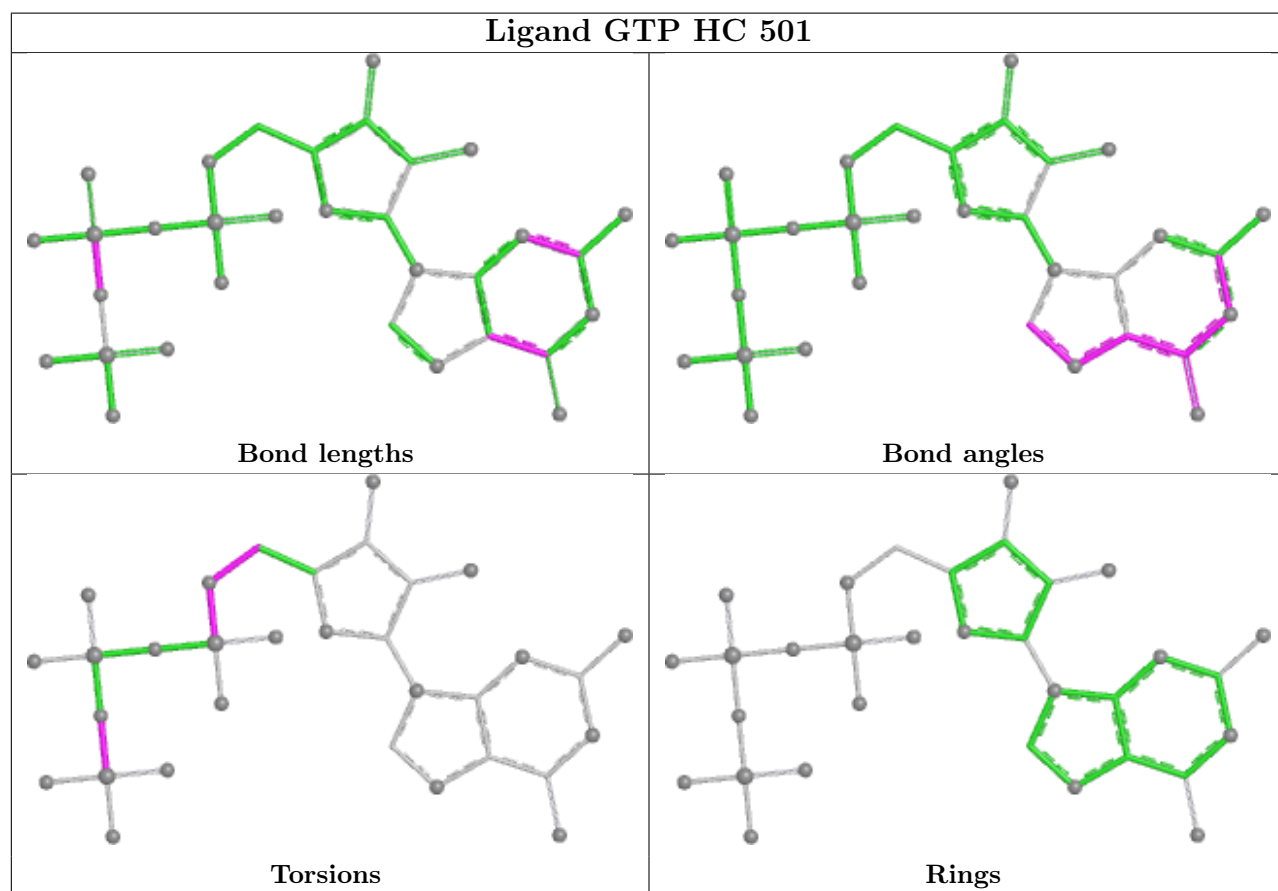
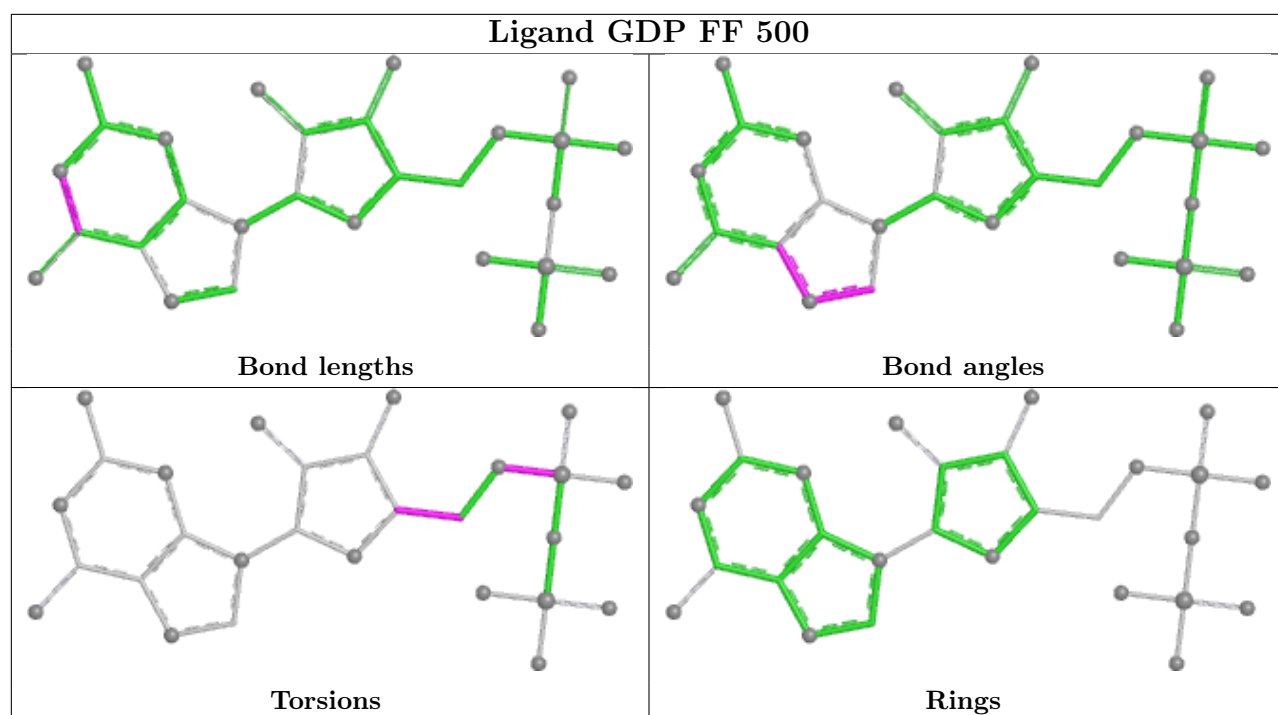
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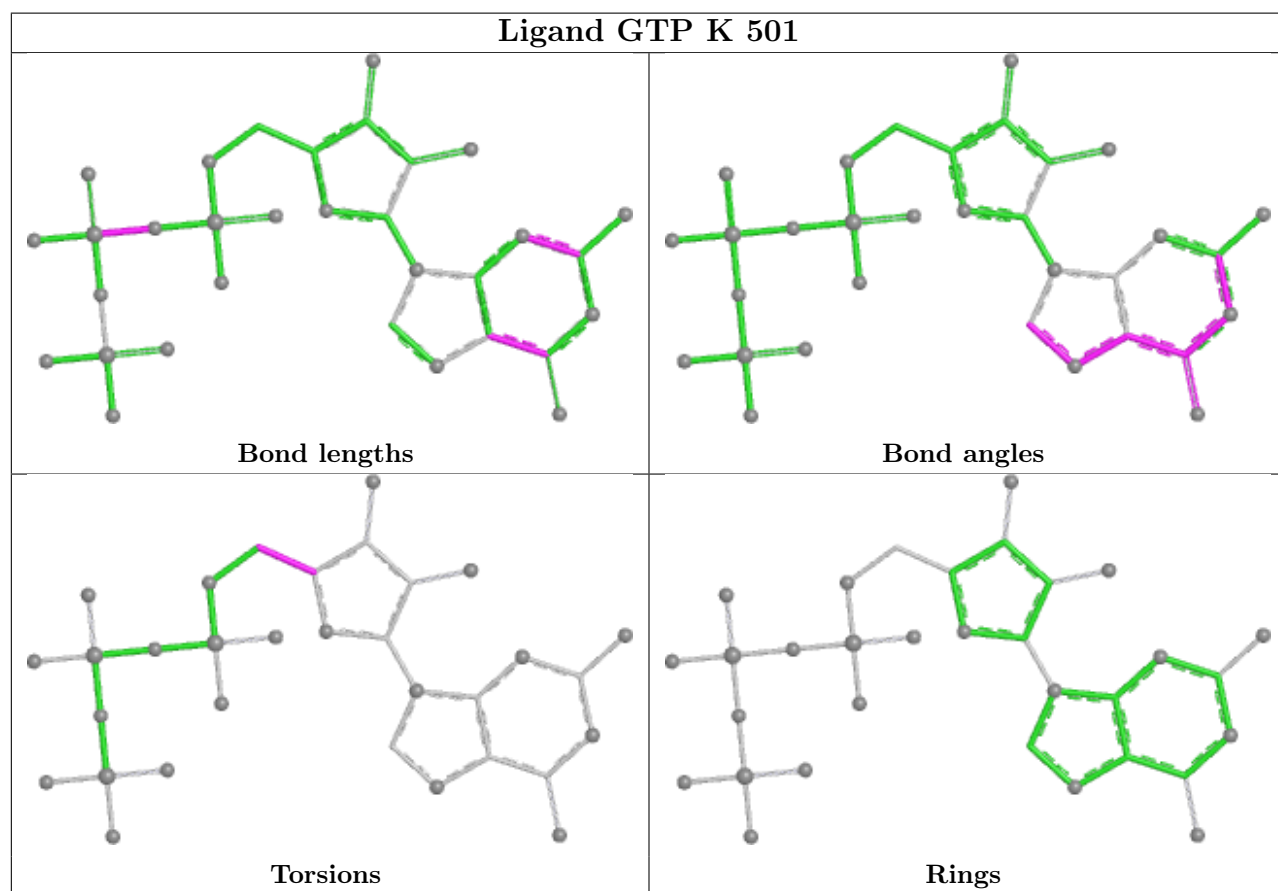
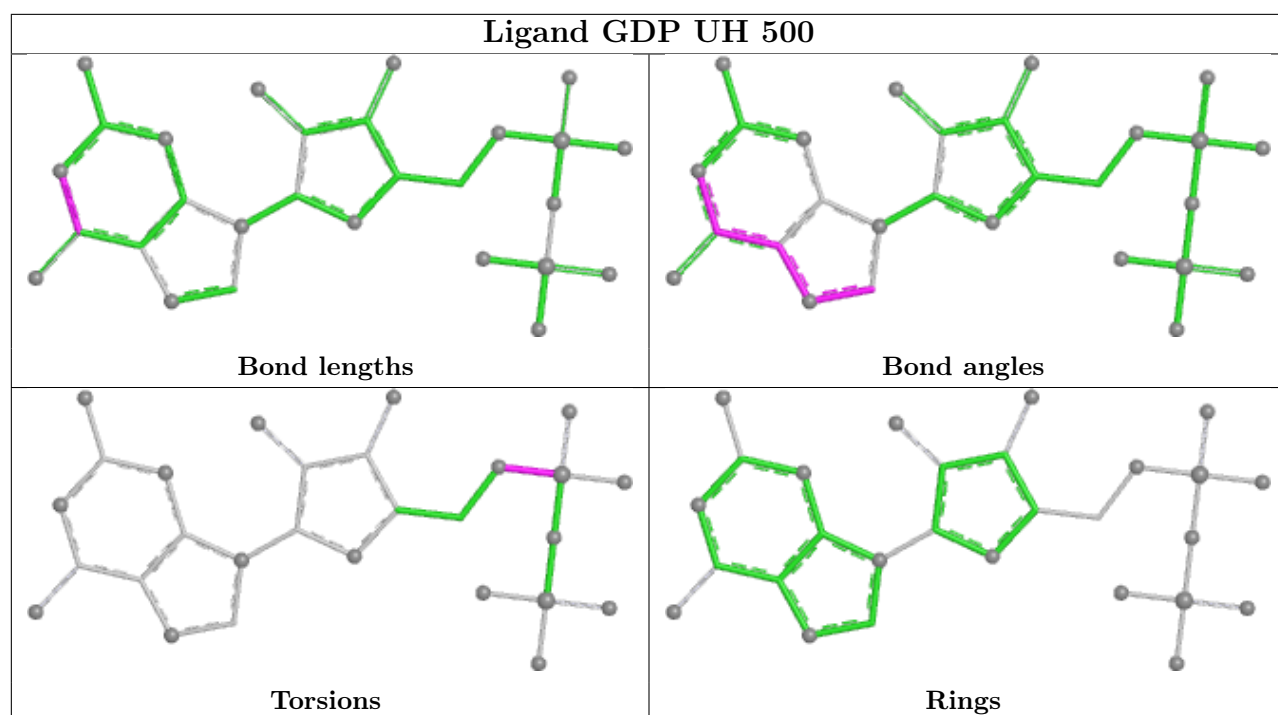
## Ligand GDP PH 500





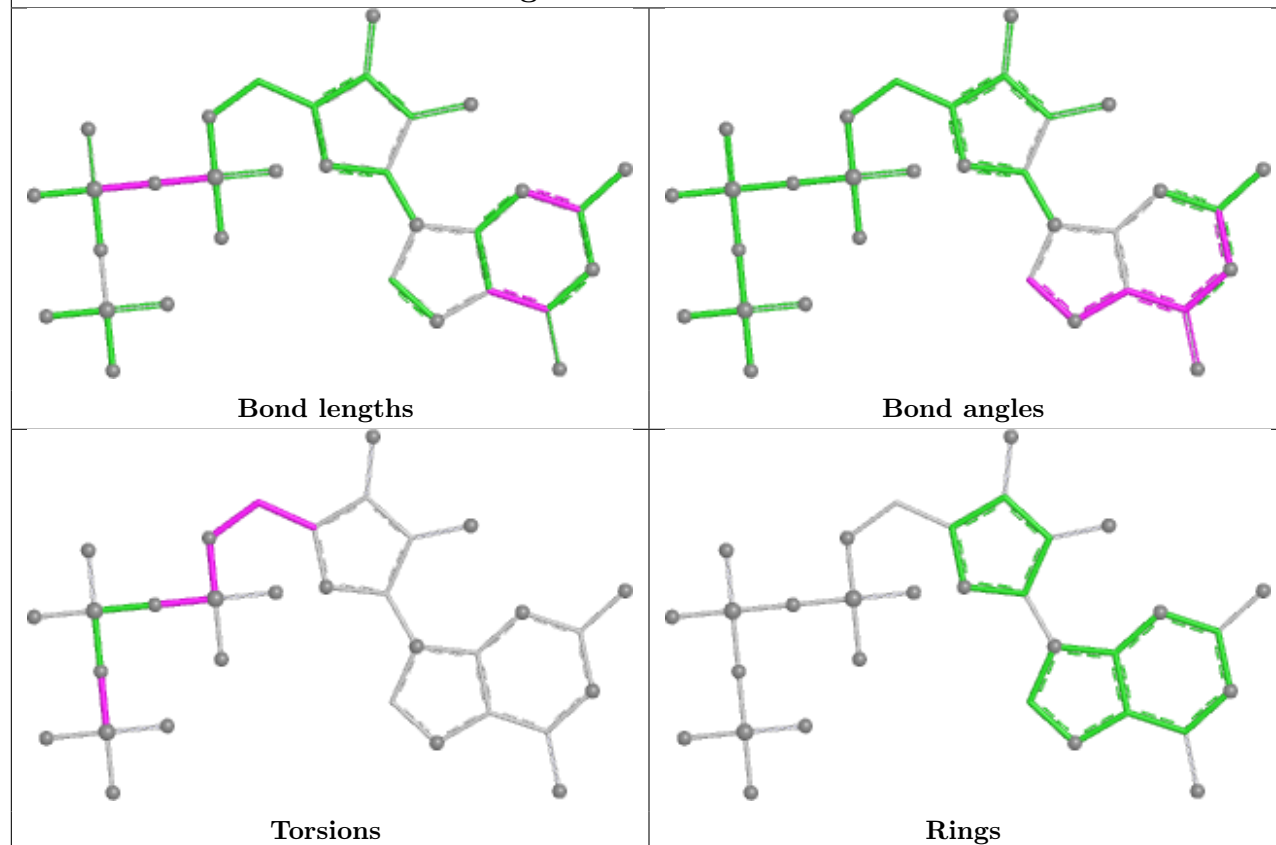




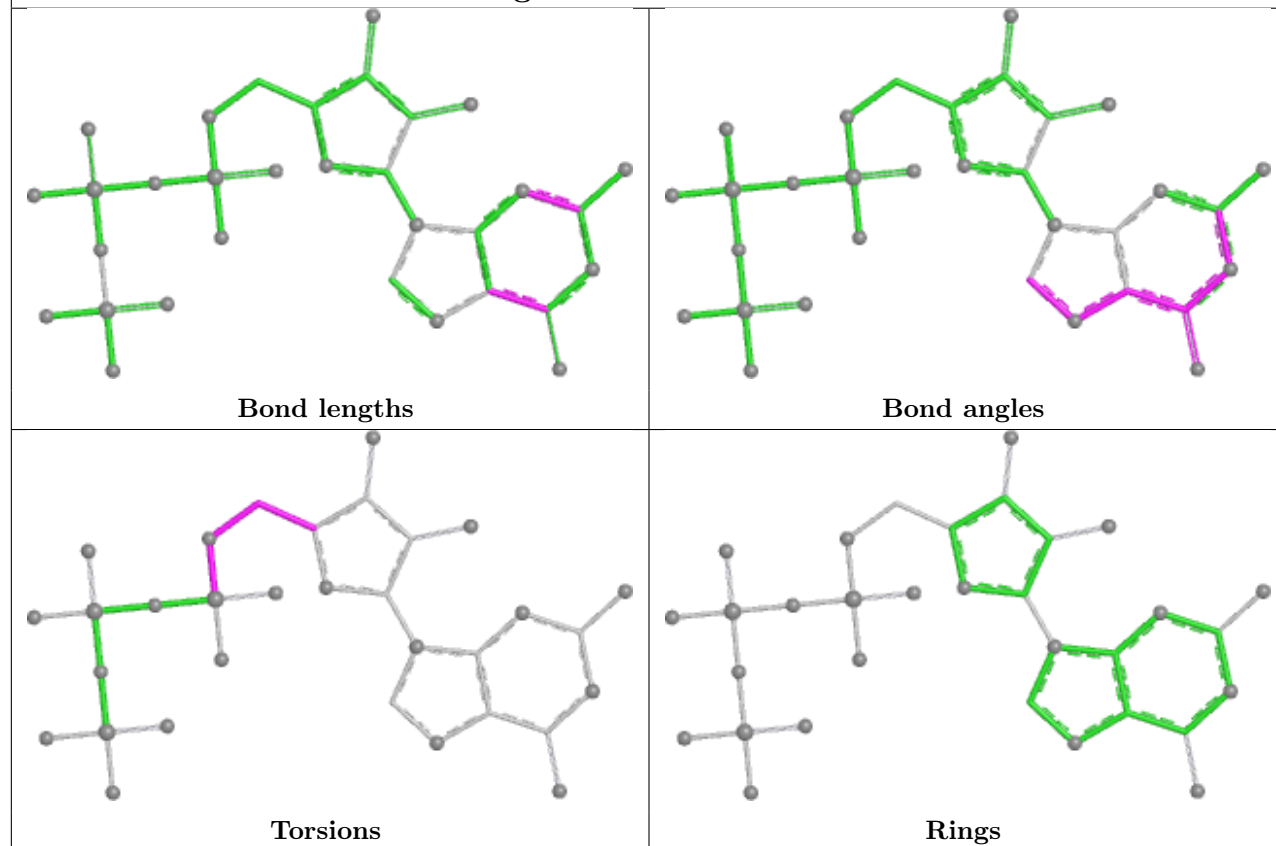




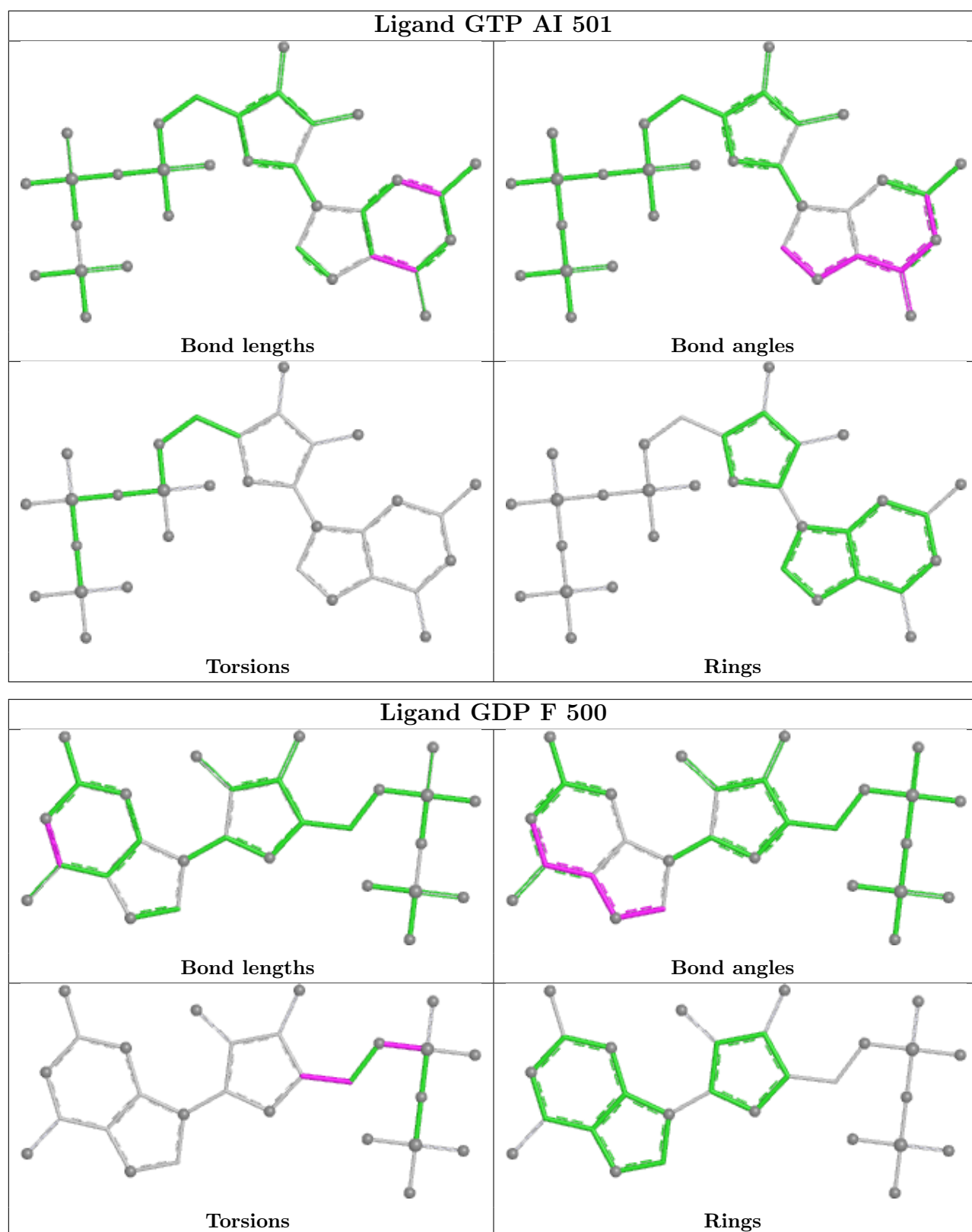
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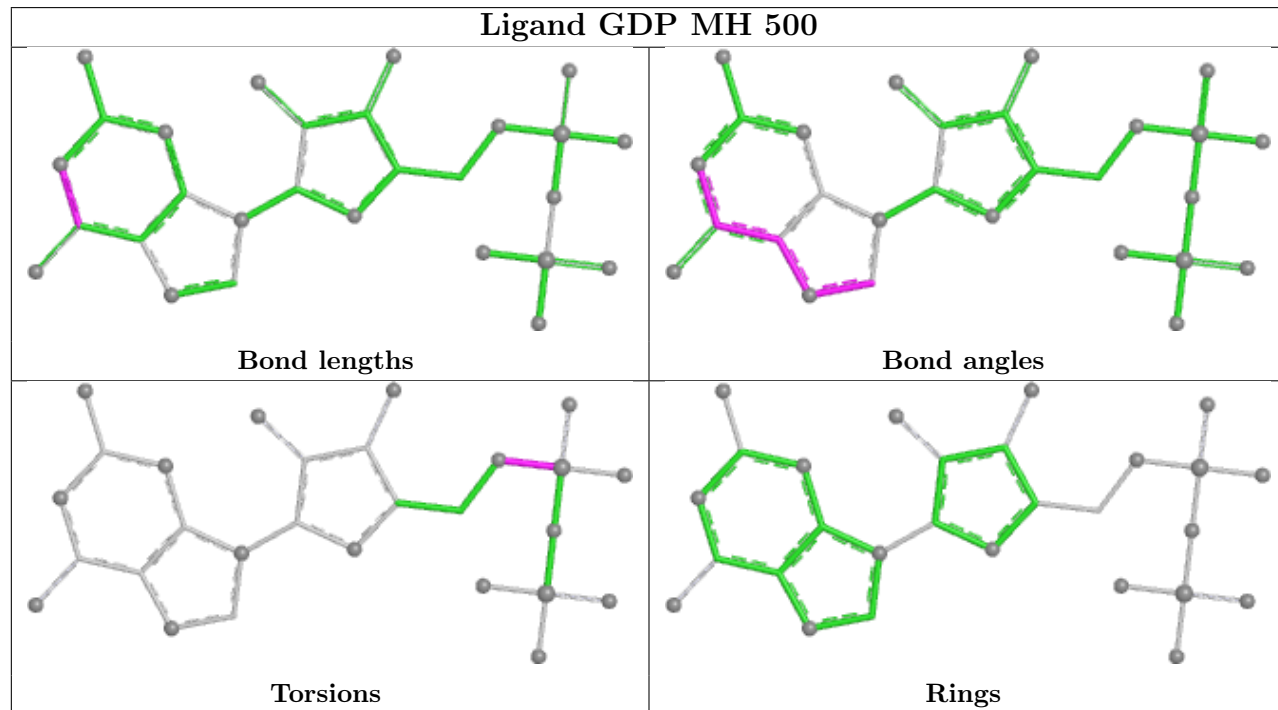
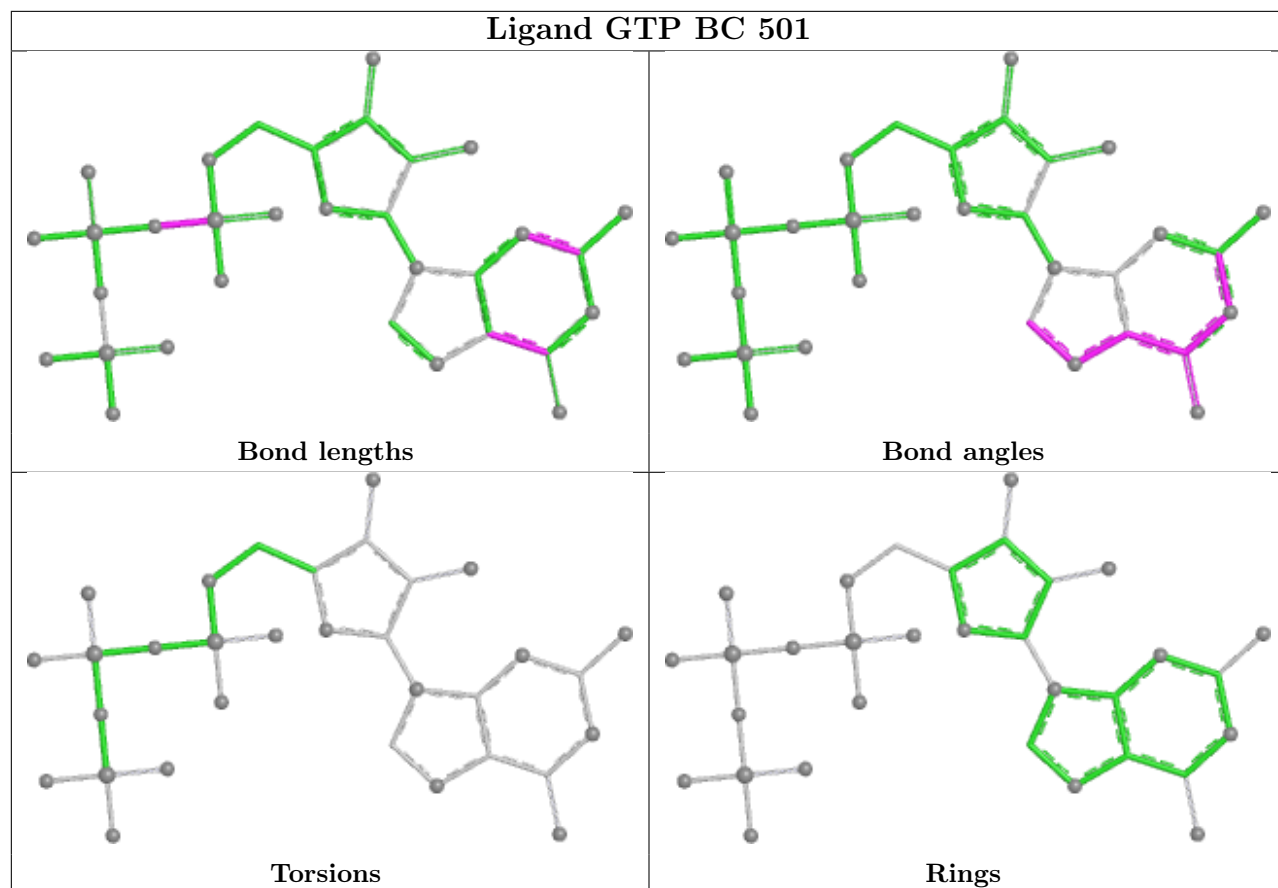
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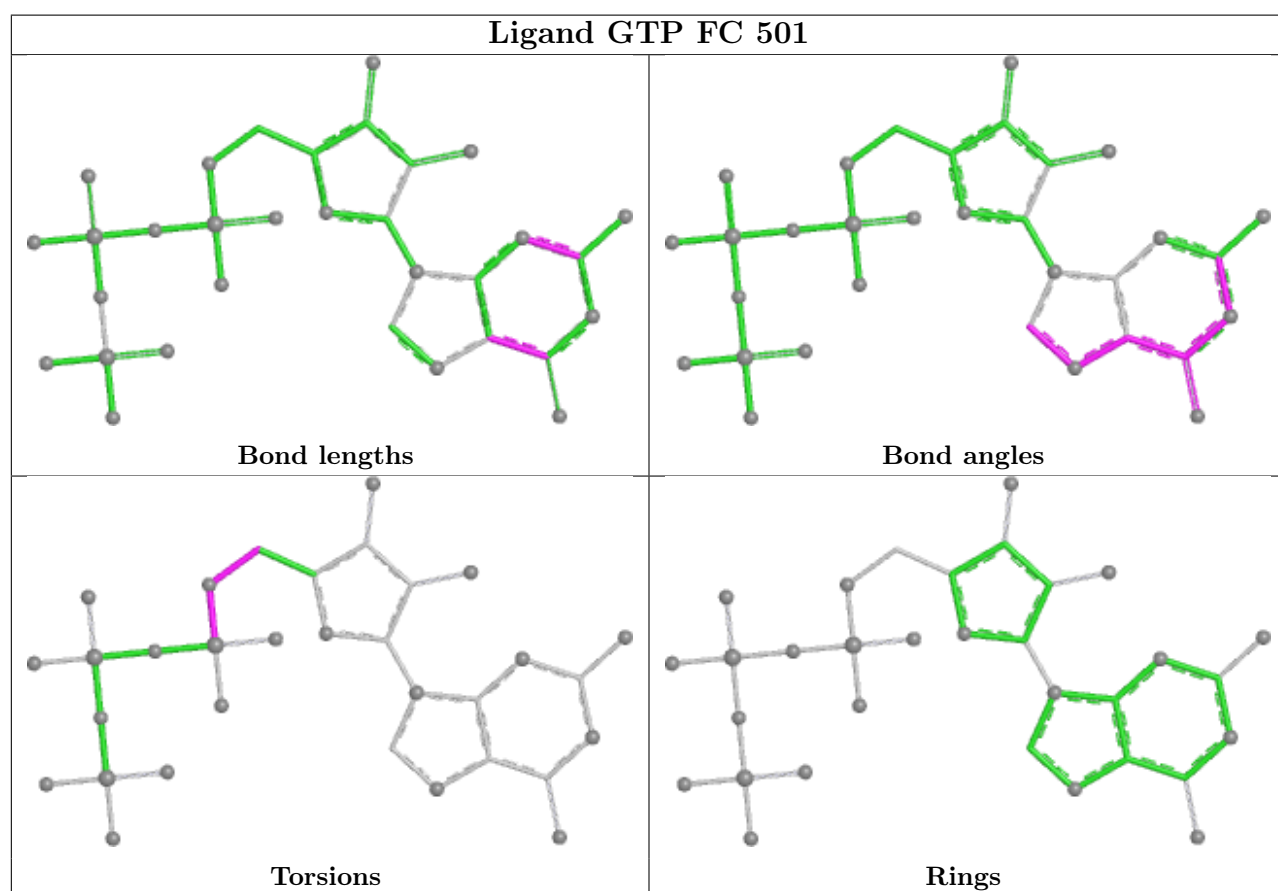
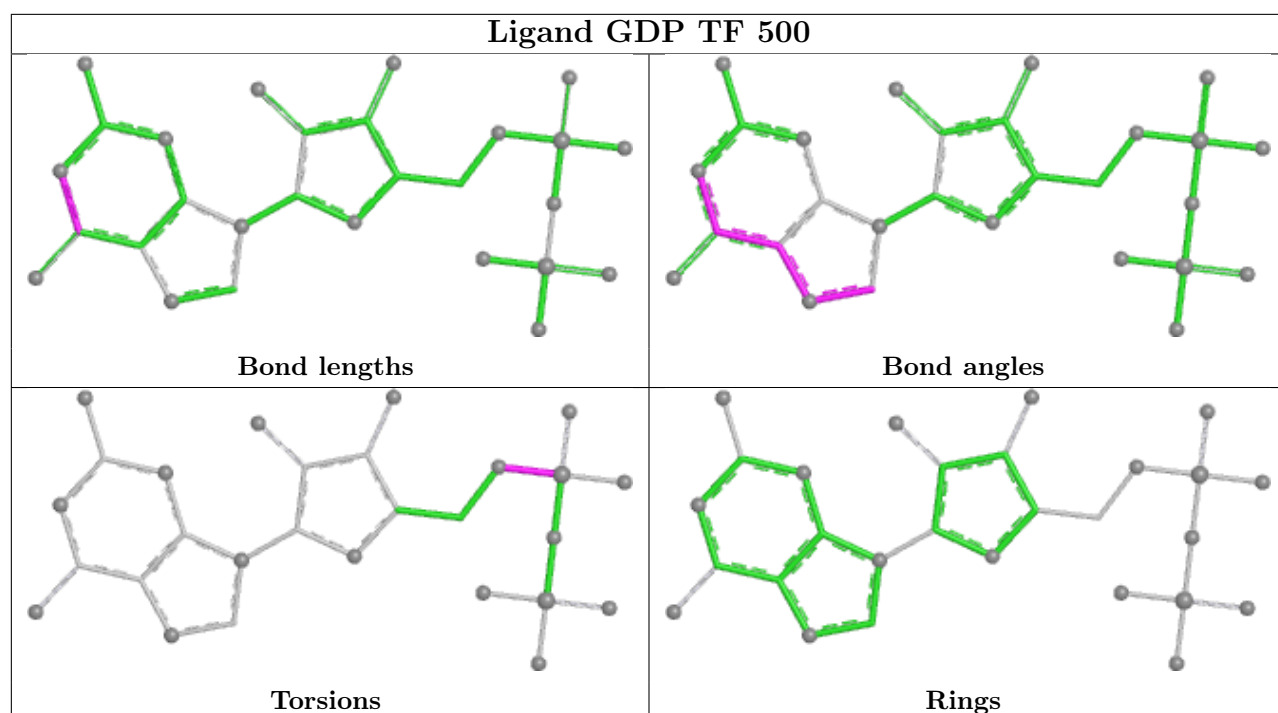




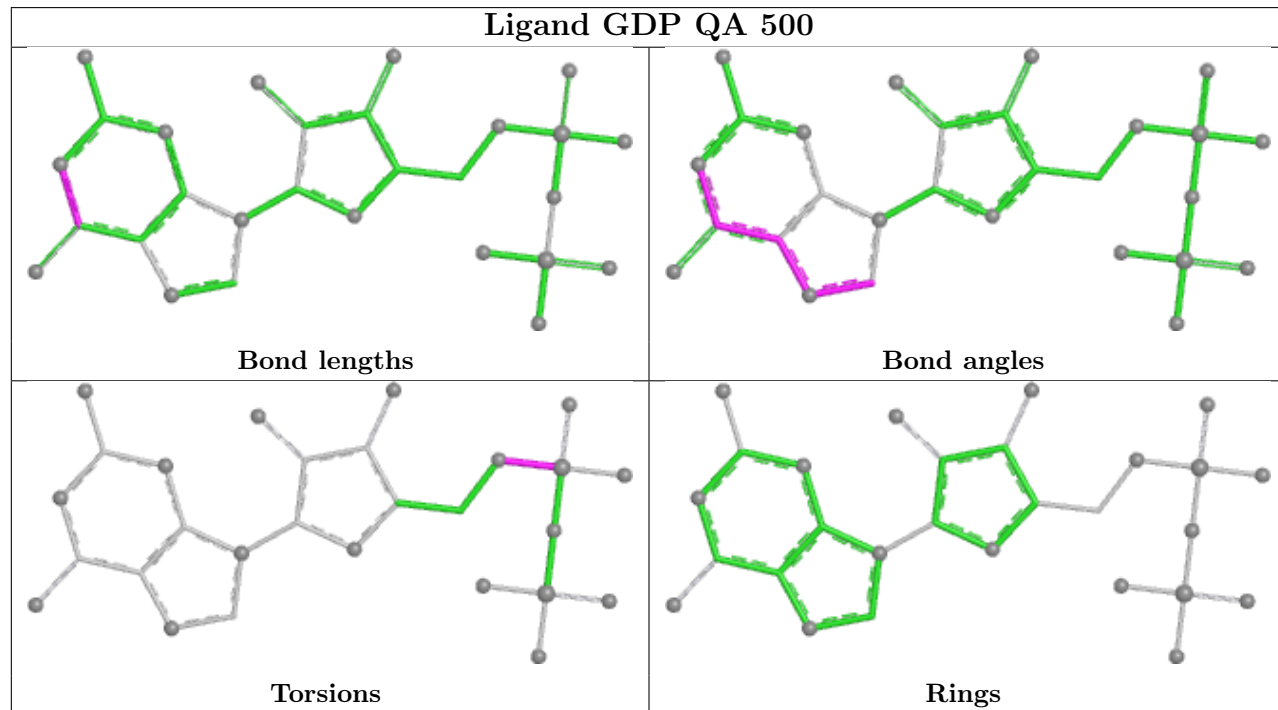
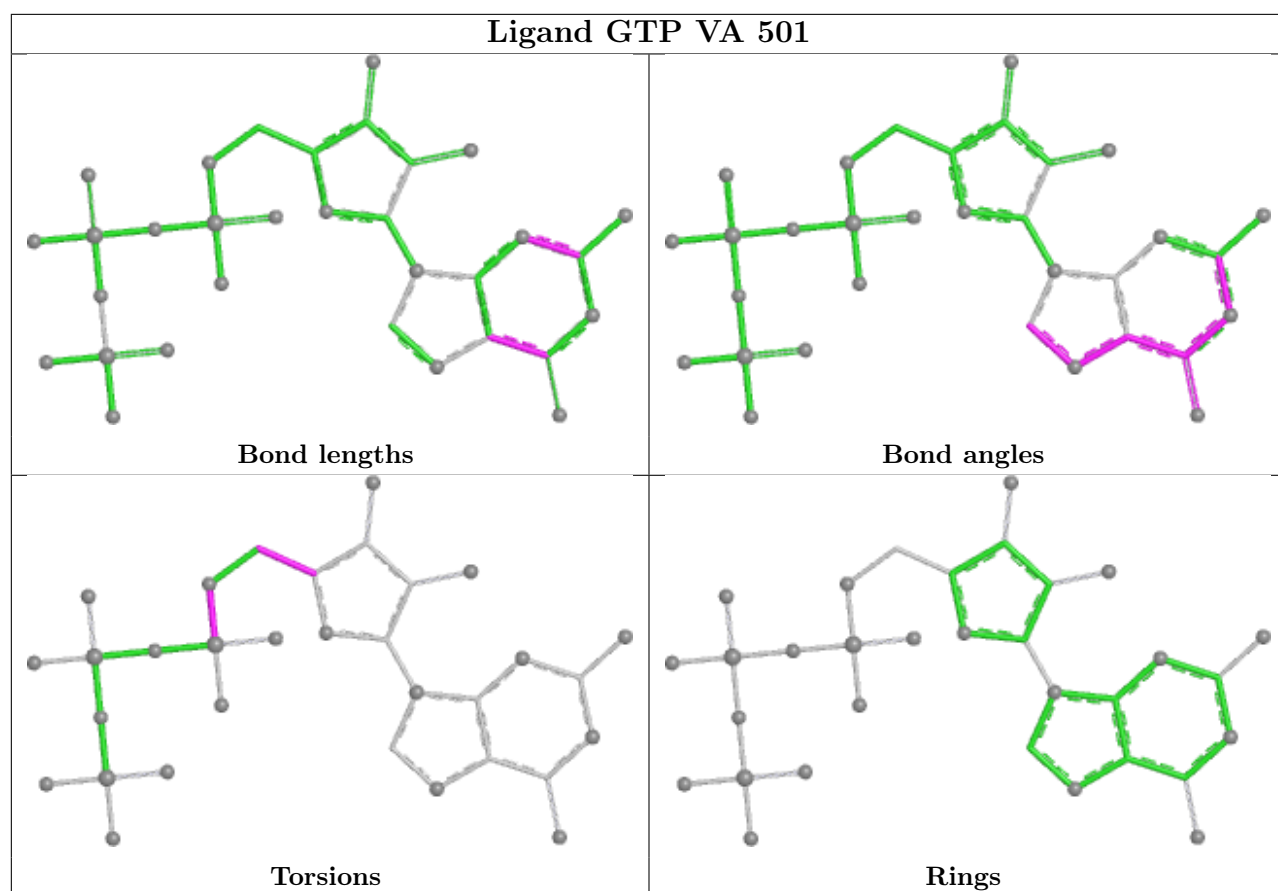




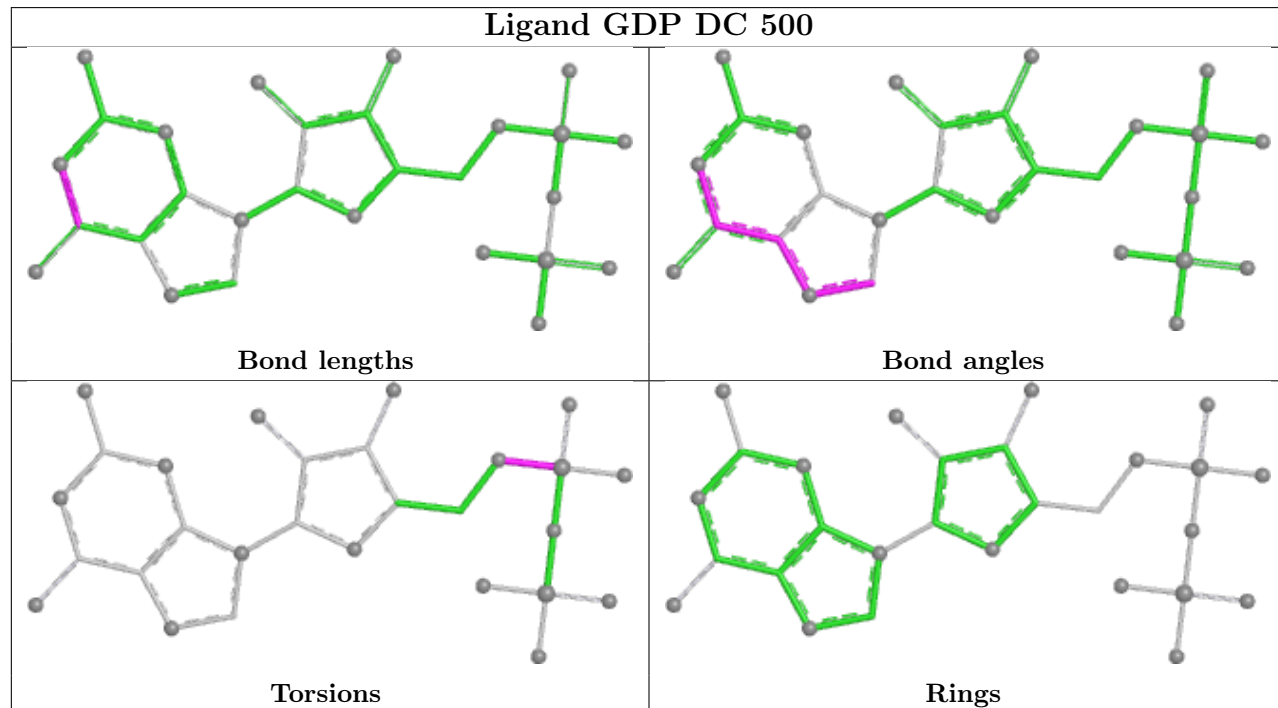
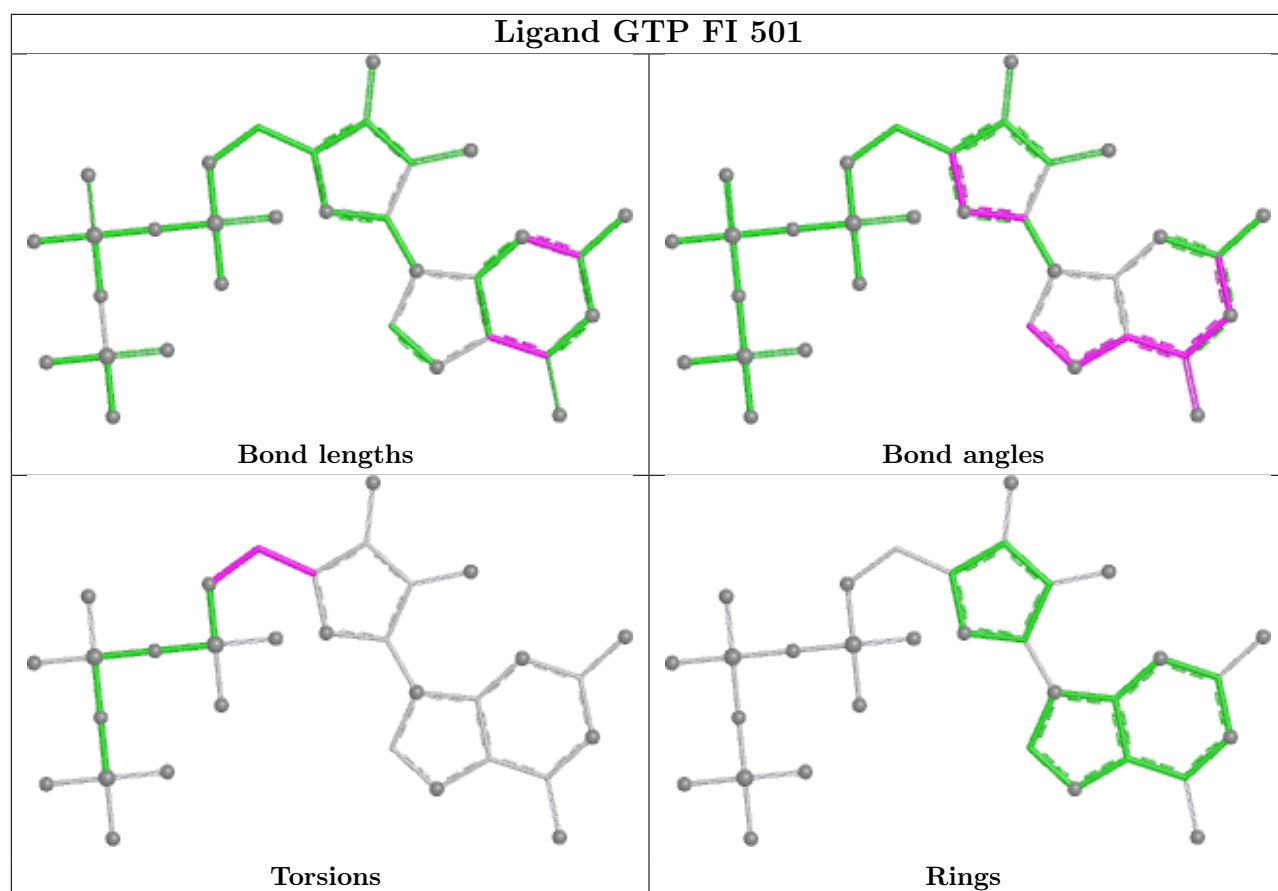




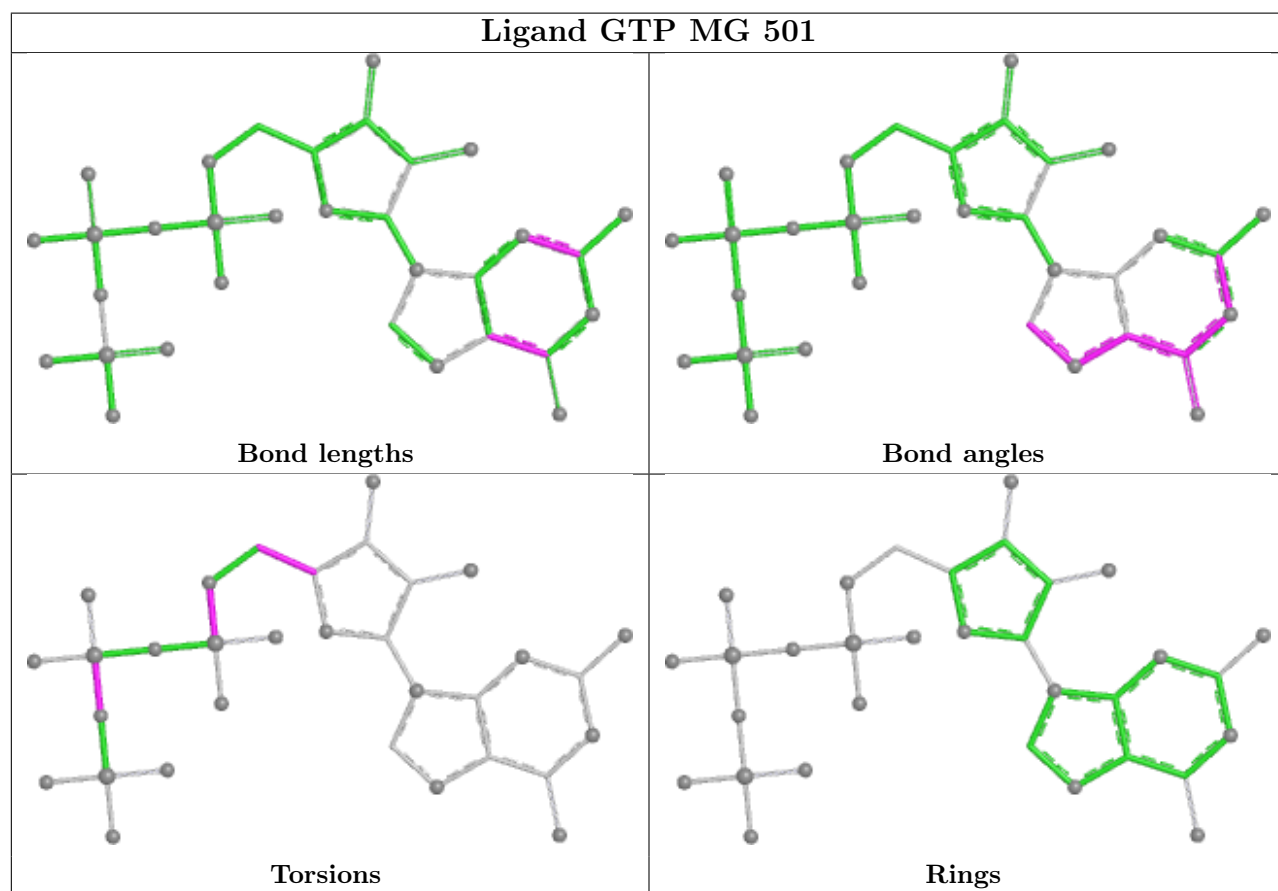
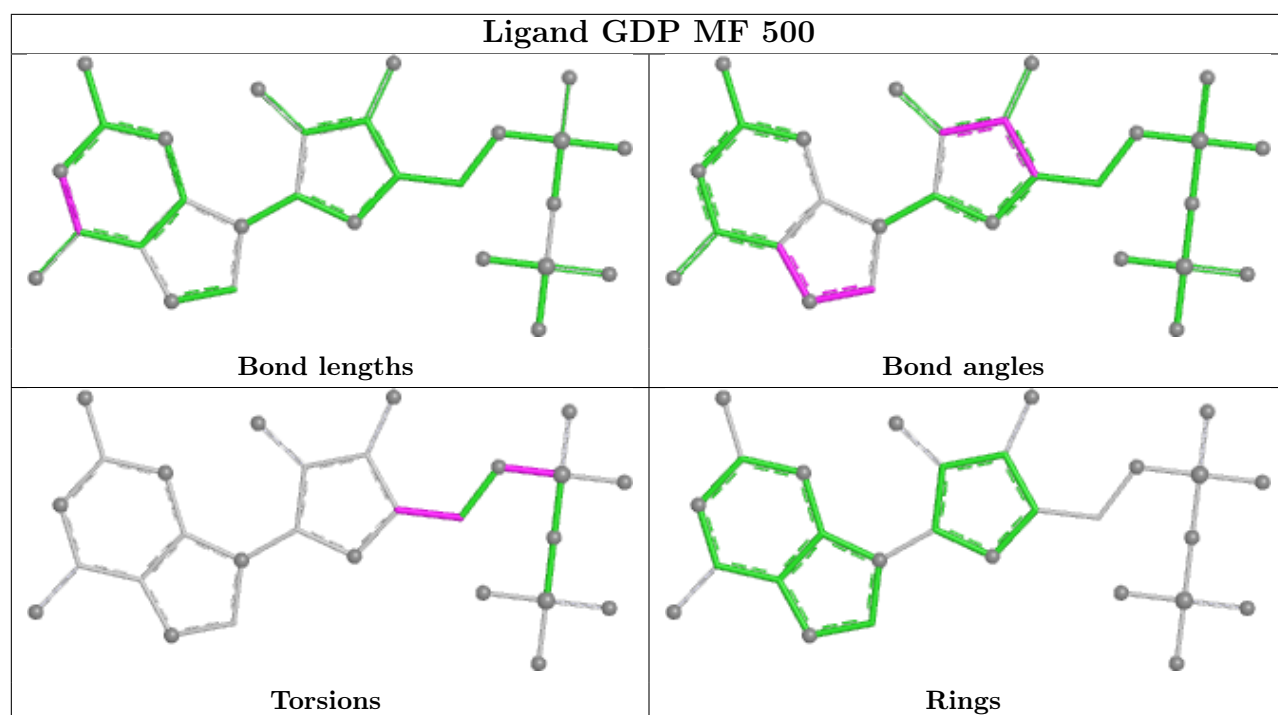




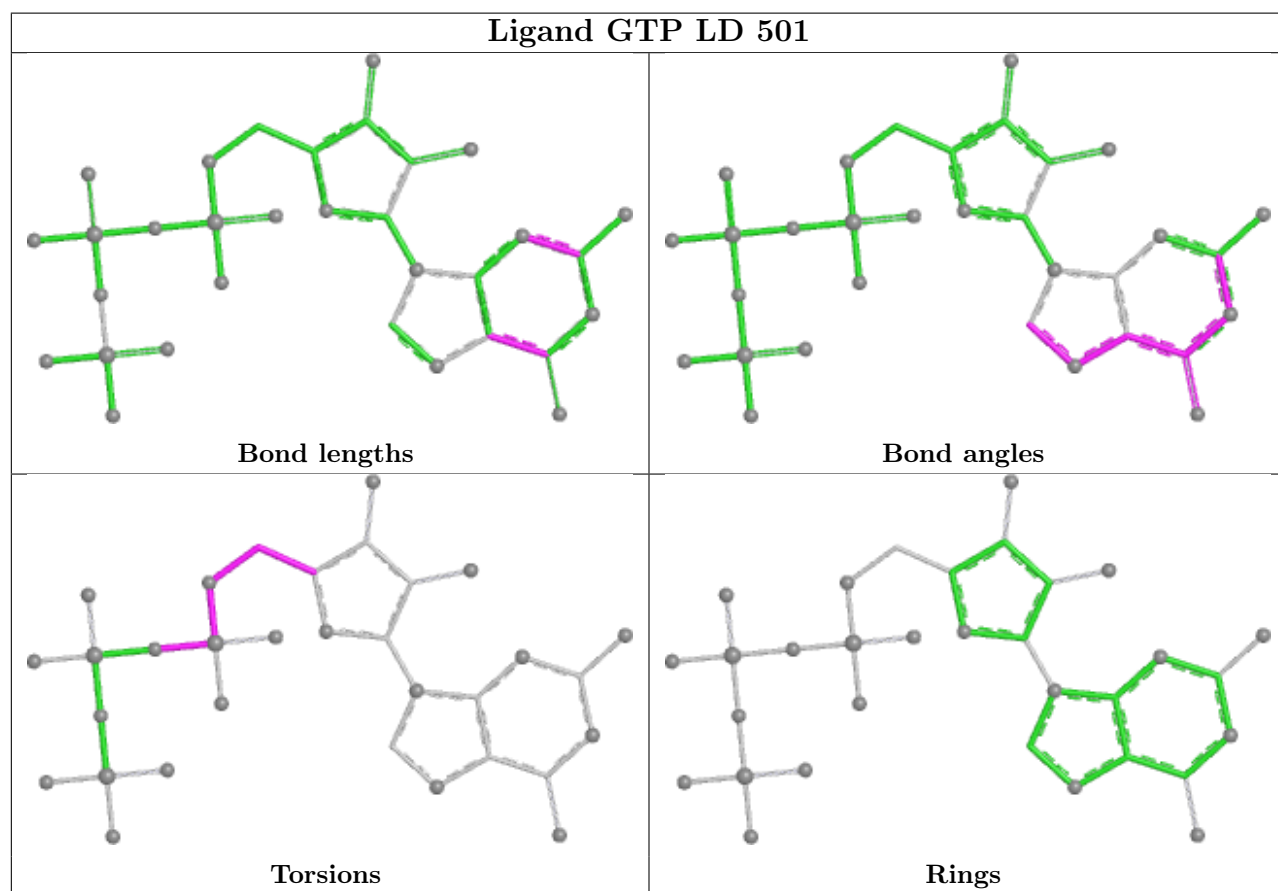
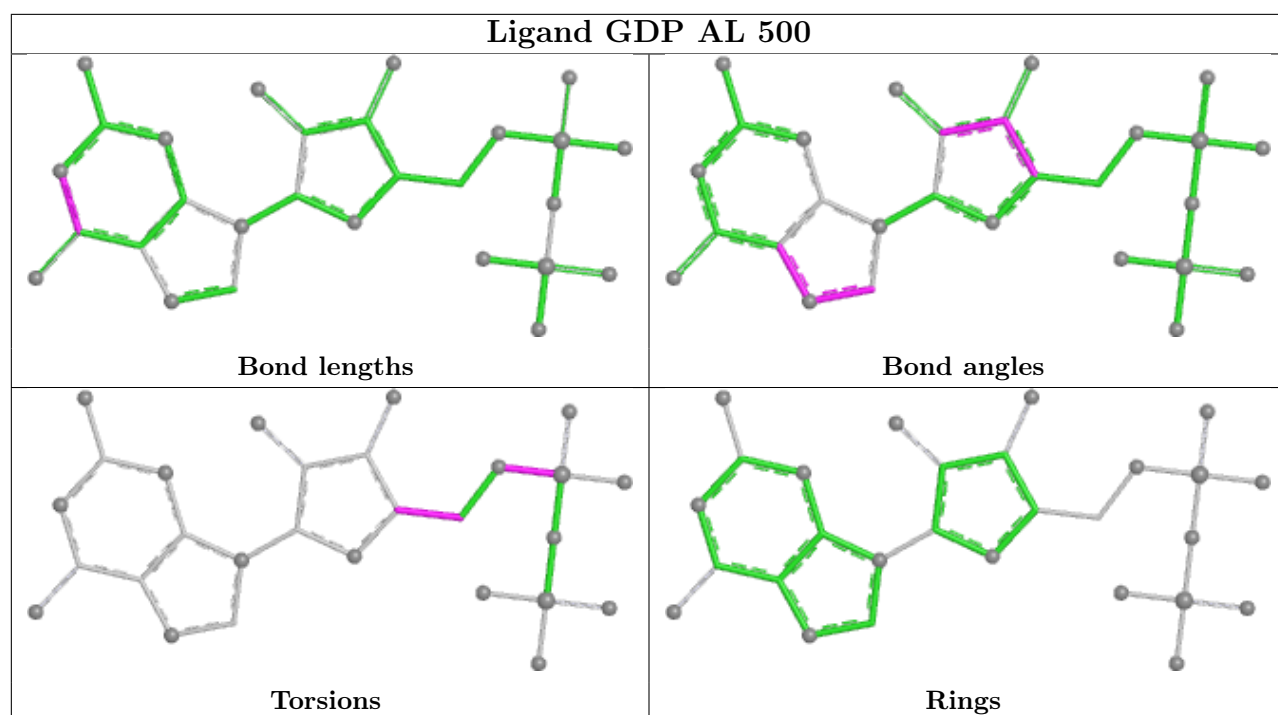






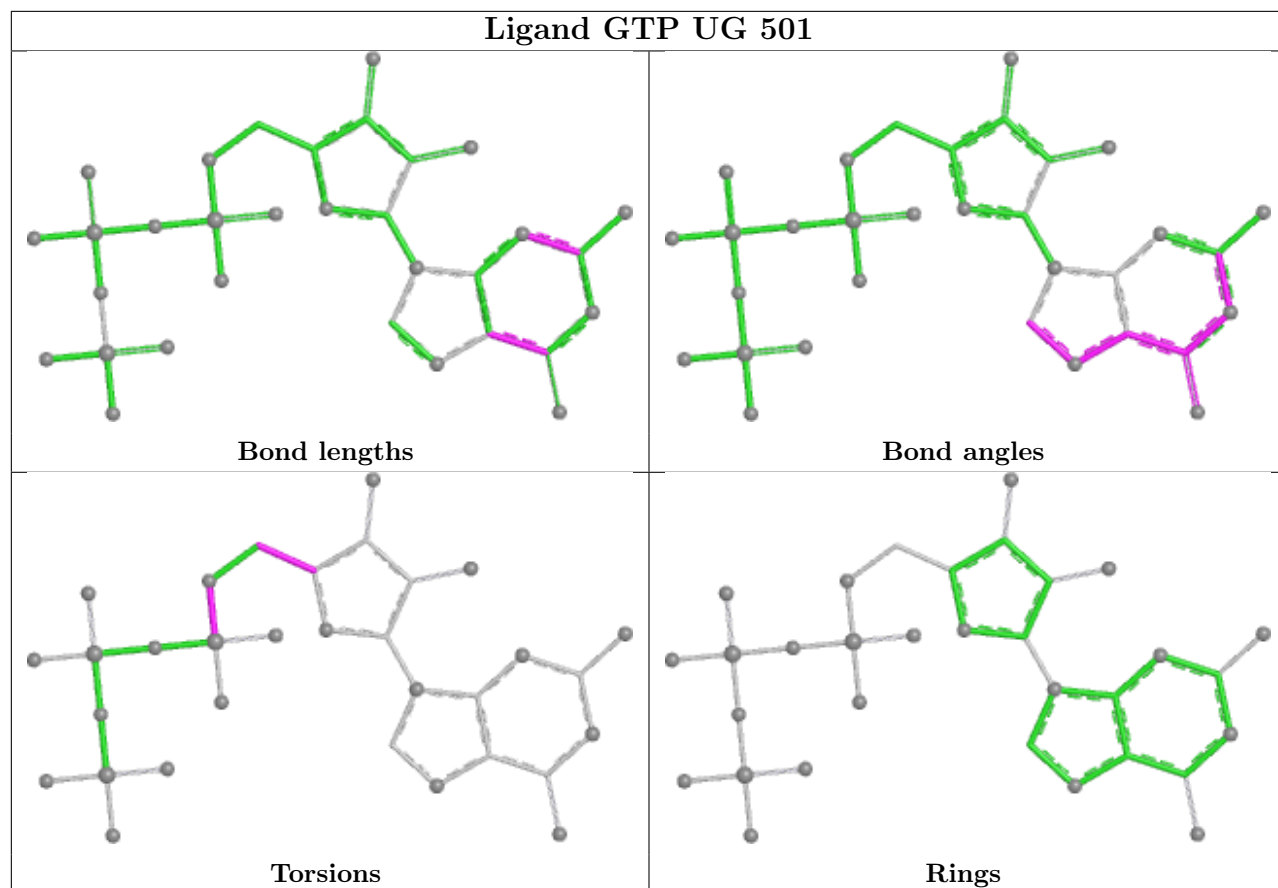




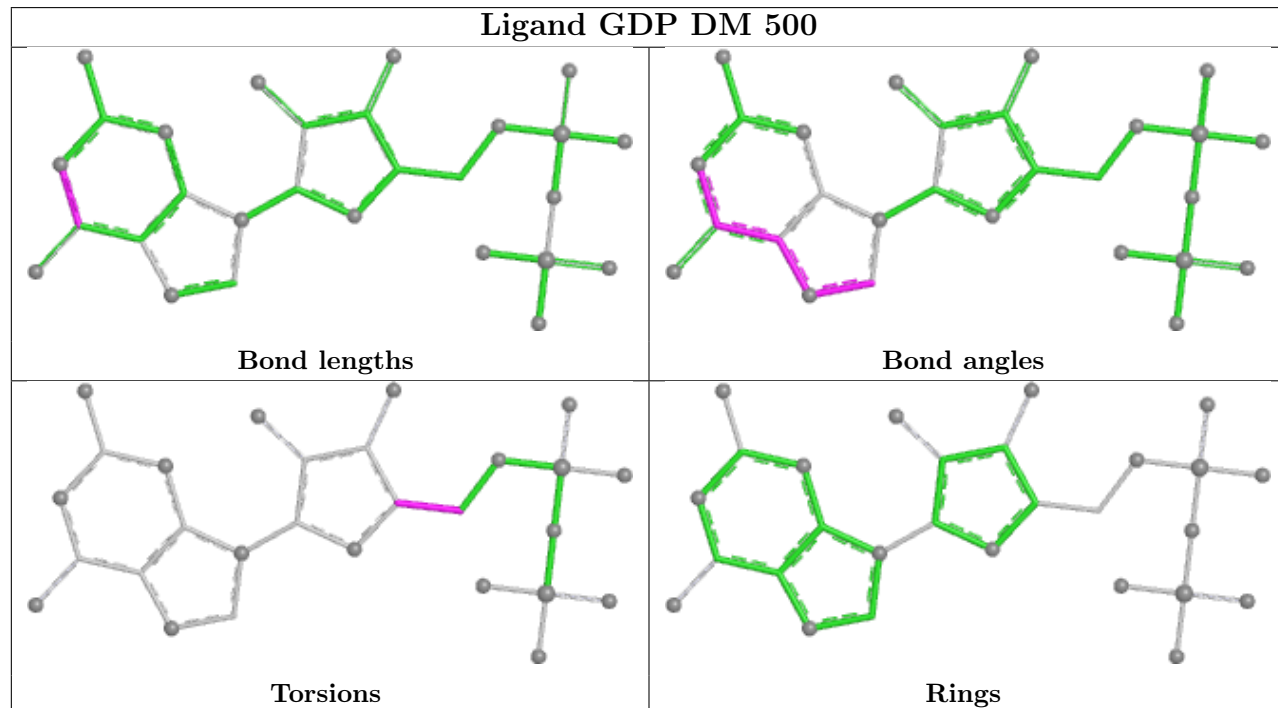




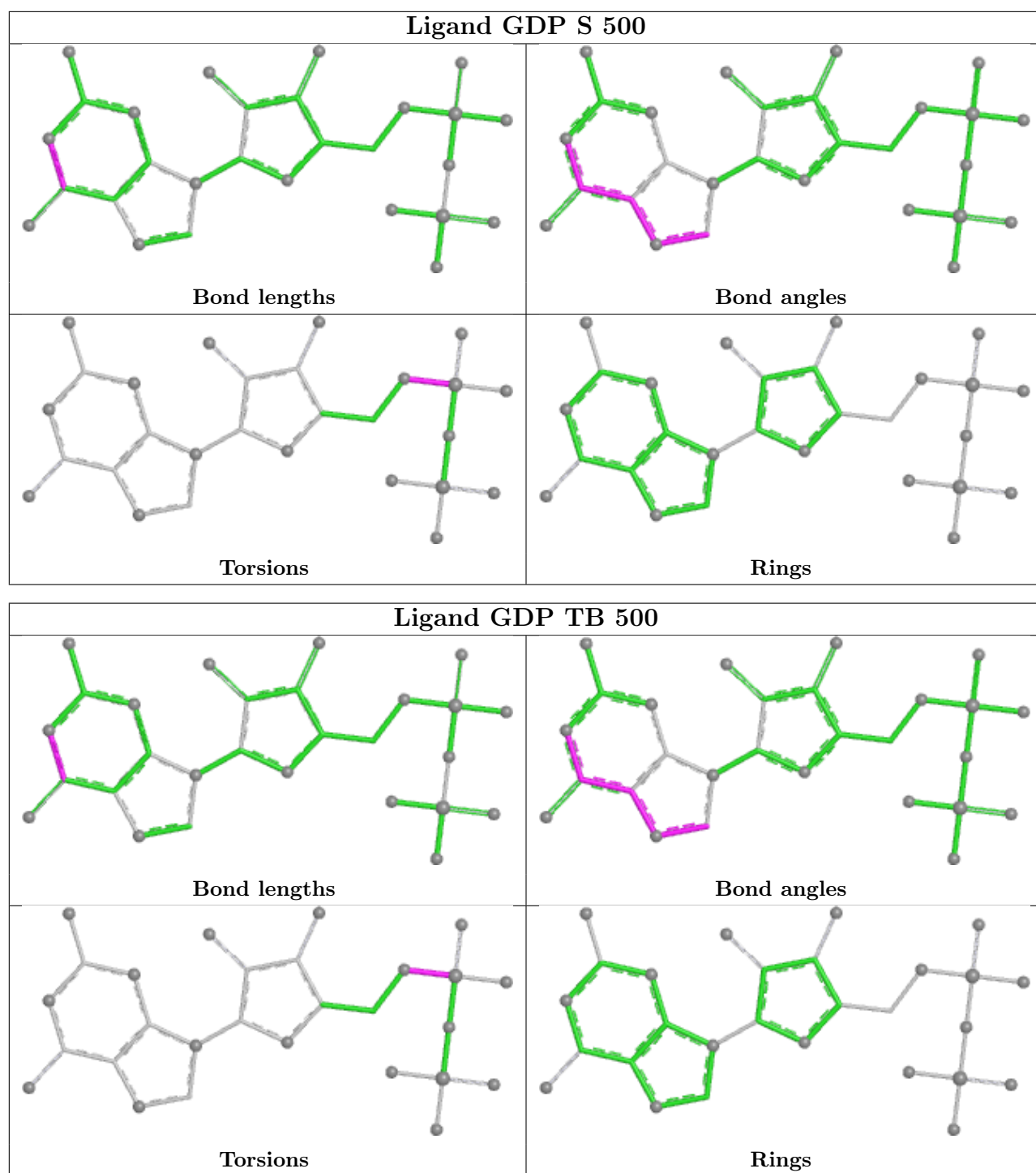
## Ligand GTP UG 501



## Ligand GDP DM 500

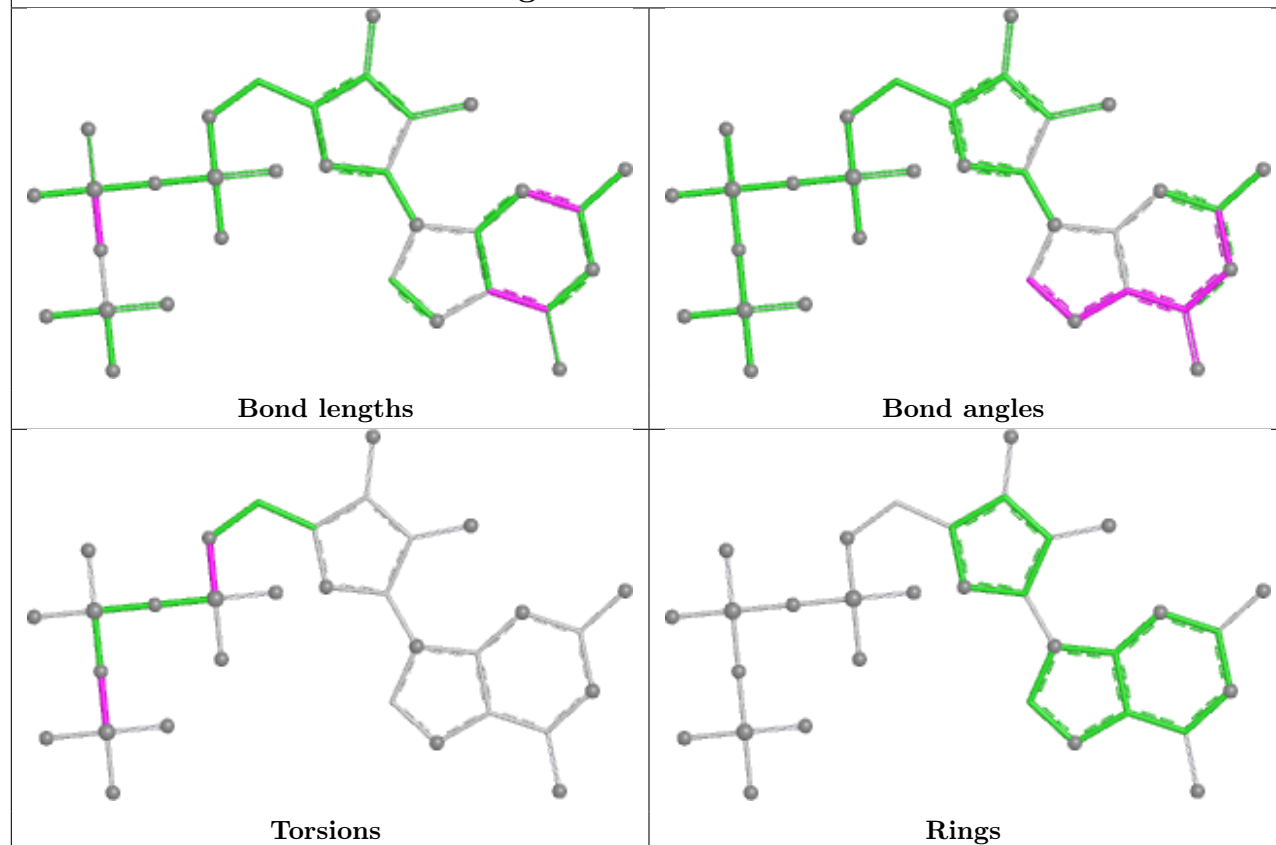




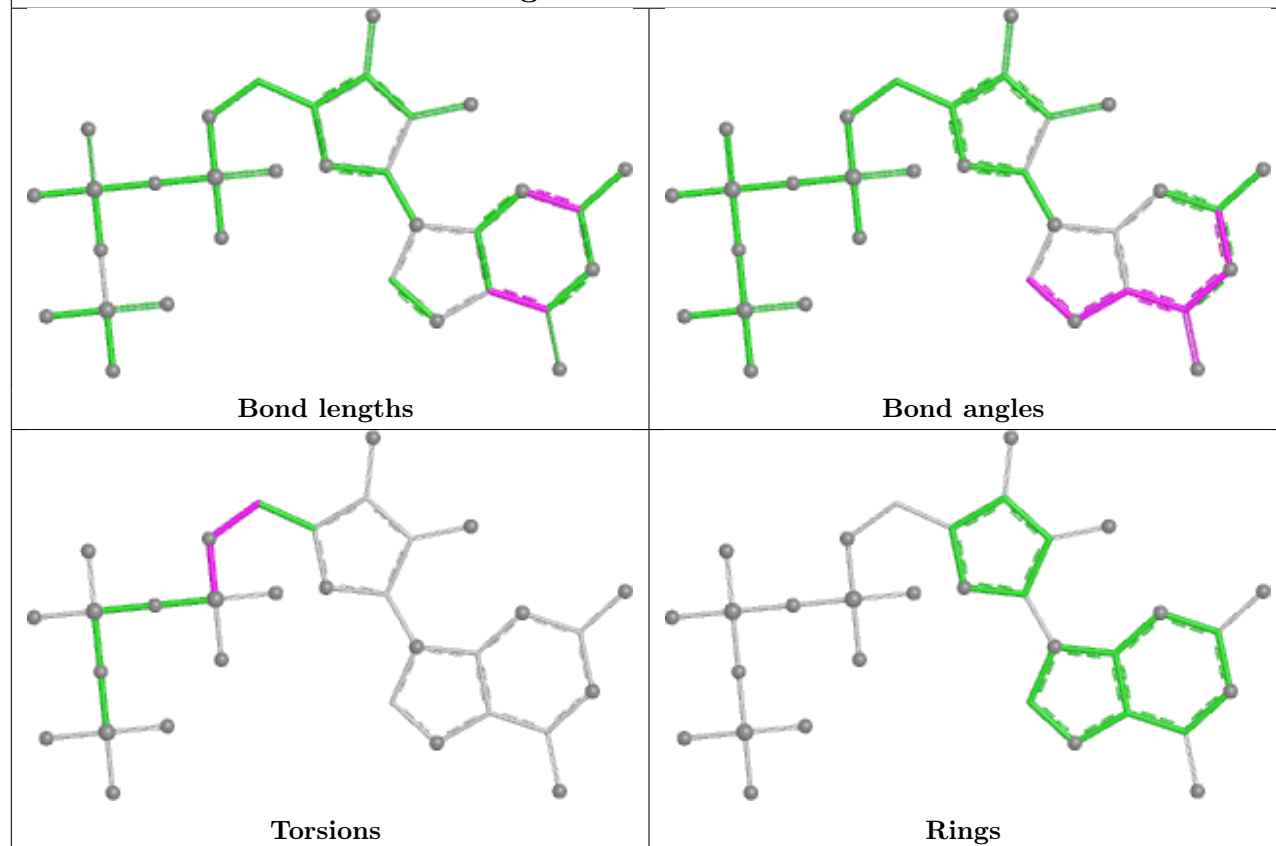




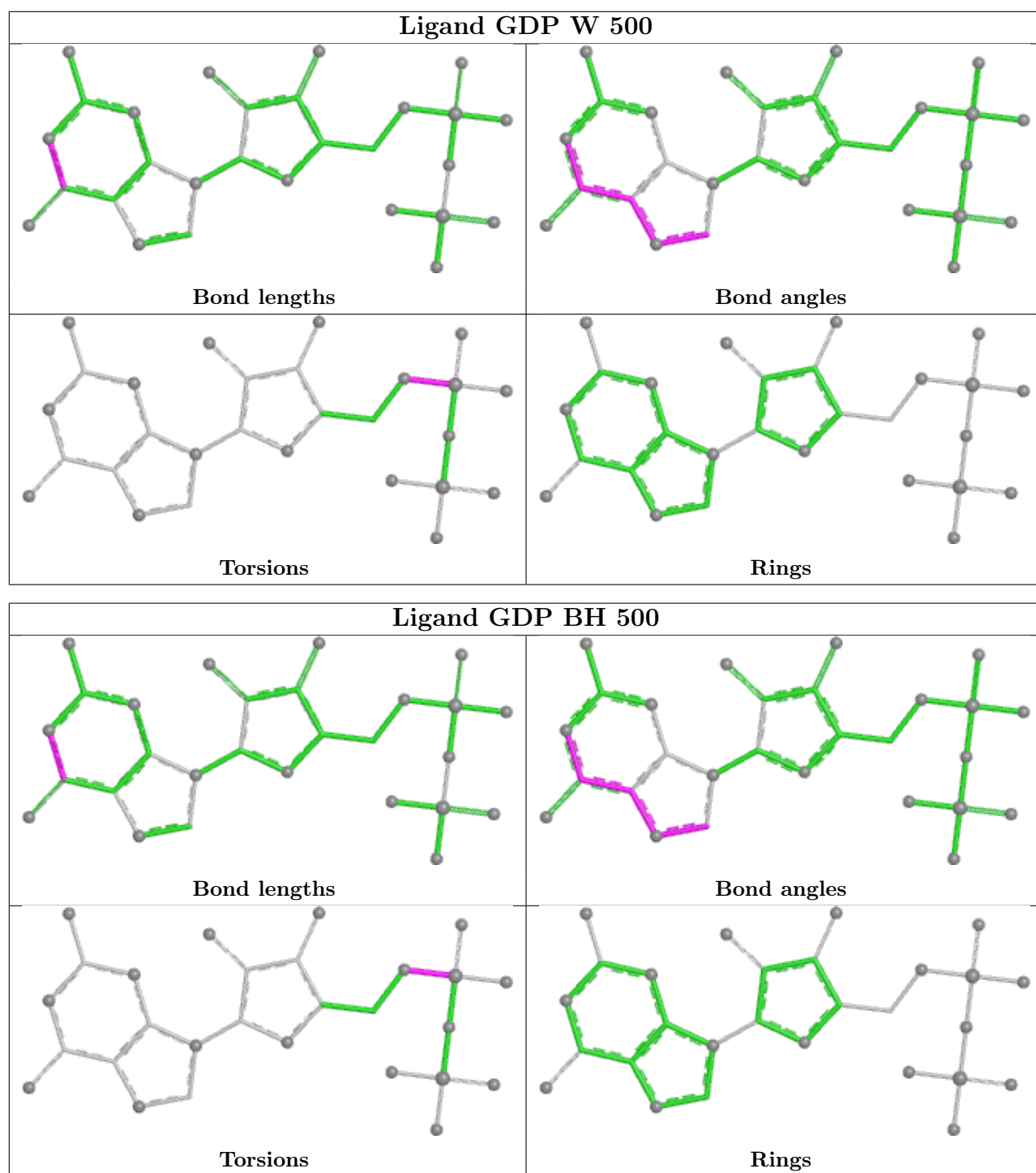
## Ligand GTP KF 501



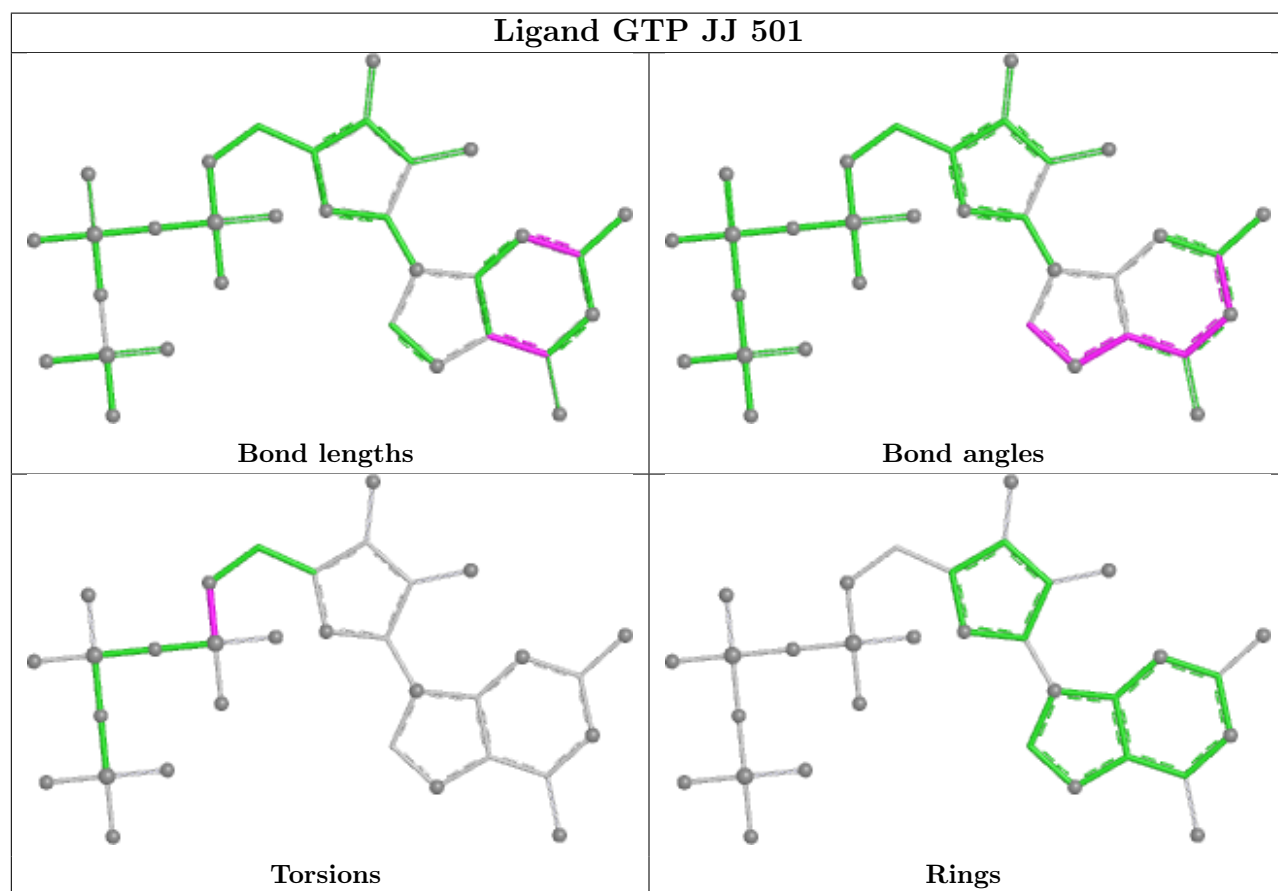
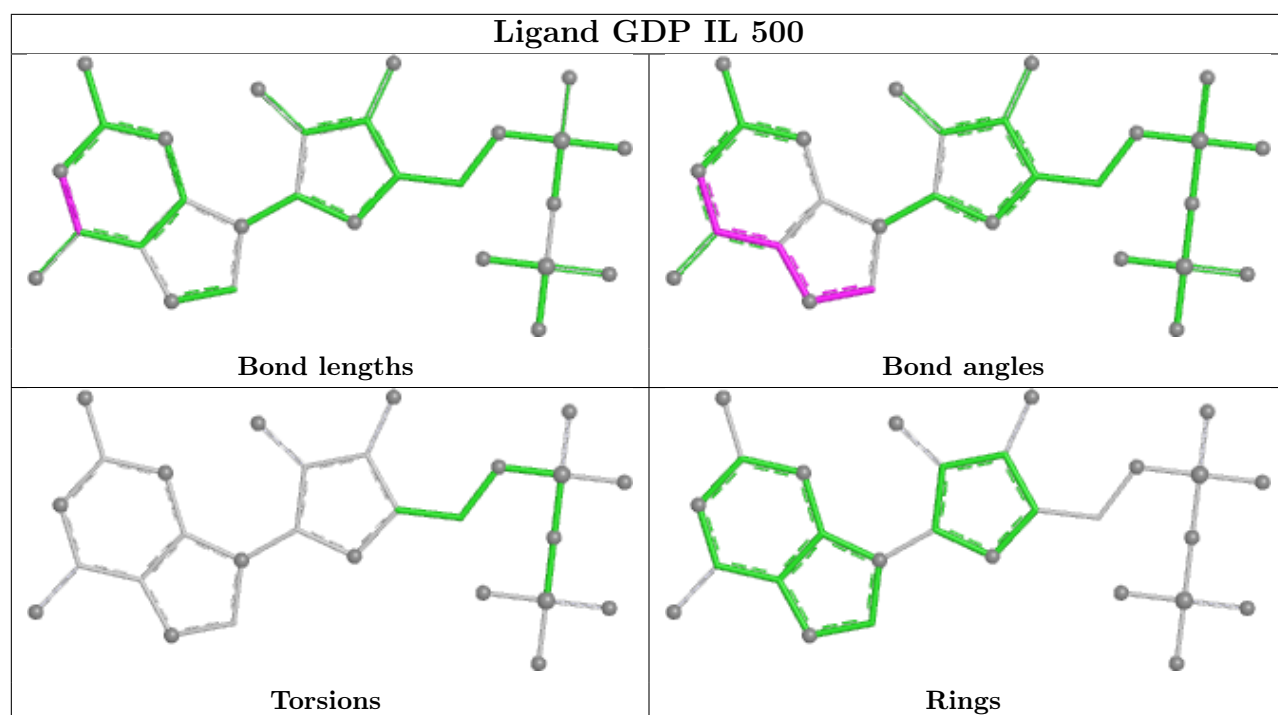
## Ligand GTP JN 501



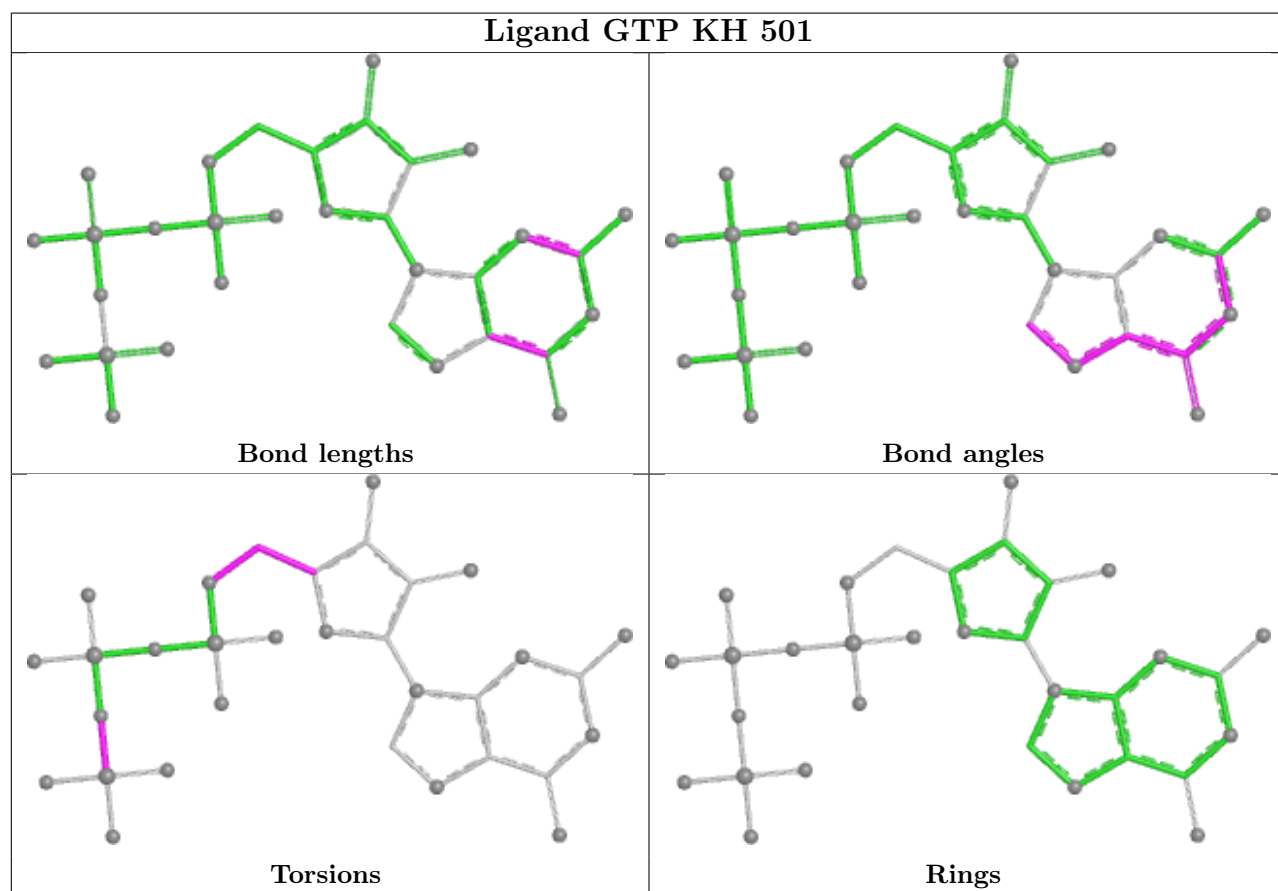
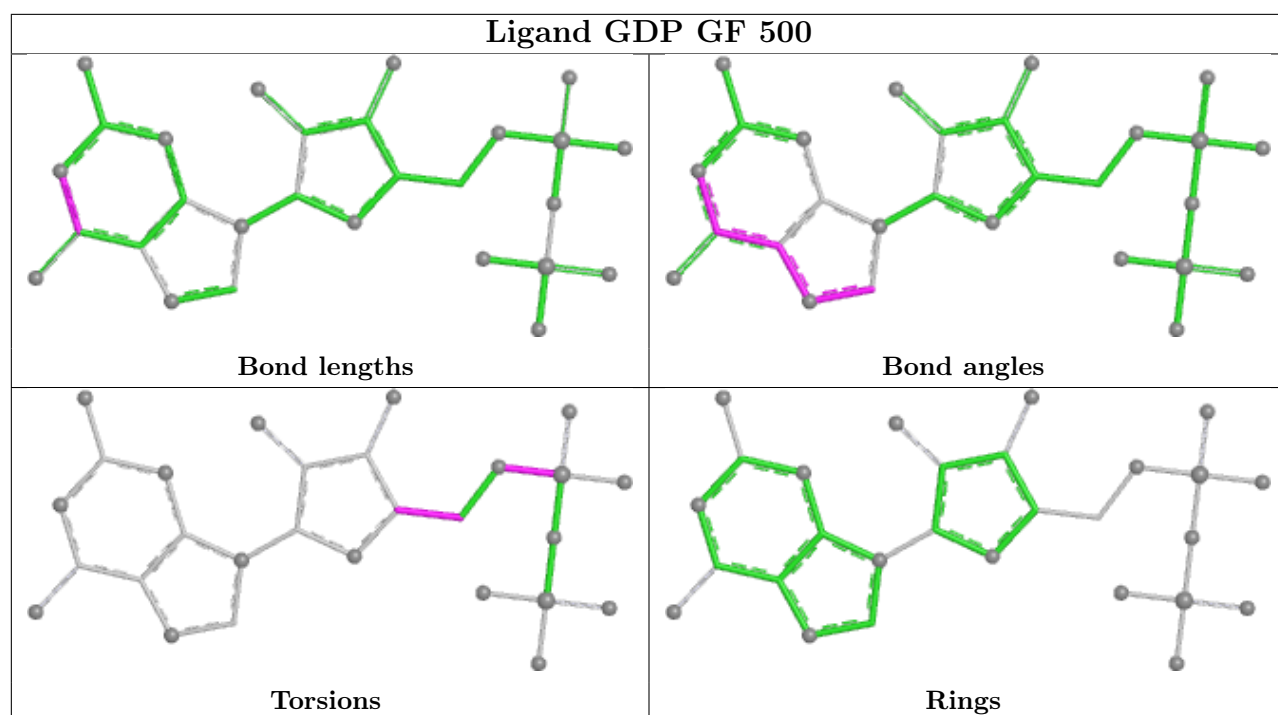




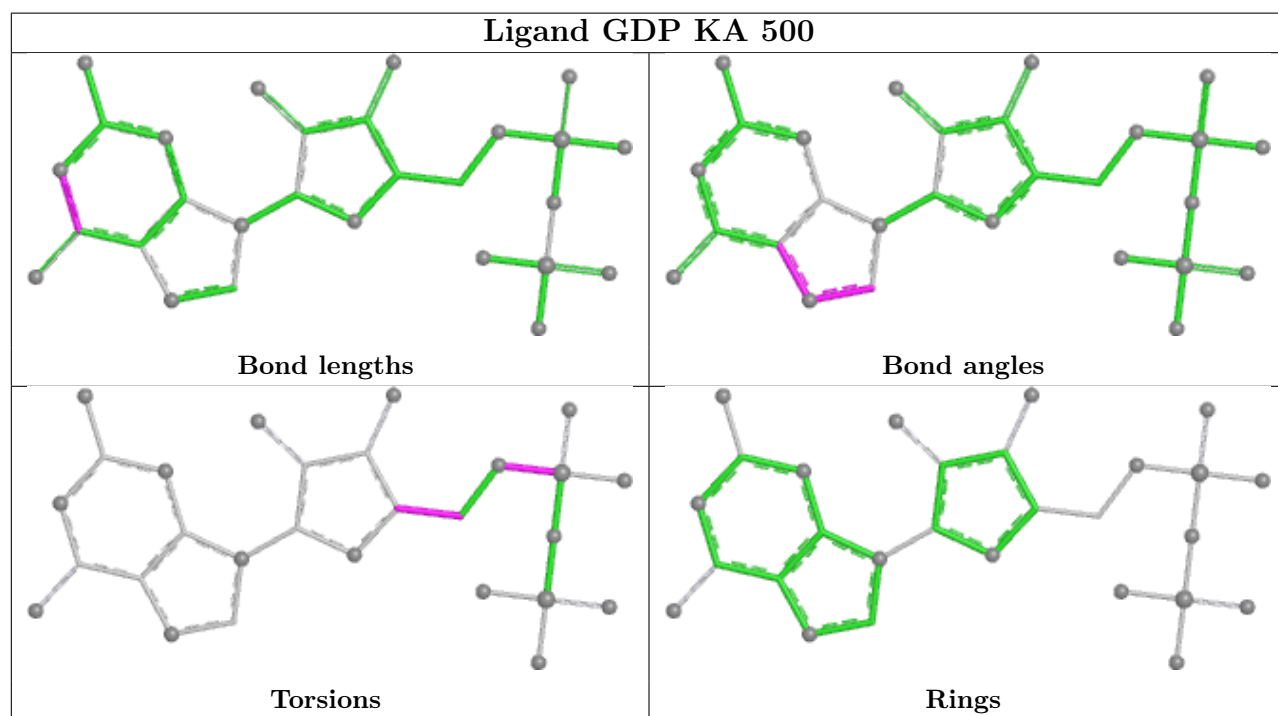
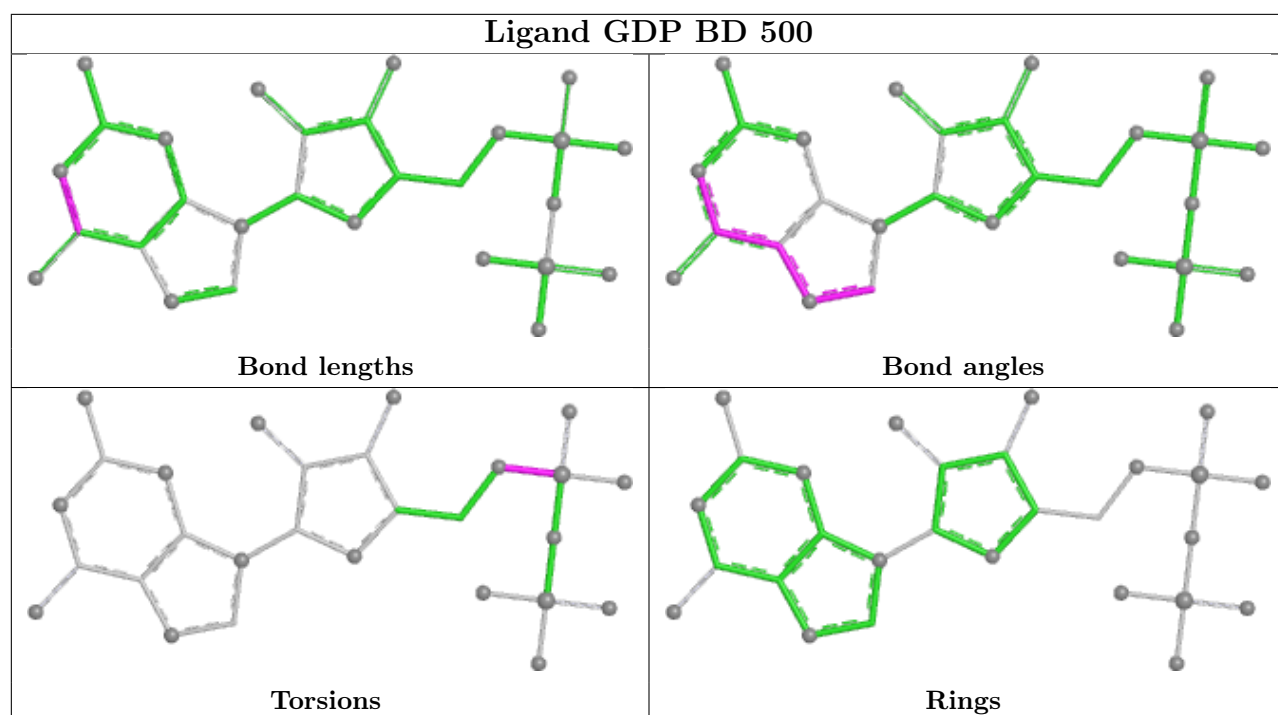






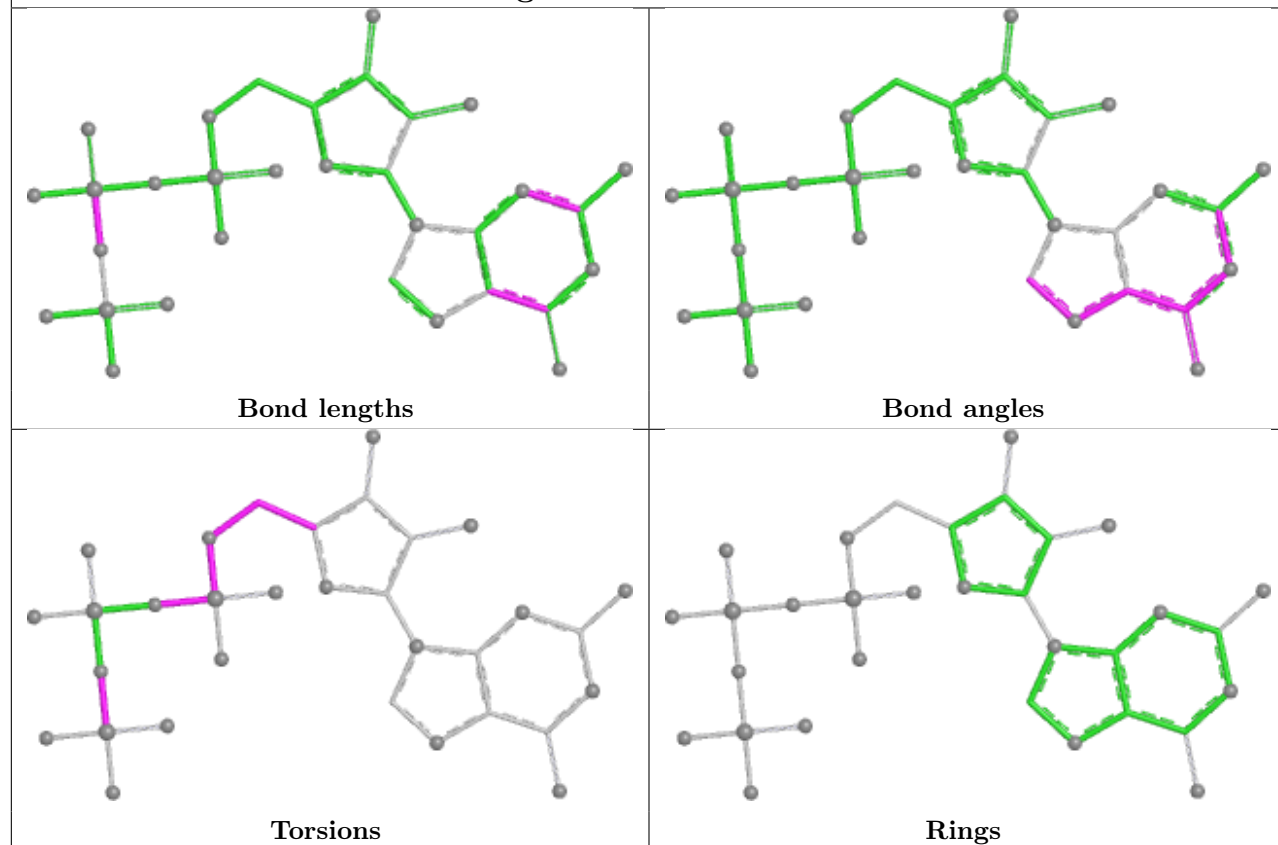




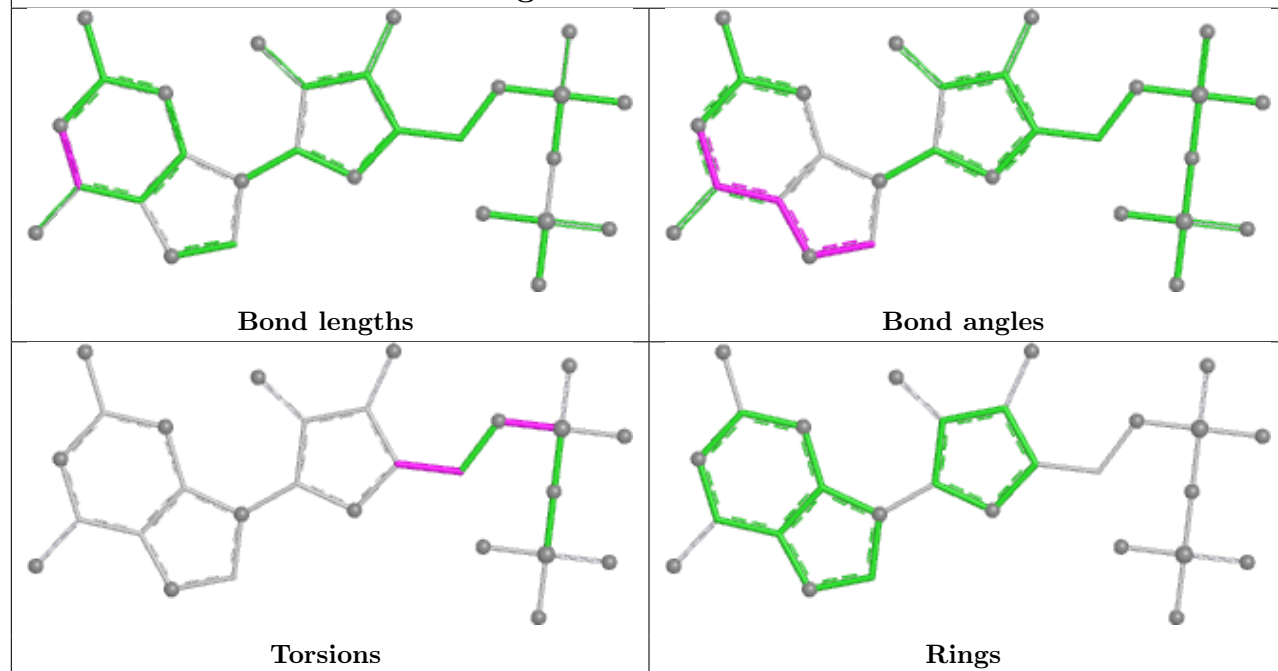




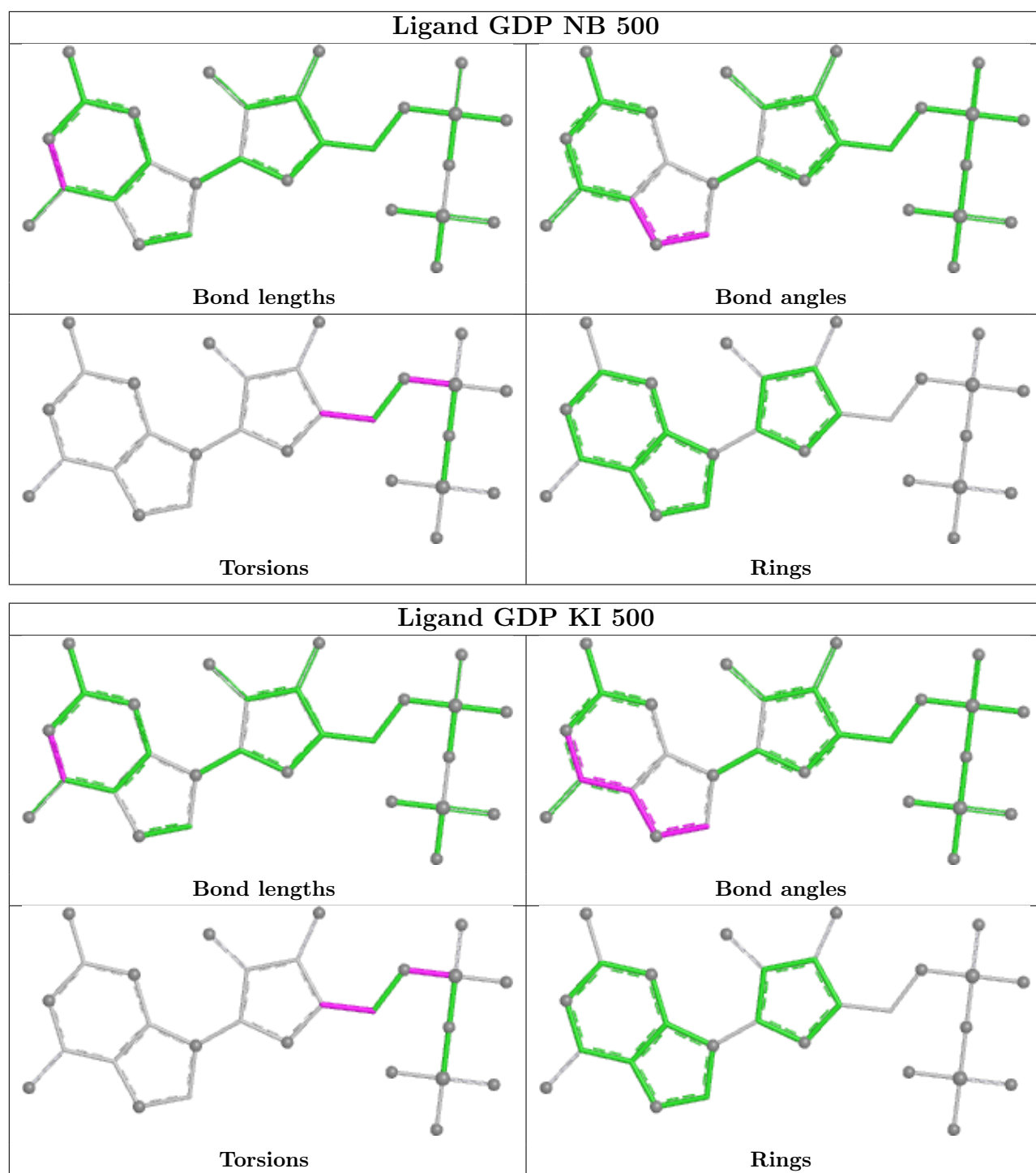
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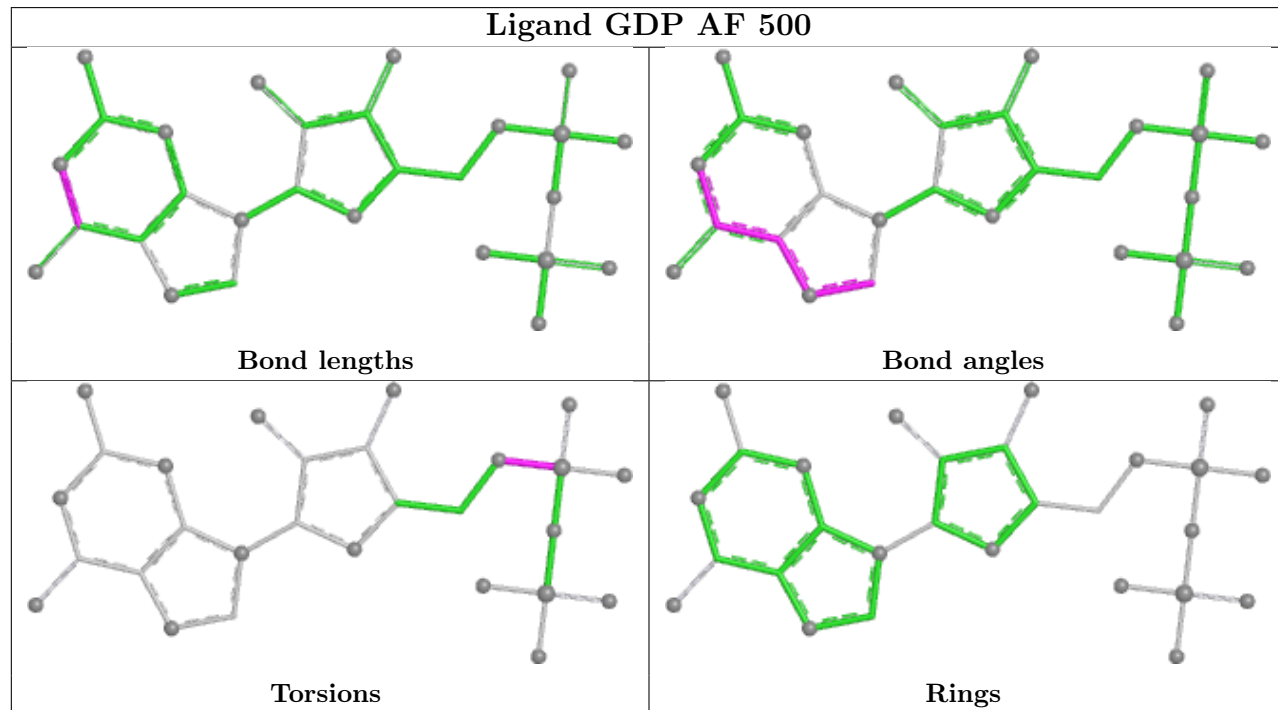
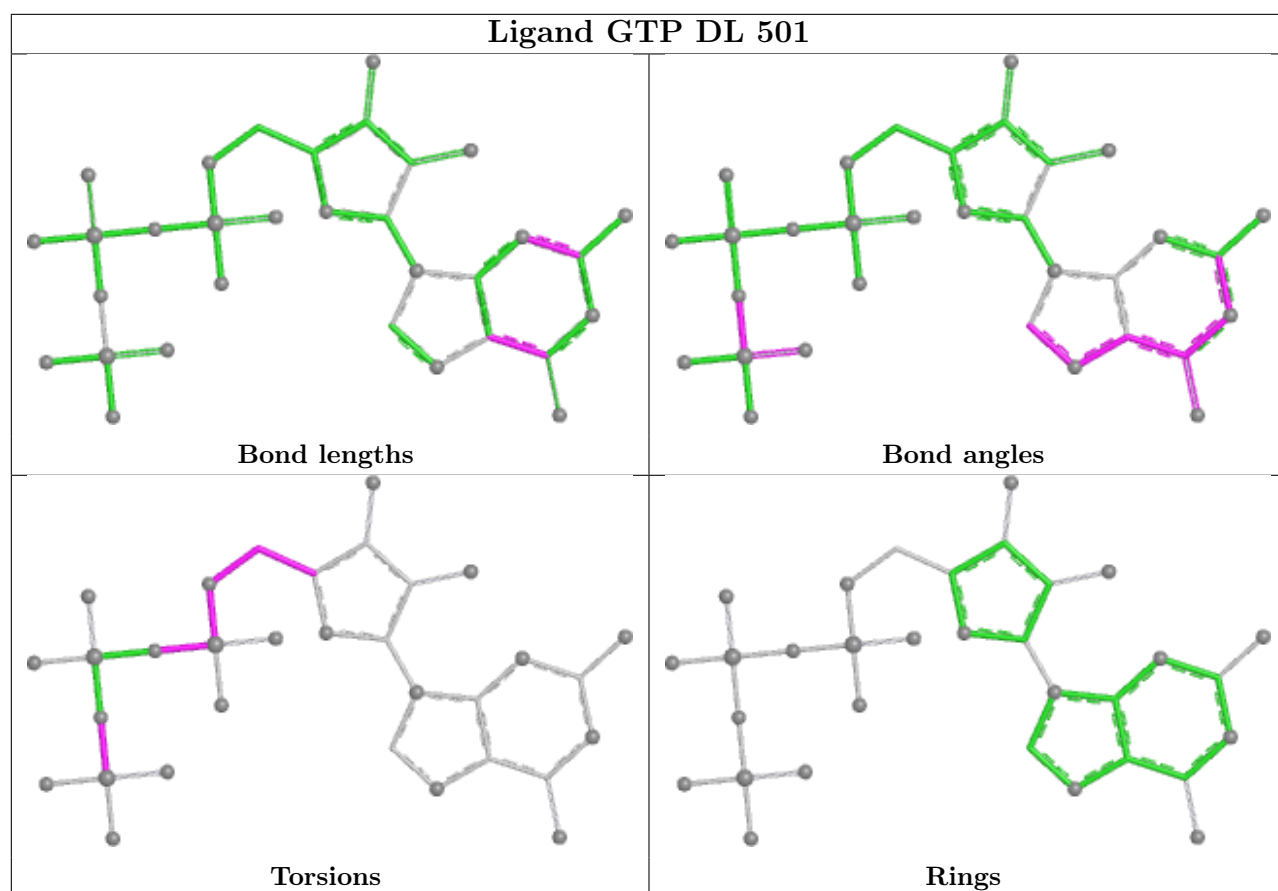
## Ligand GDP ED 500



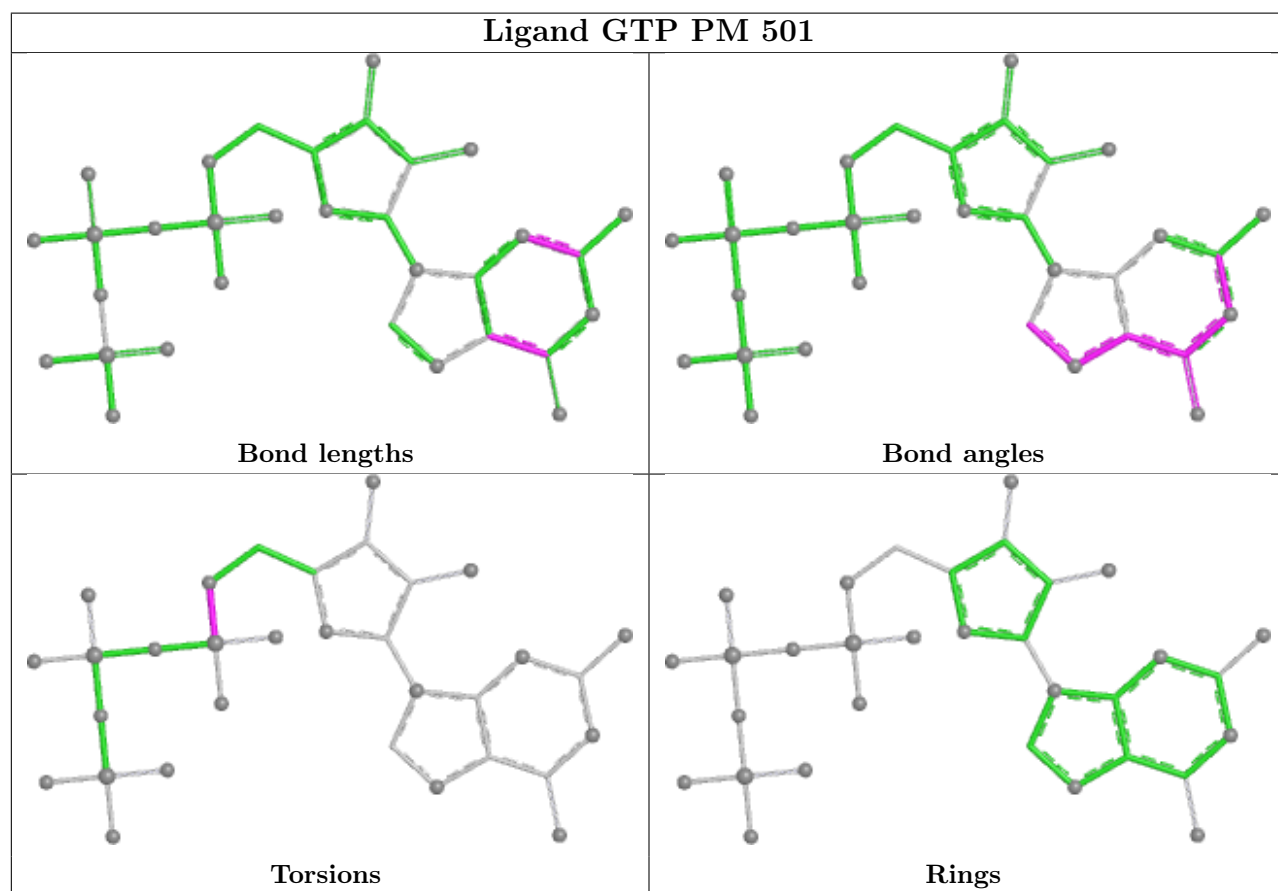
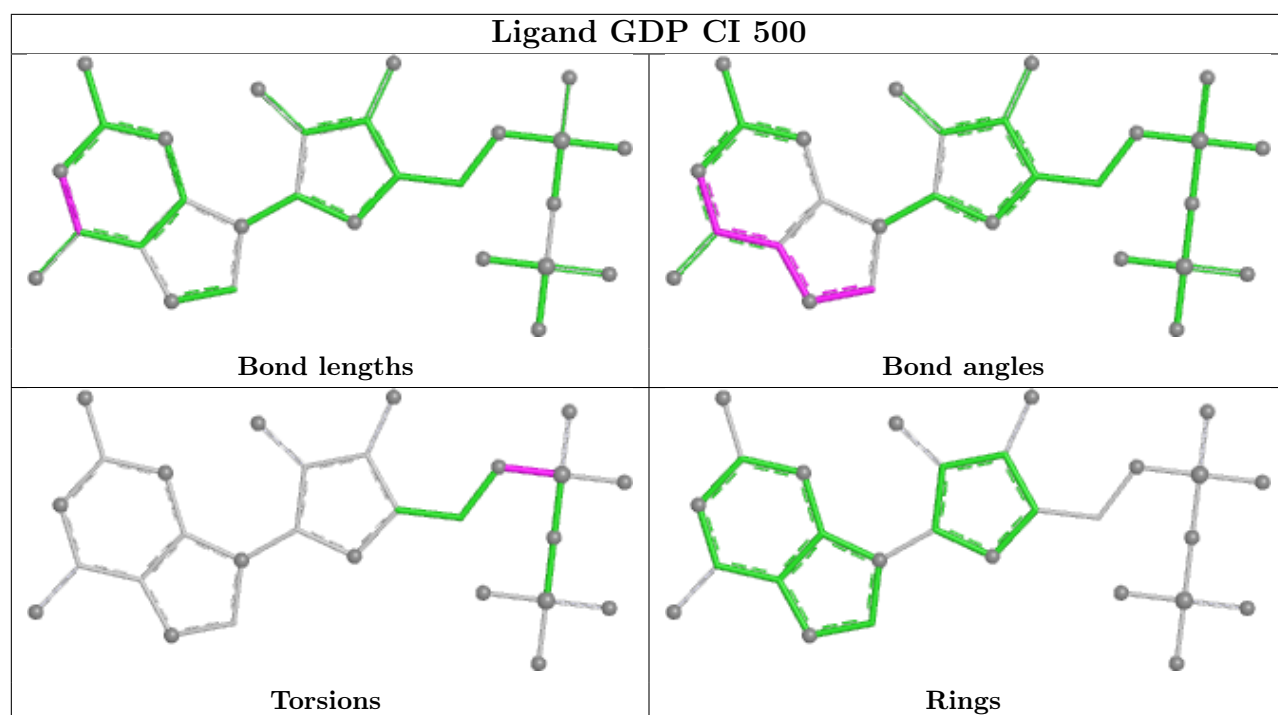




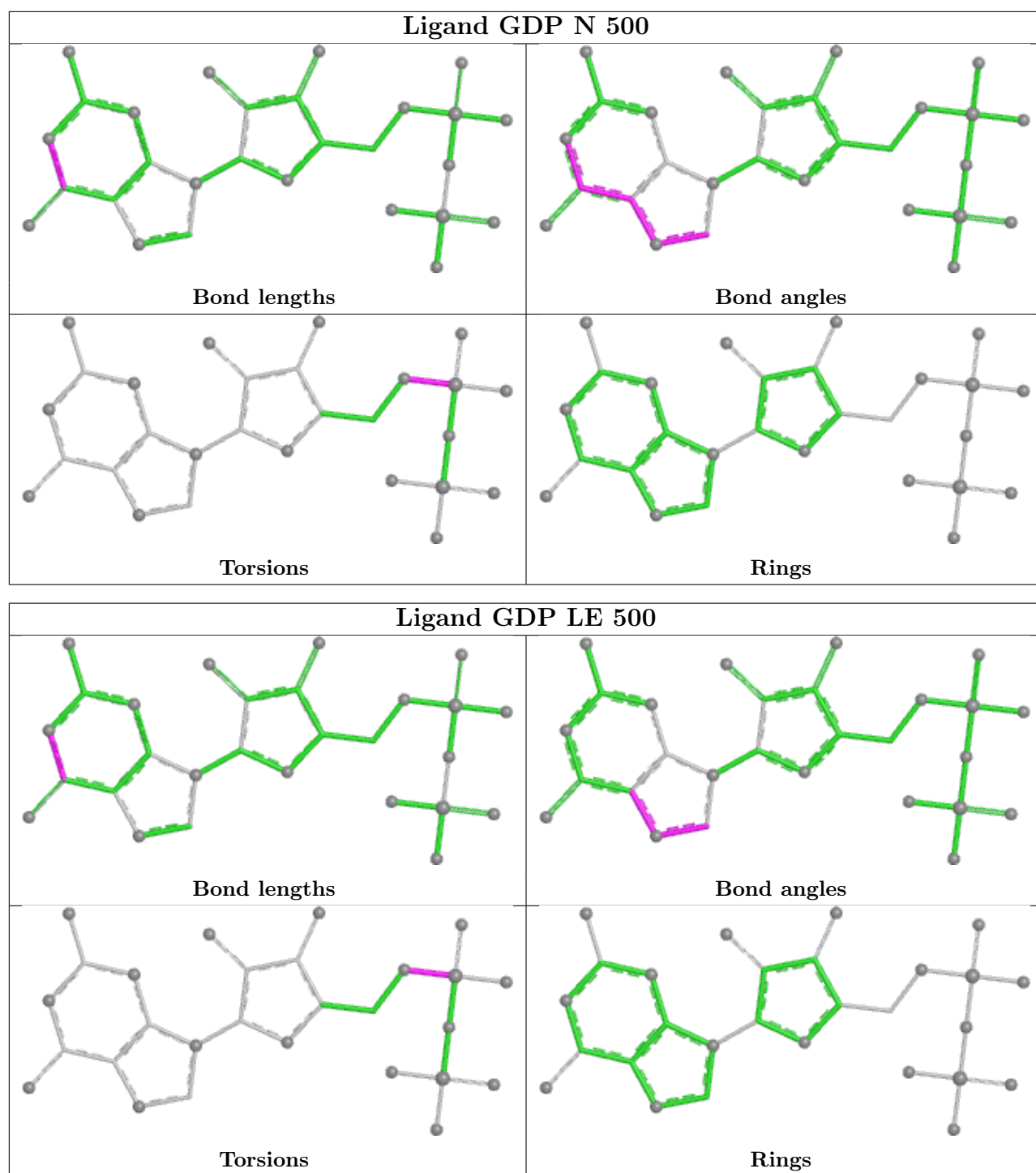




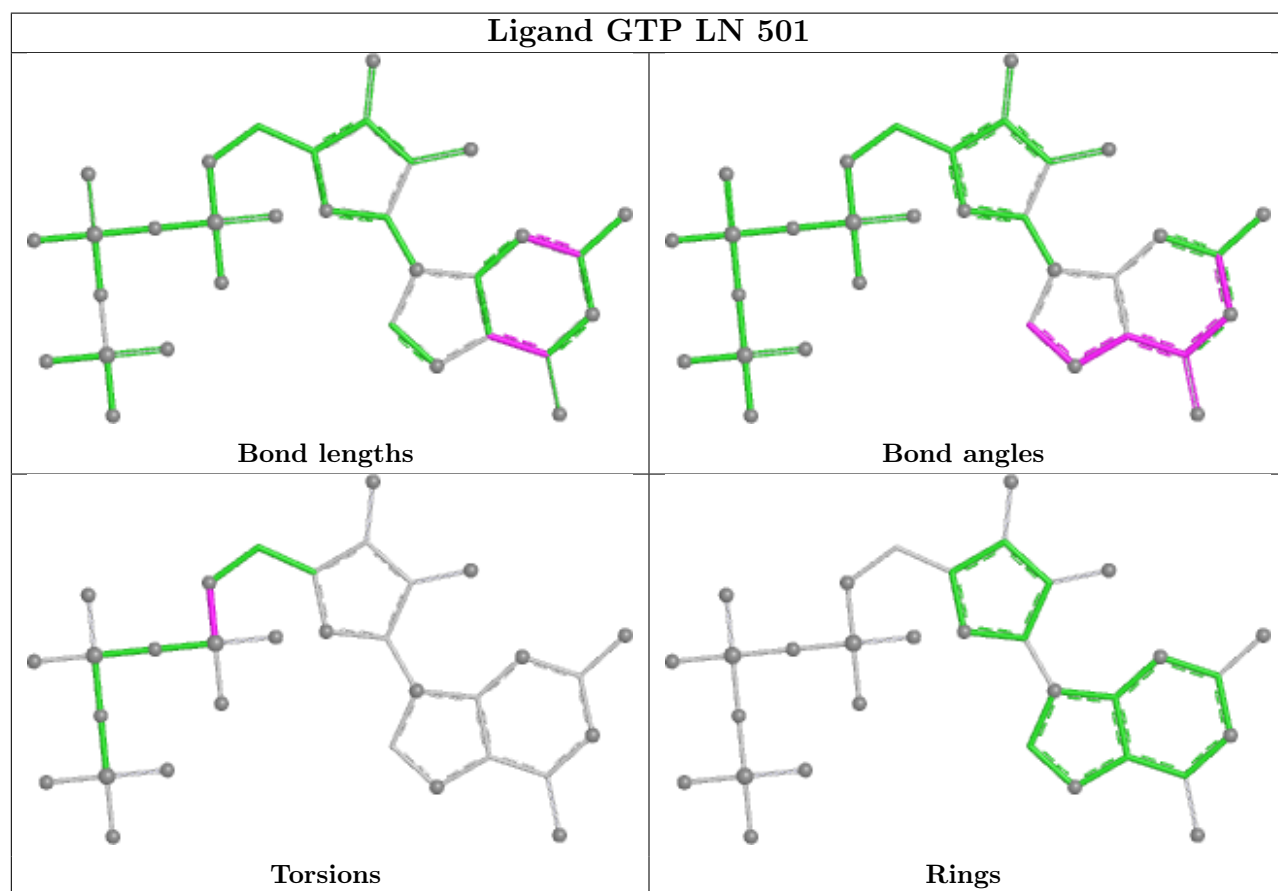
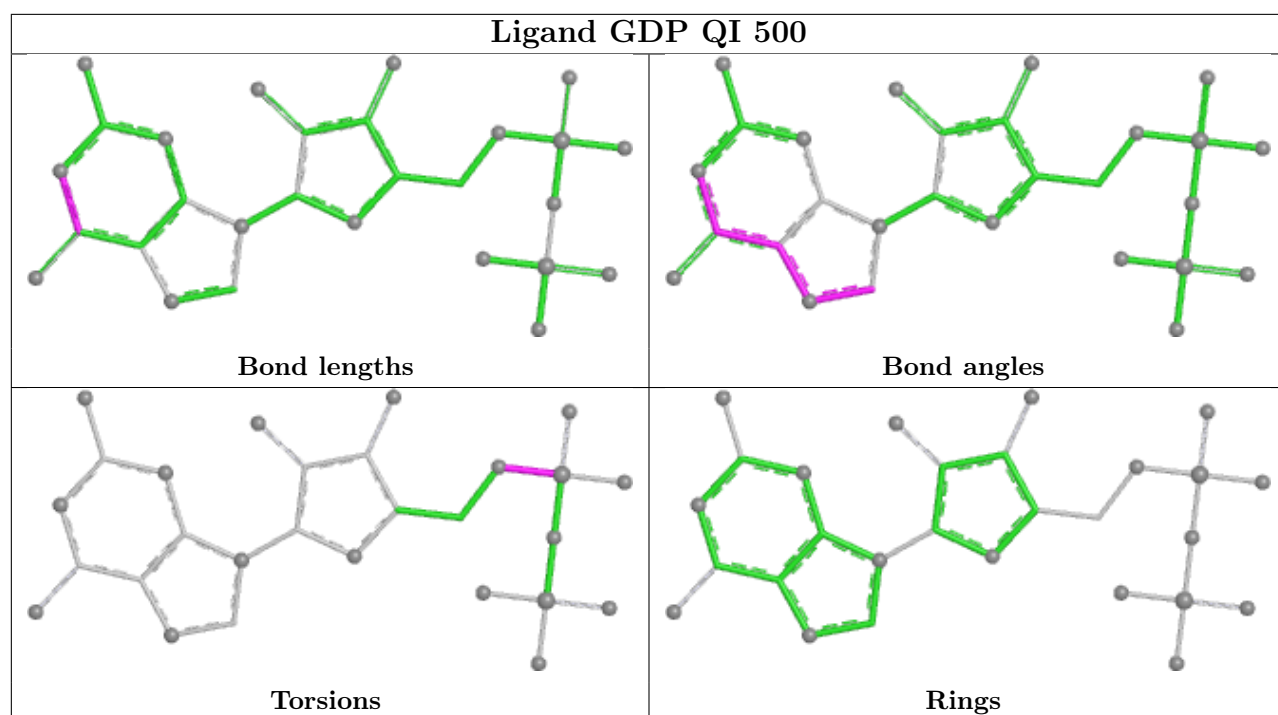






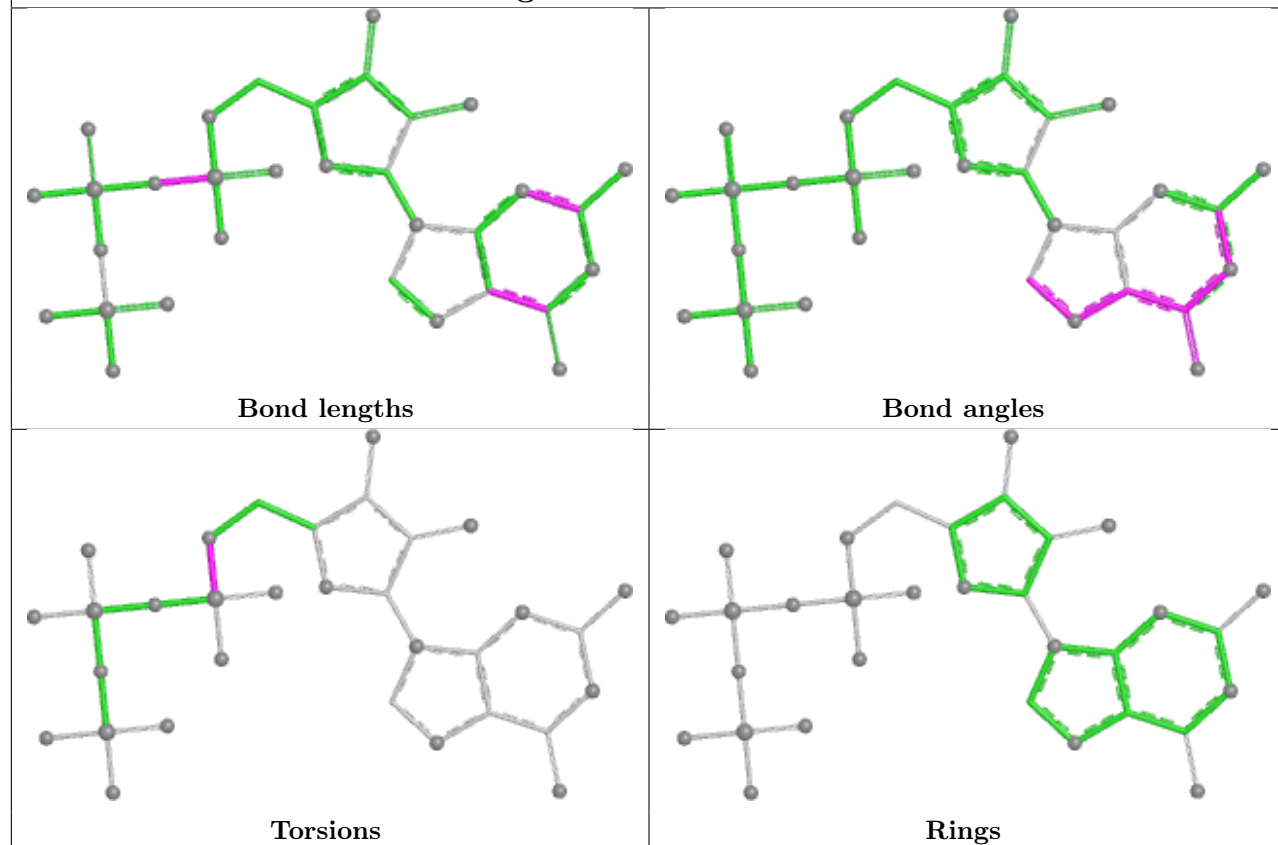




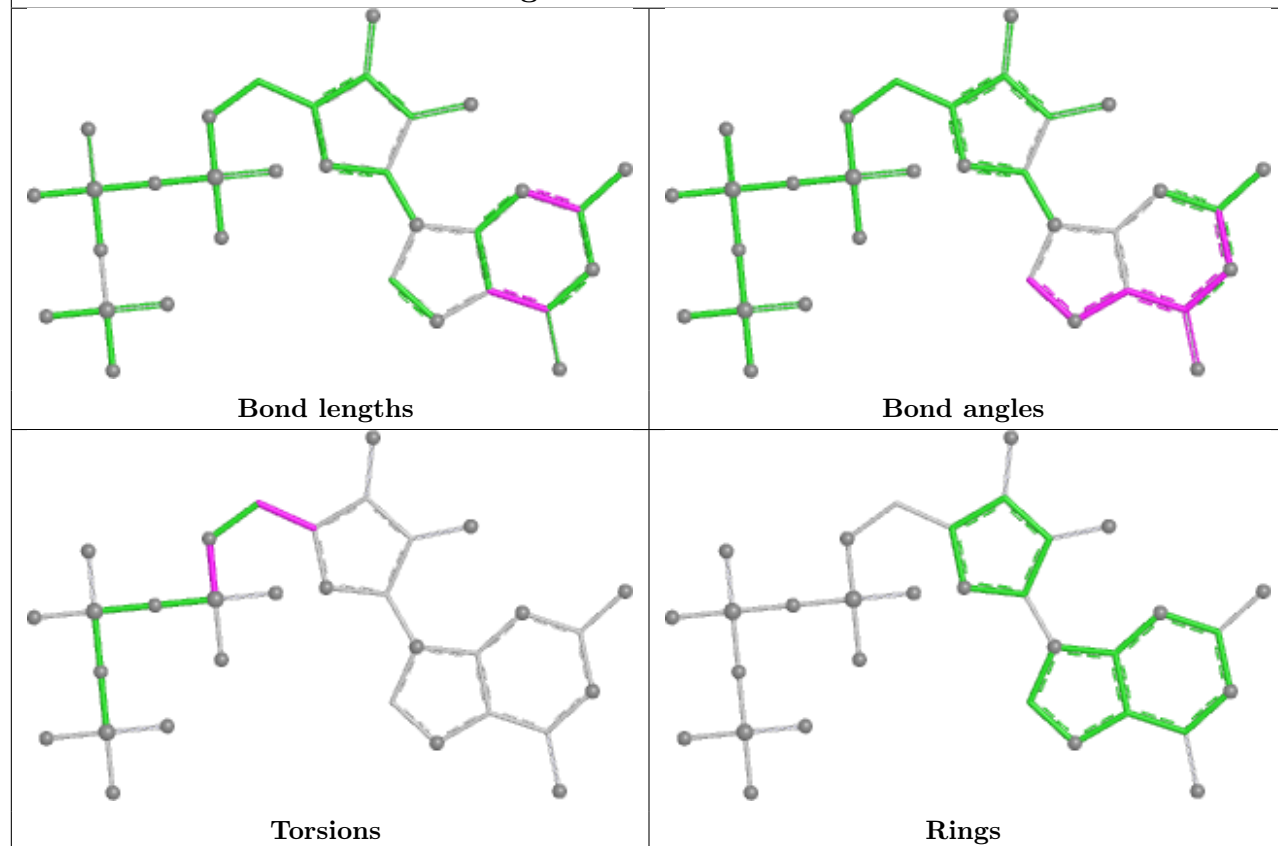




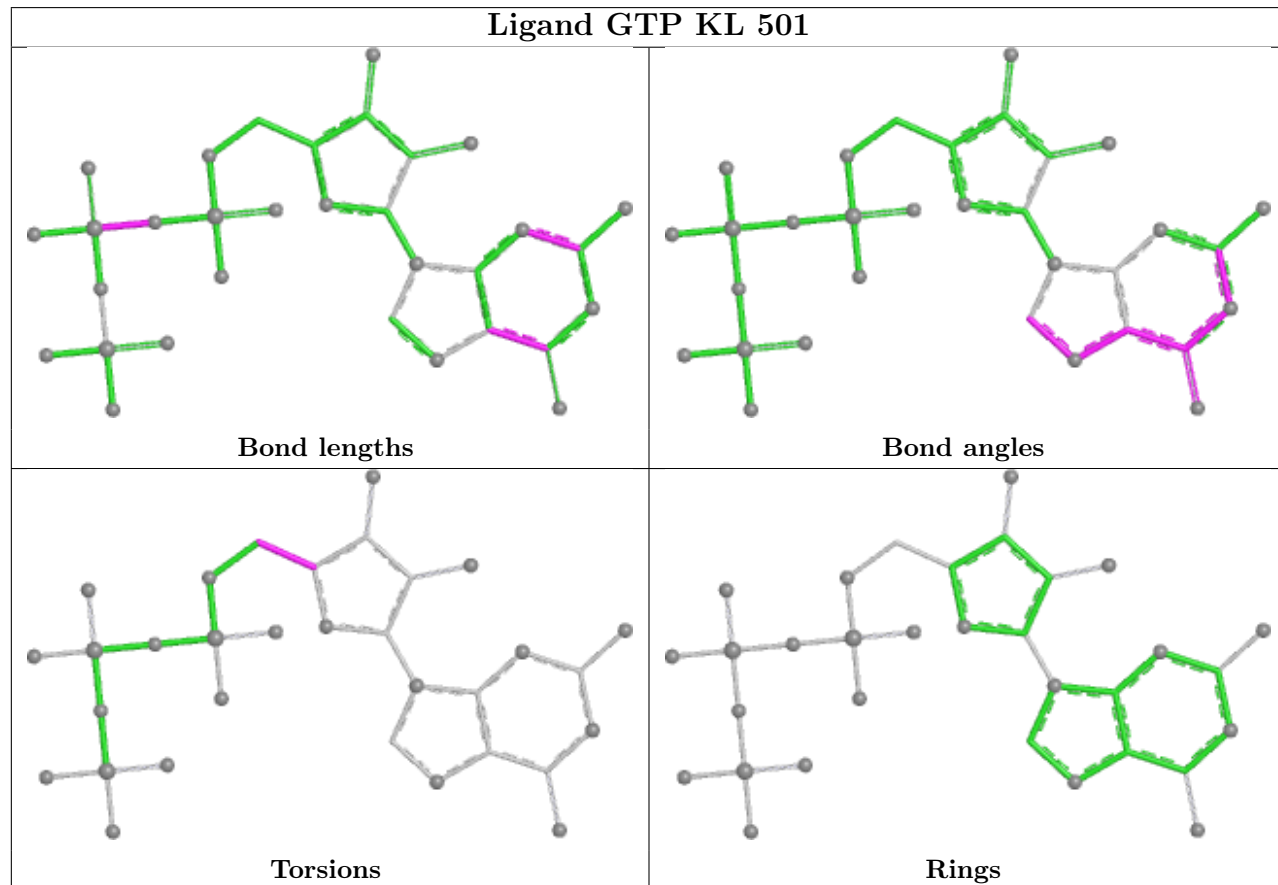
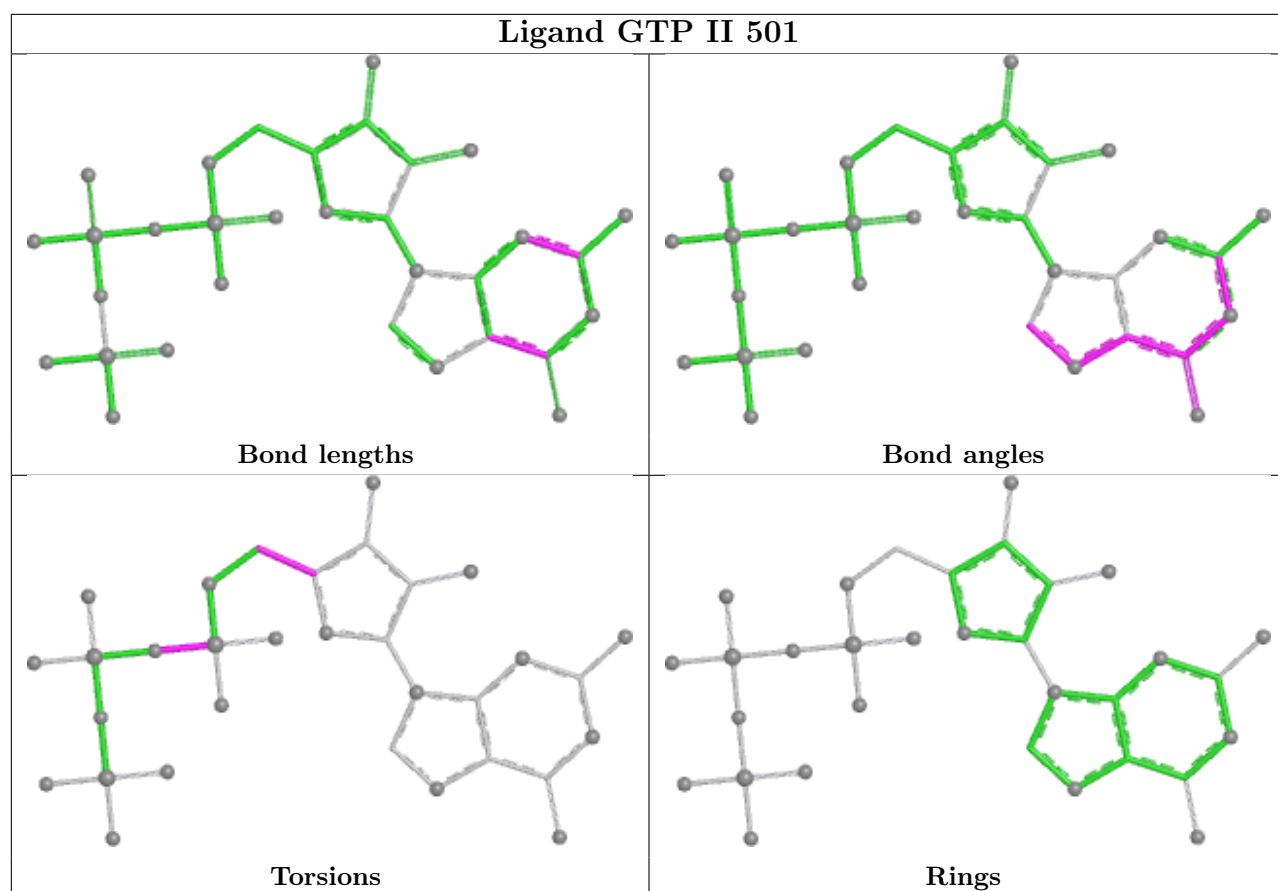
## Ligand GTP DB 501



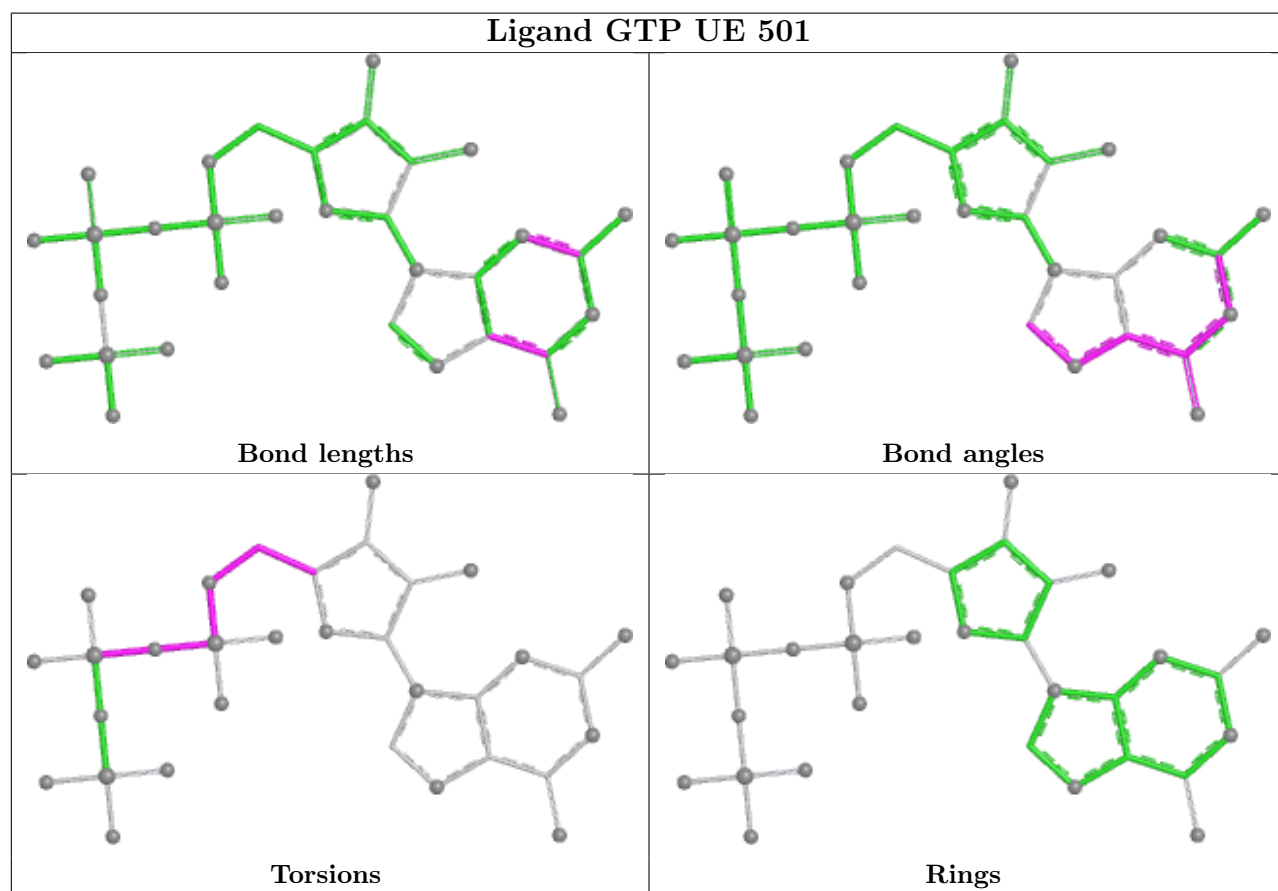
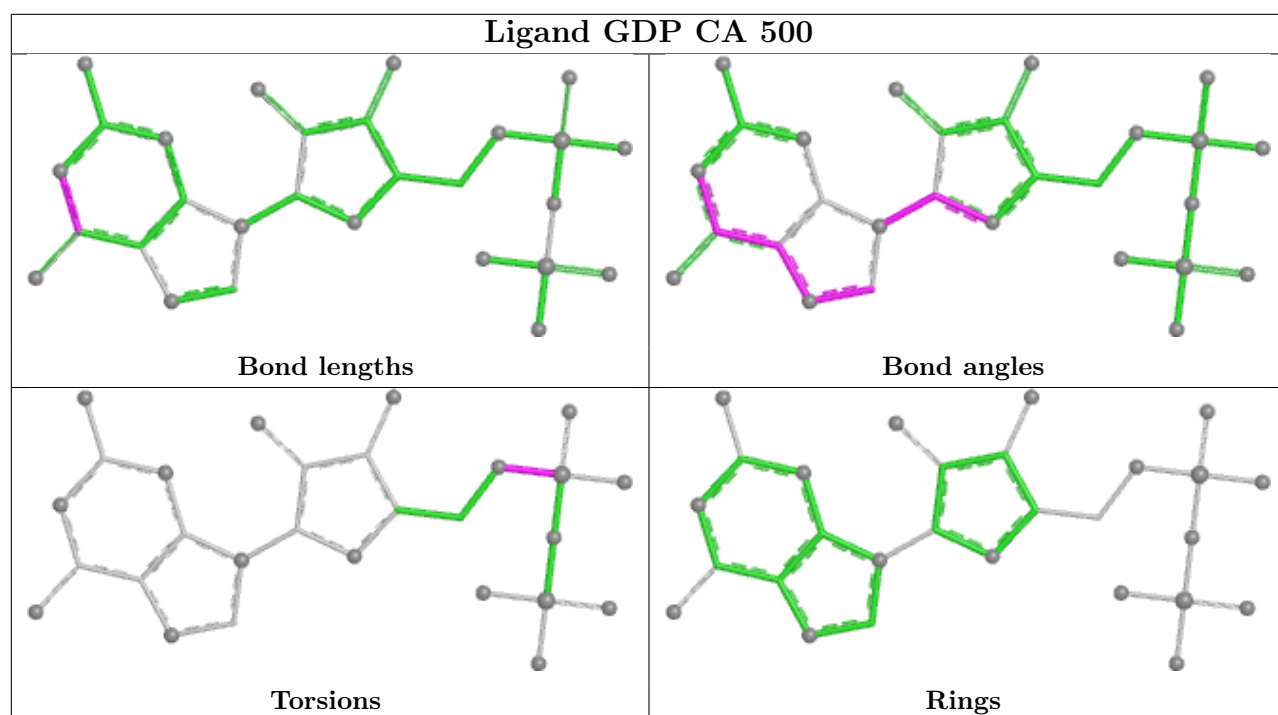
## Ligand GTP JH 501



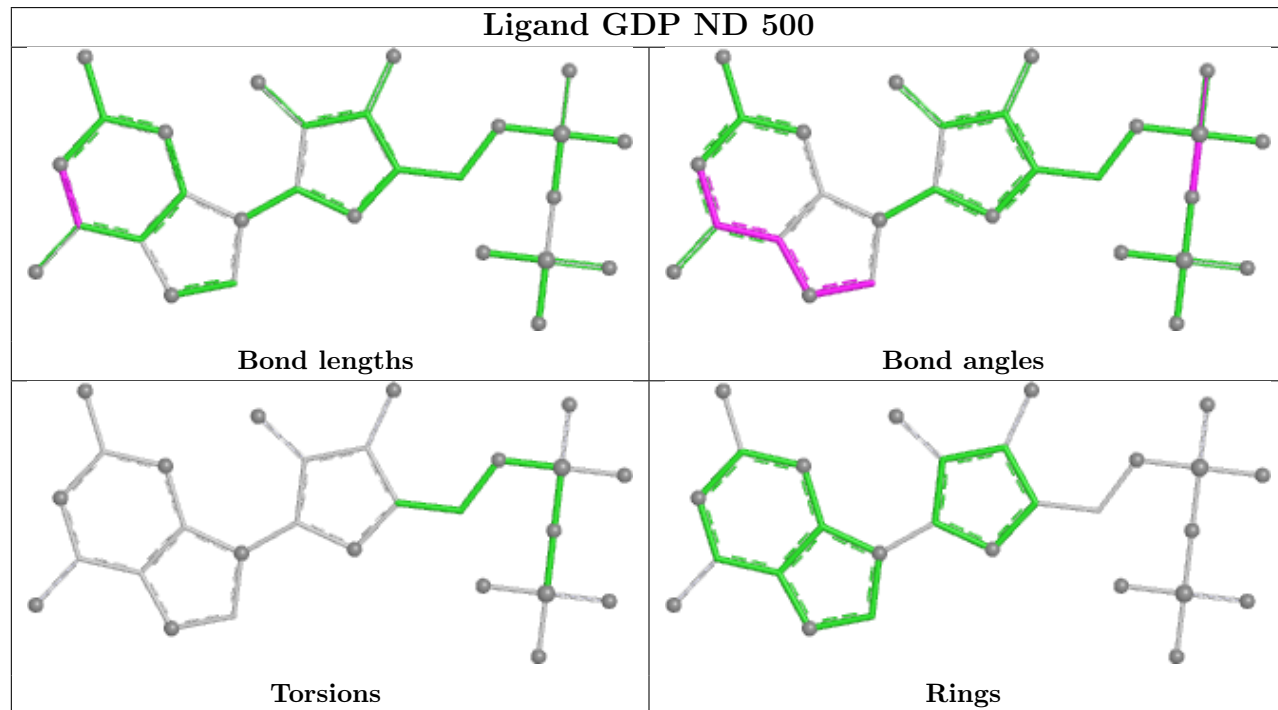
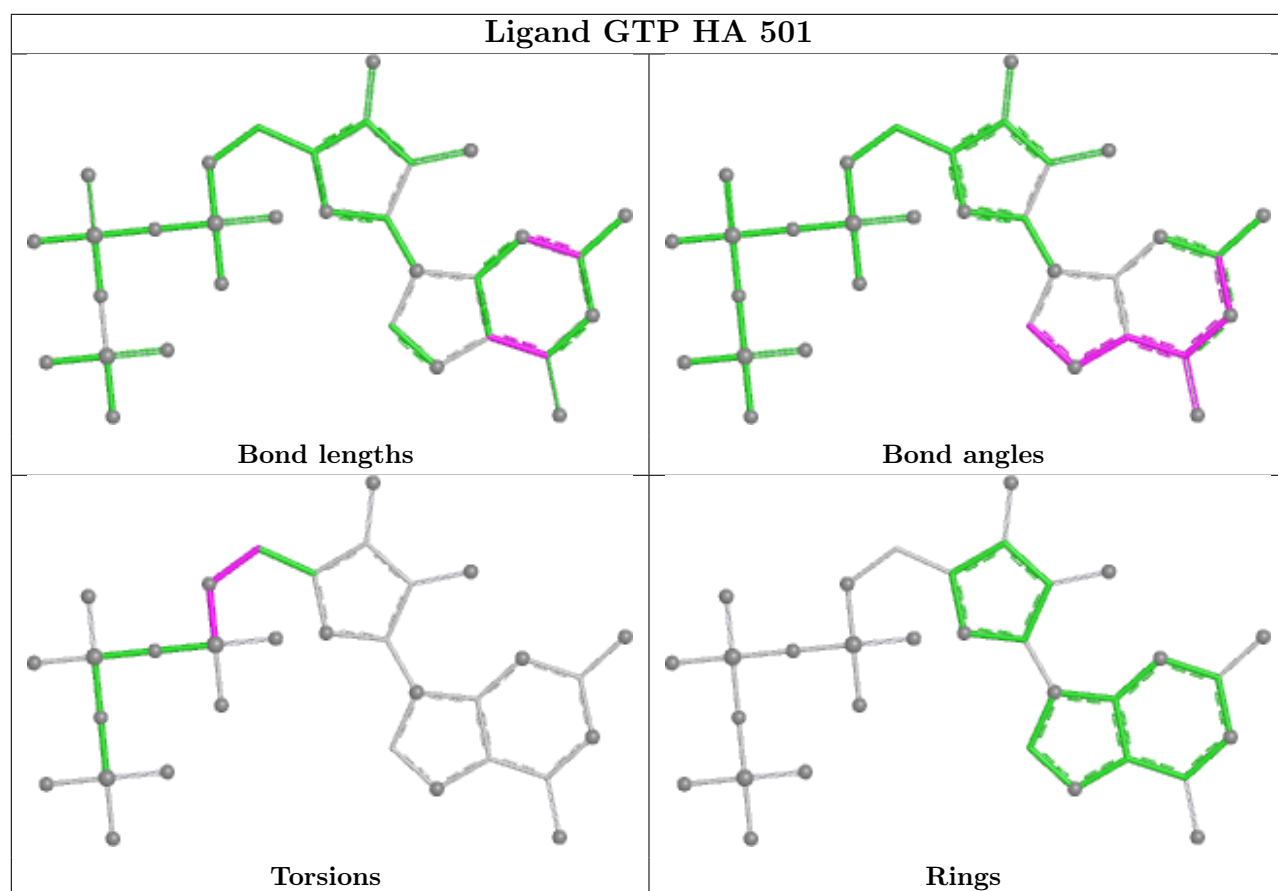




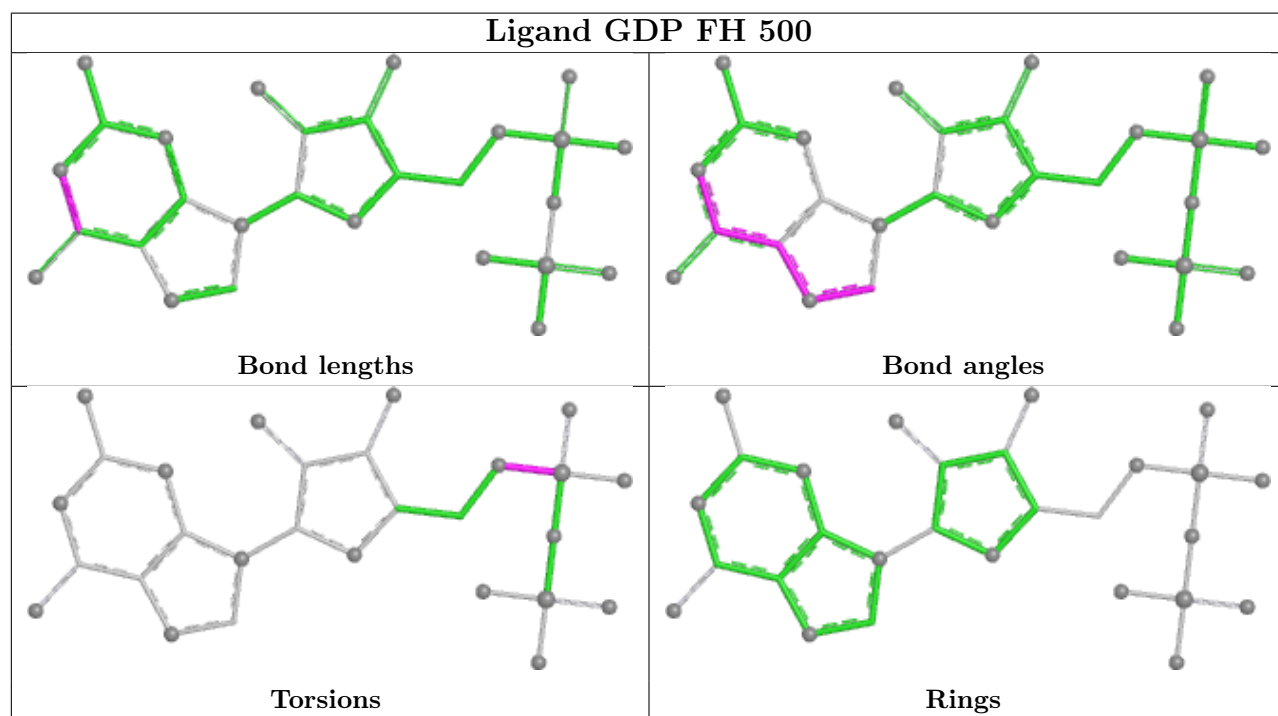
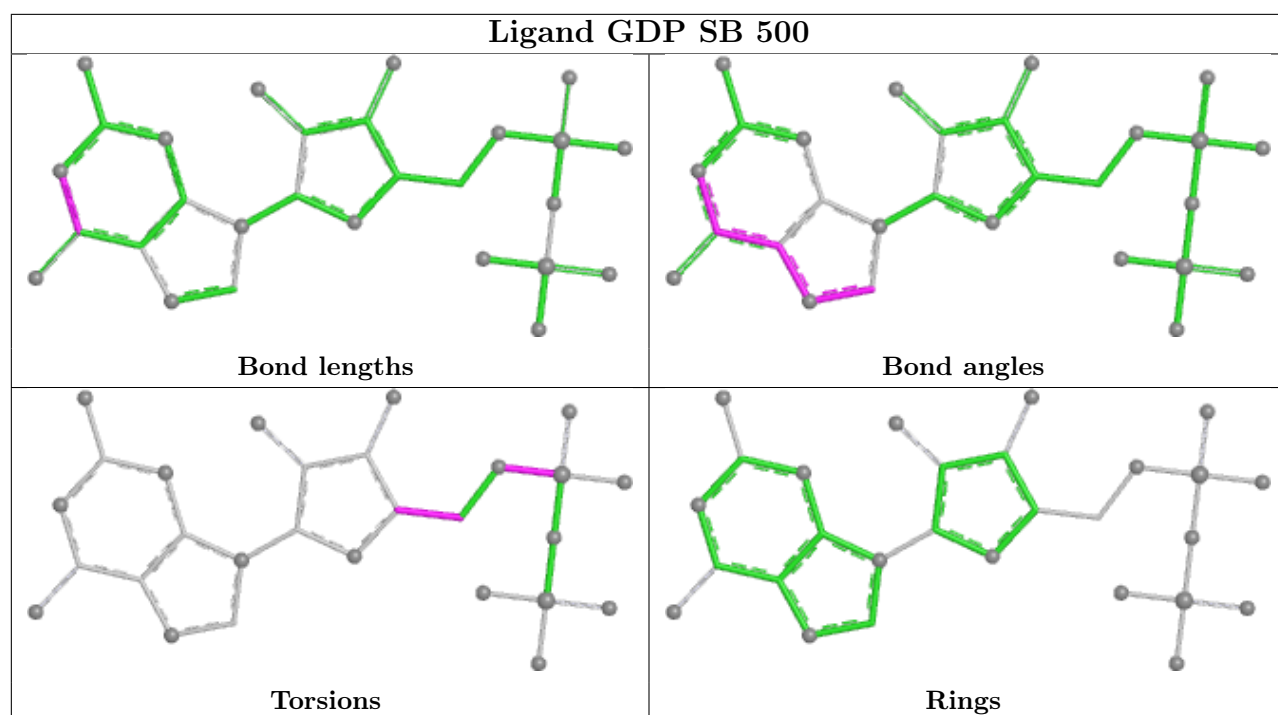




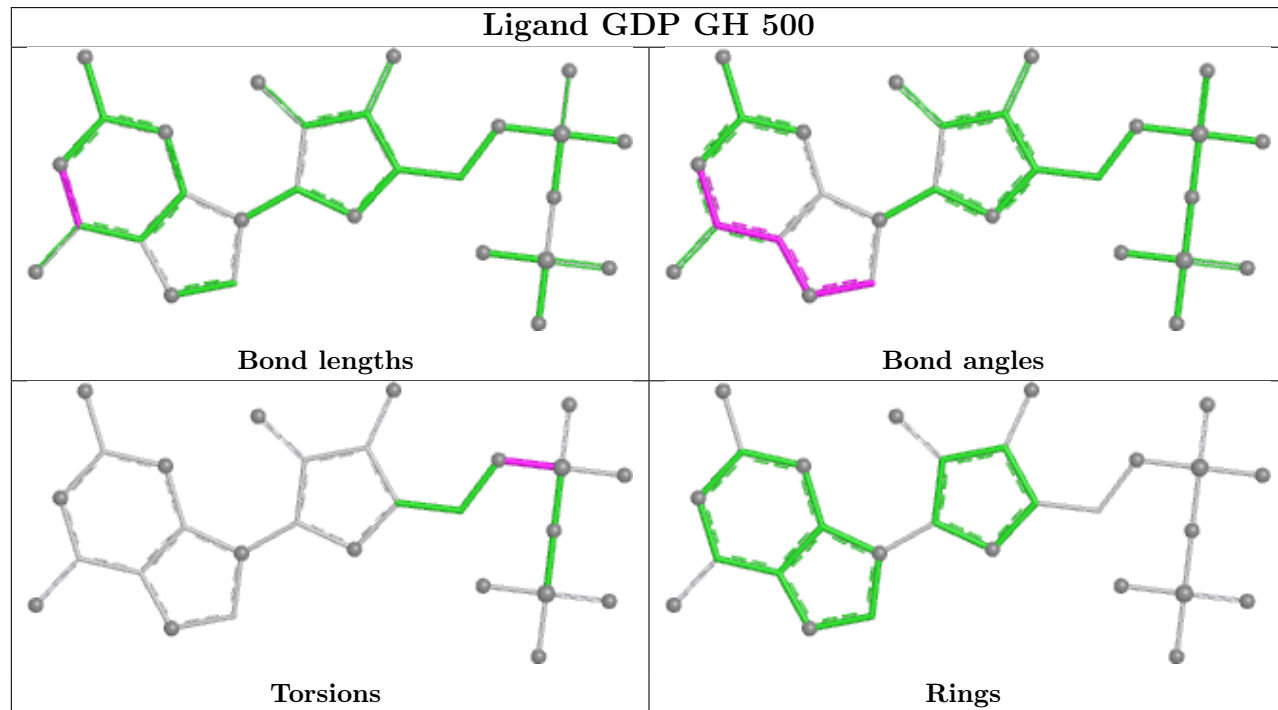
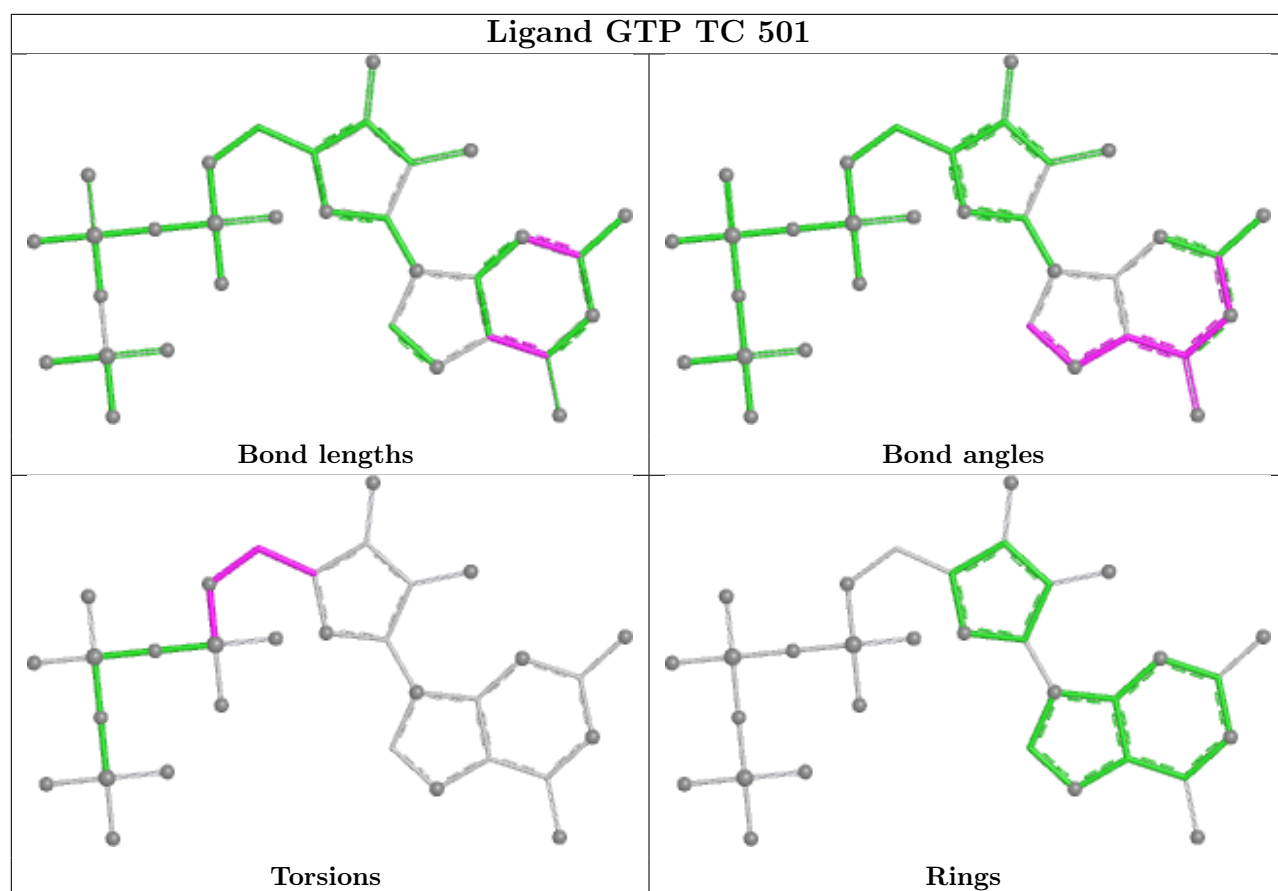




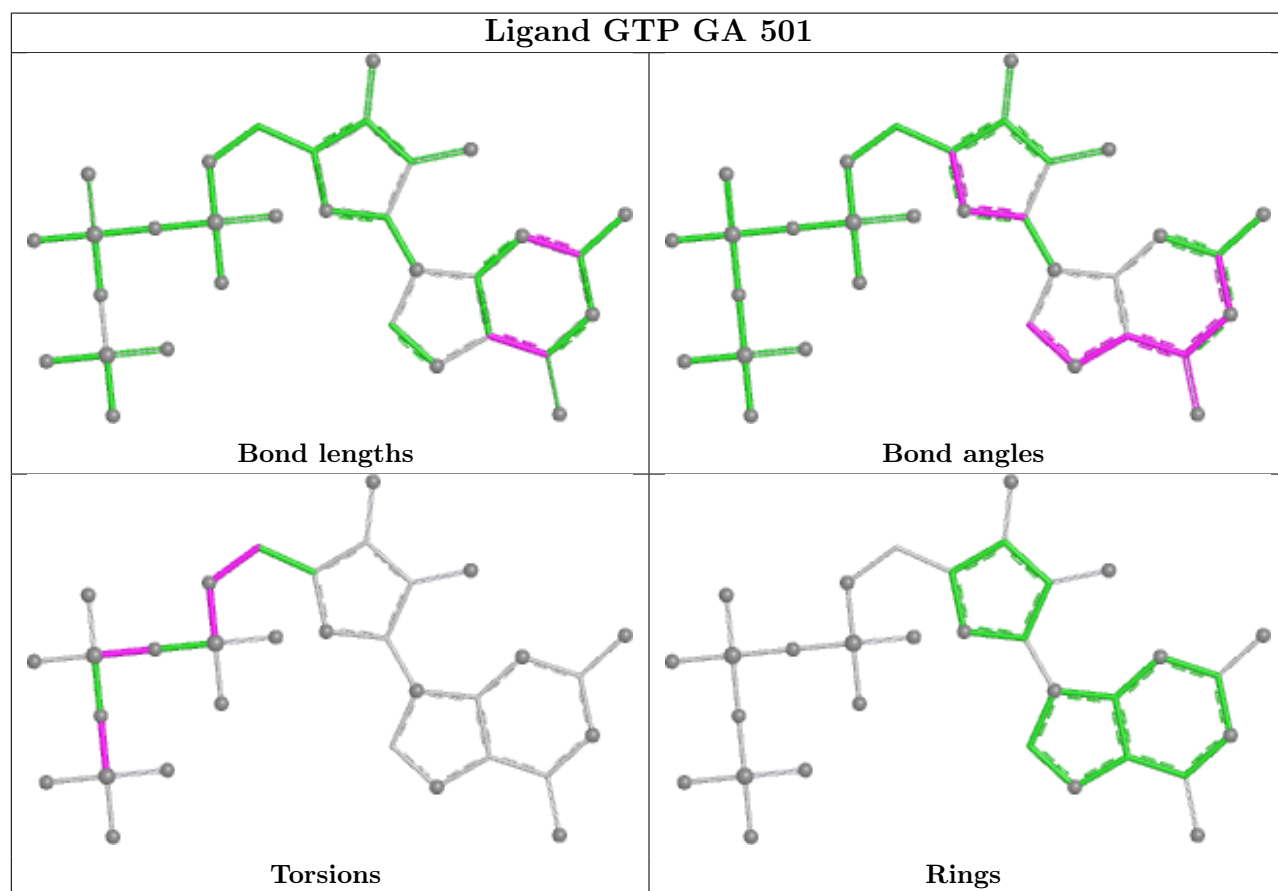
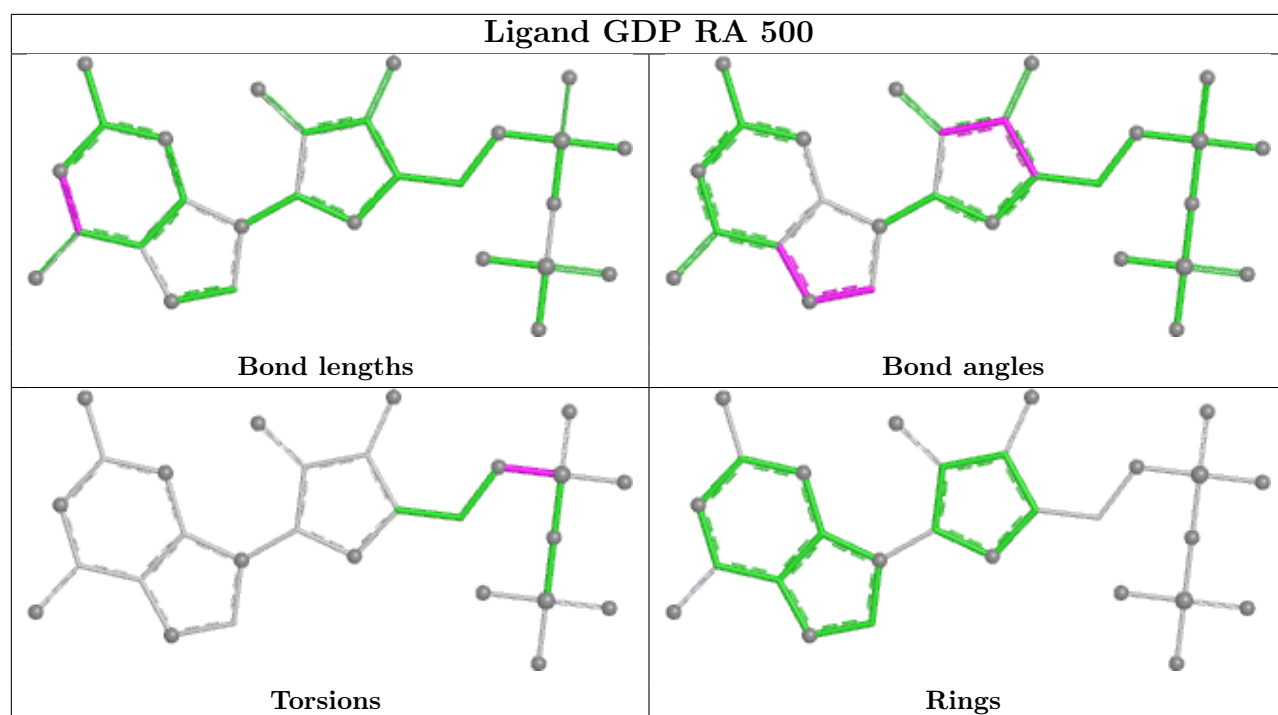






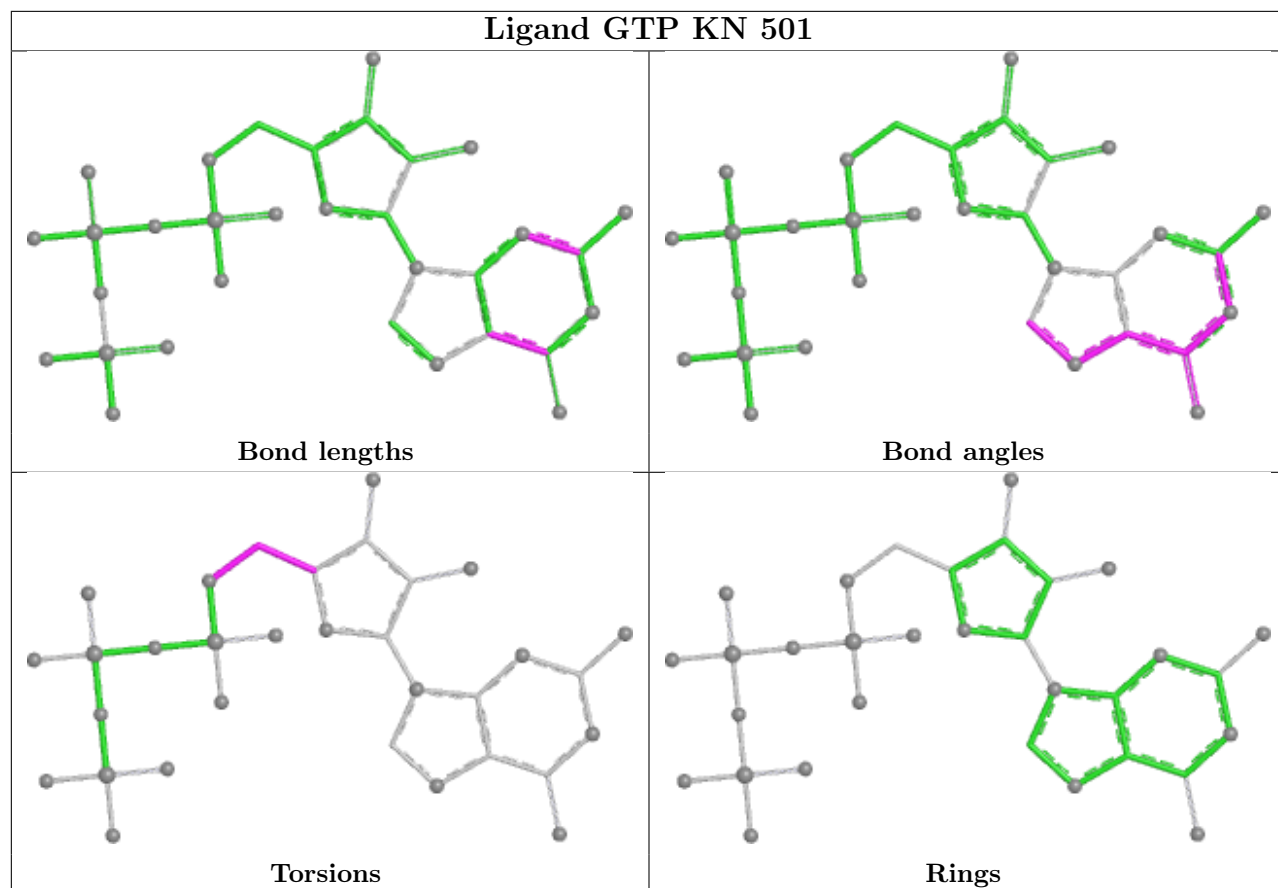




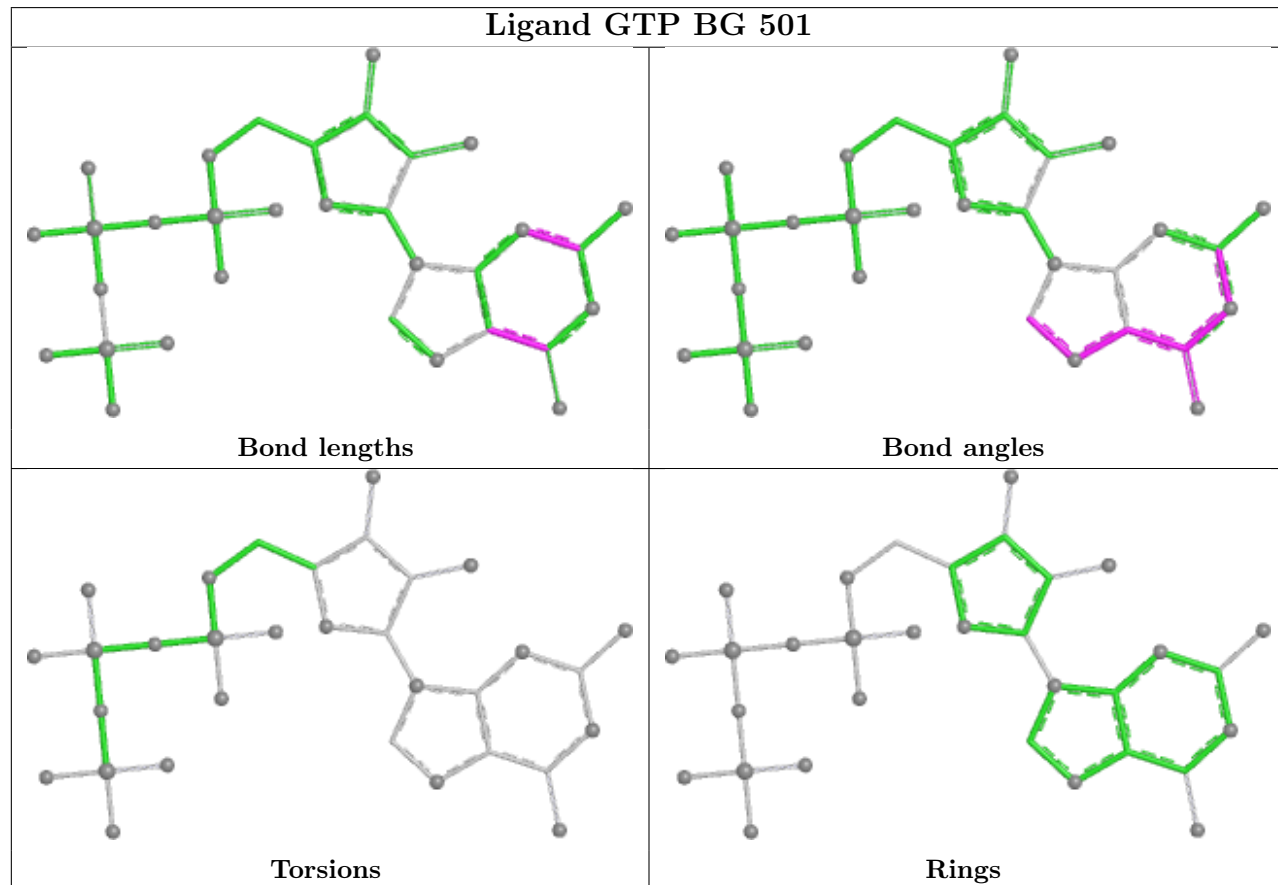




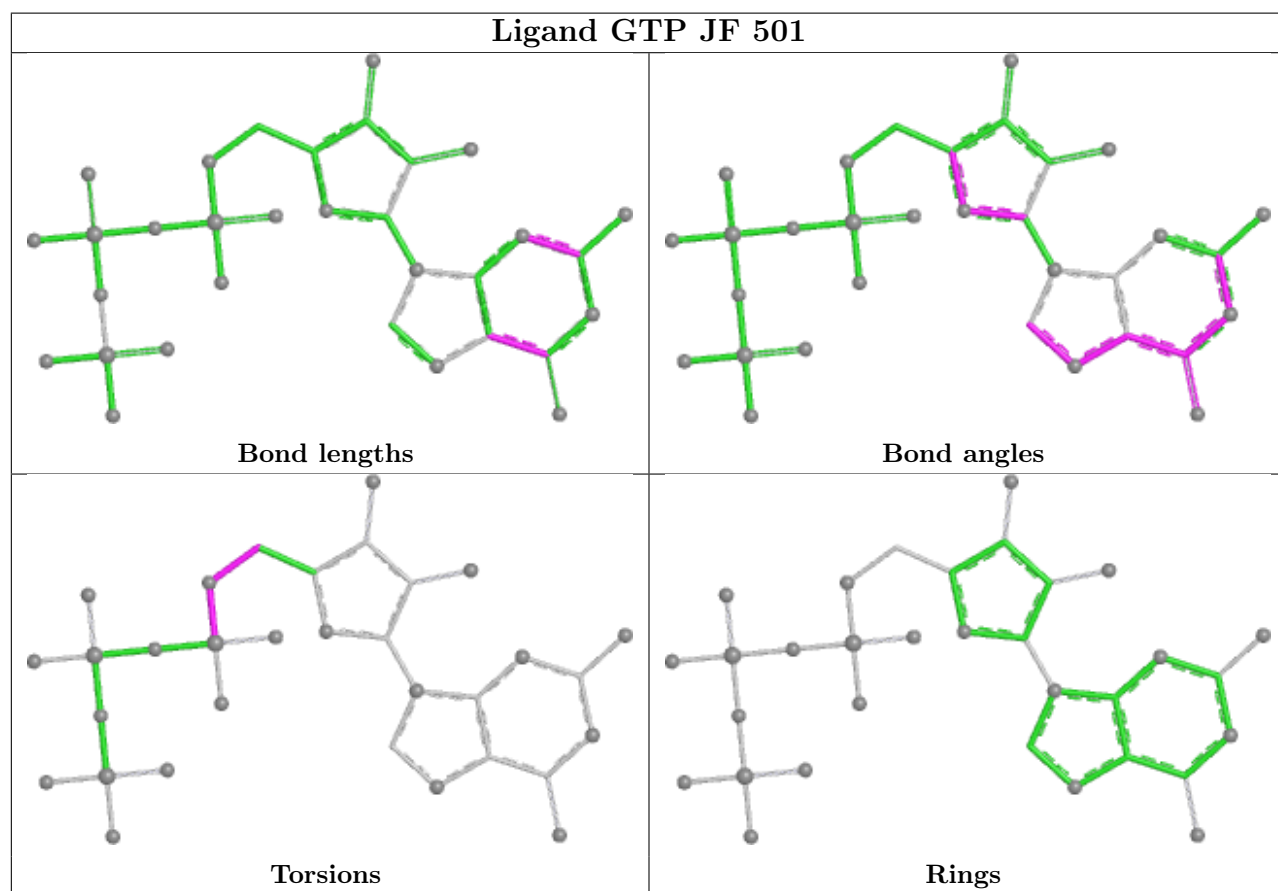
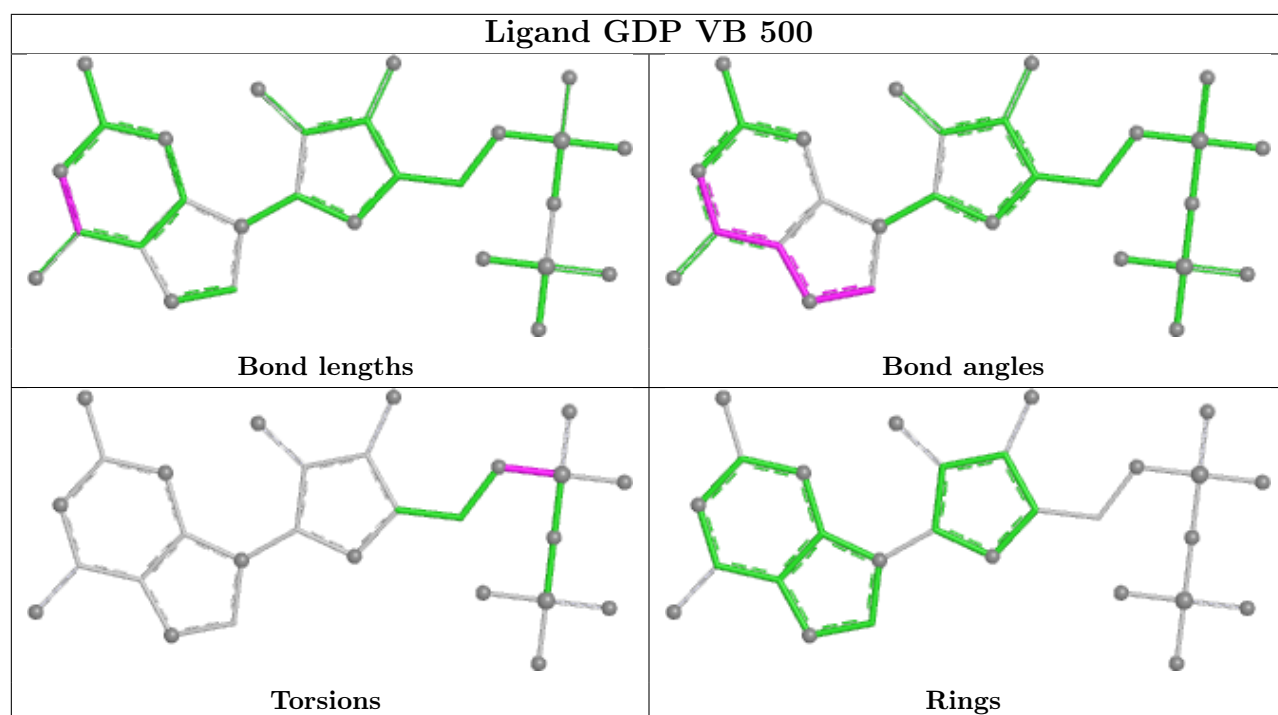
## Ligand GTP KN 501



## Ligand GTP BG 501

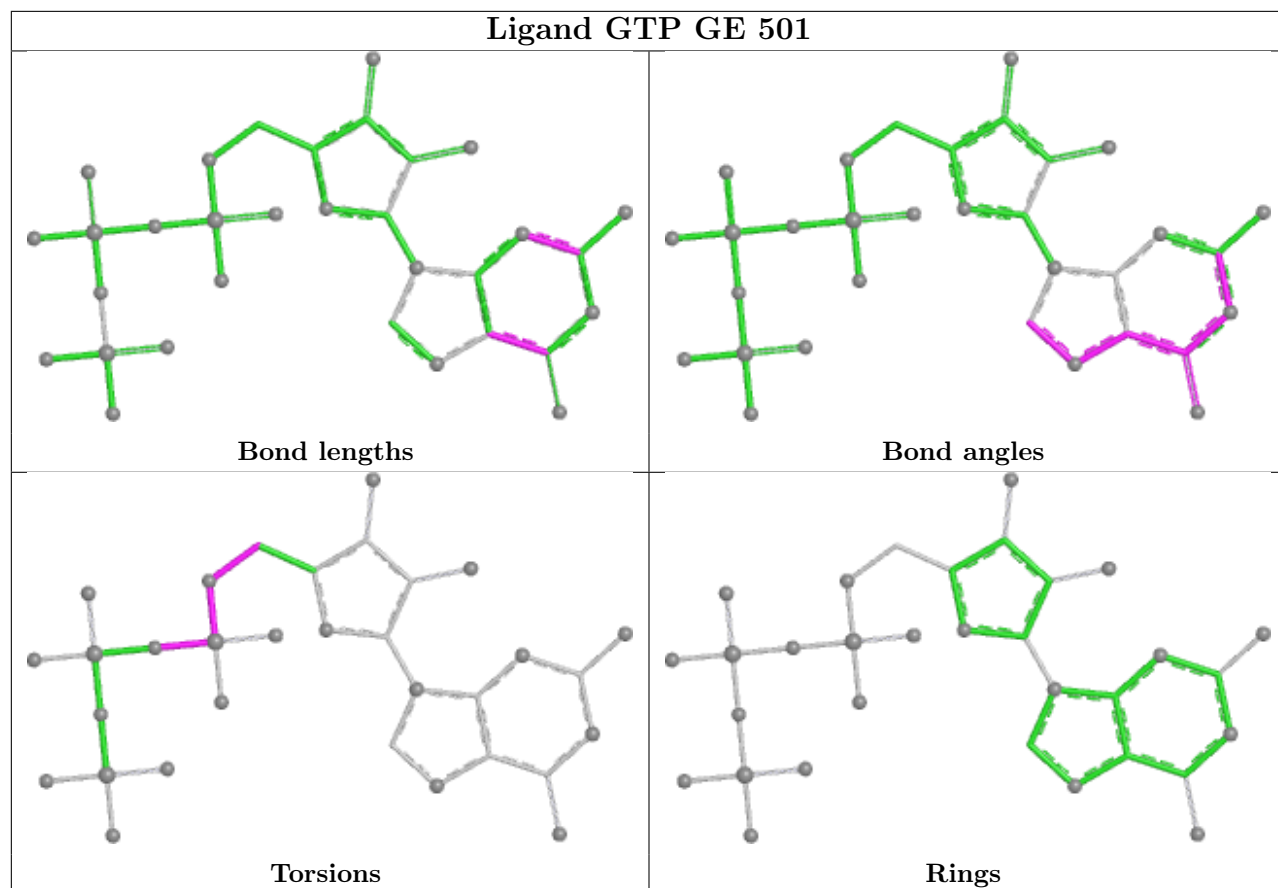




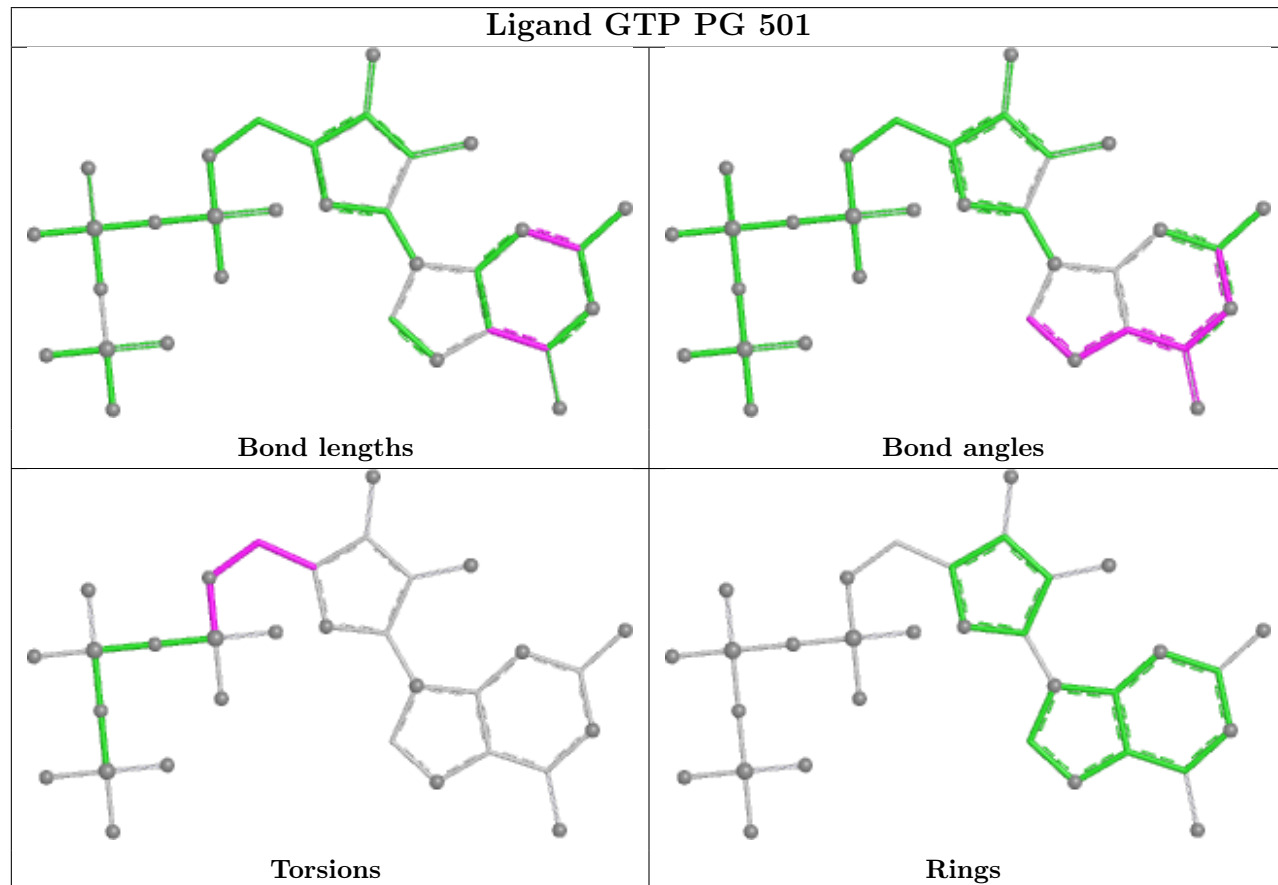




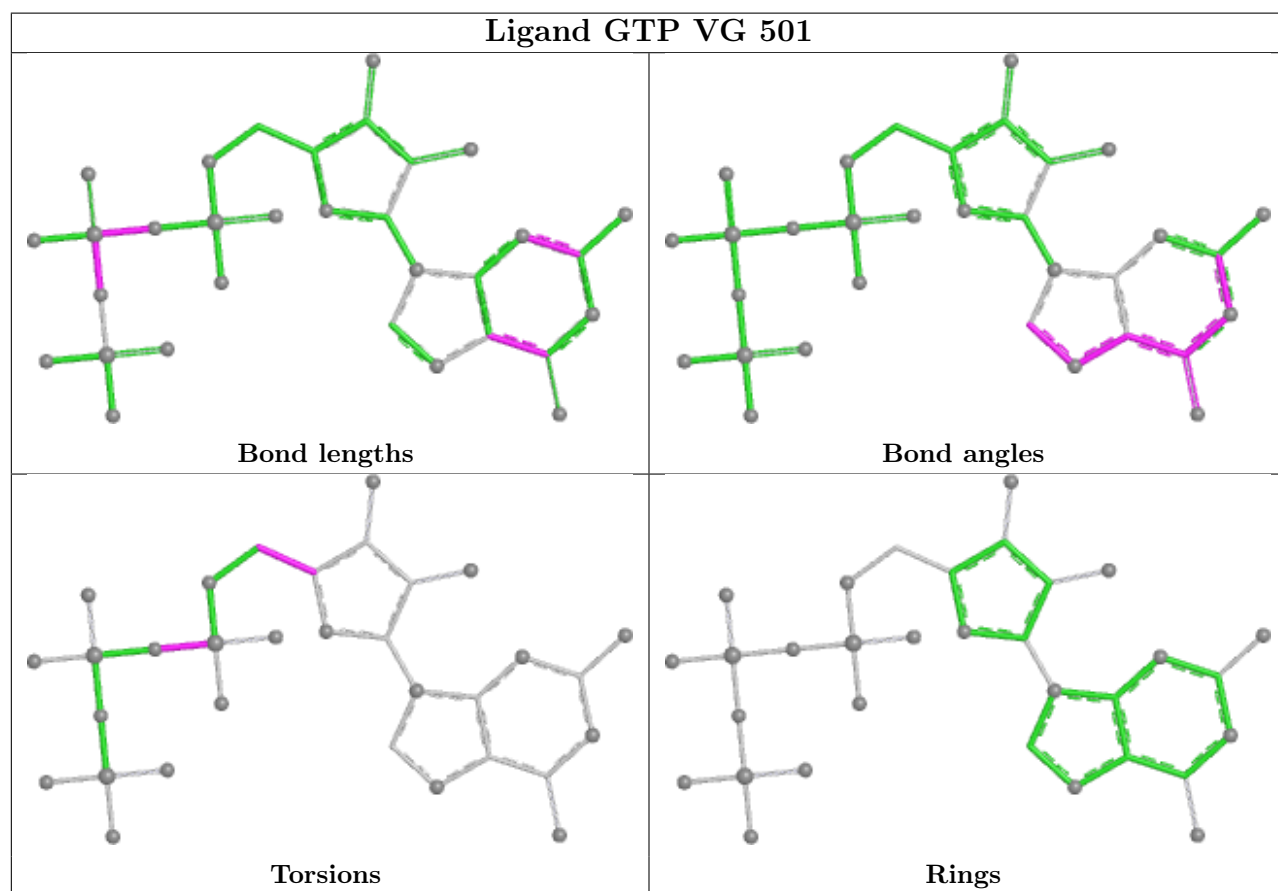
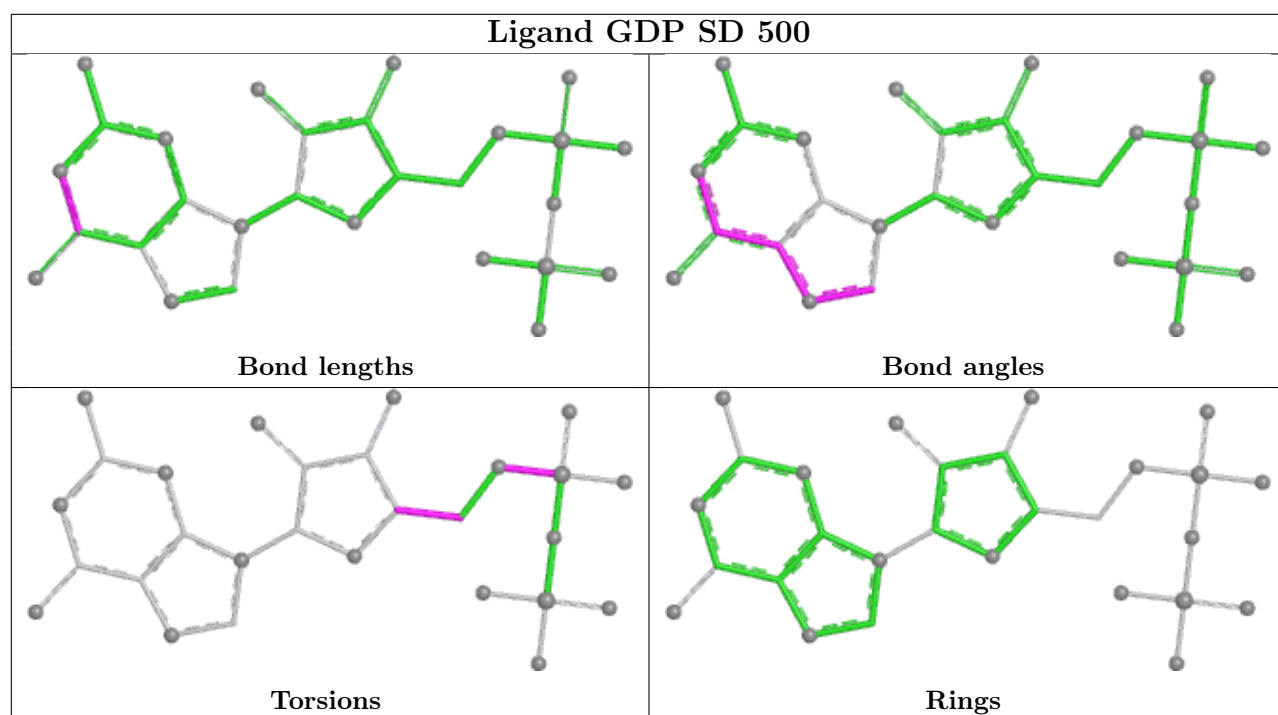
## Ligand GTP GE 501



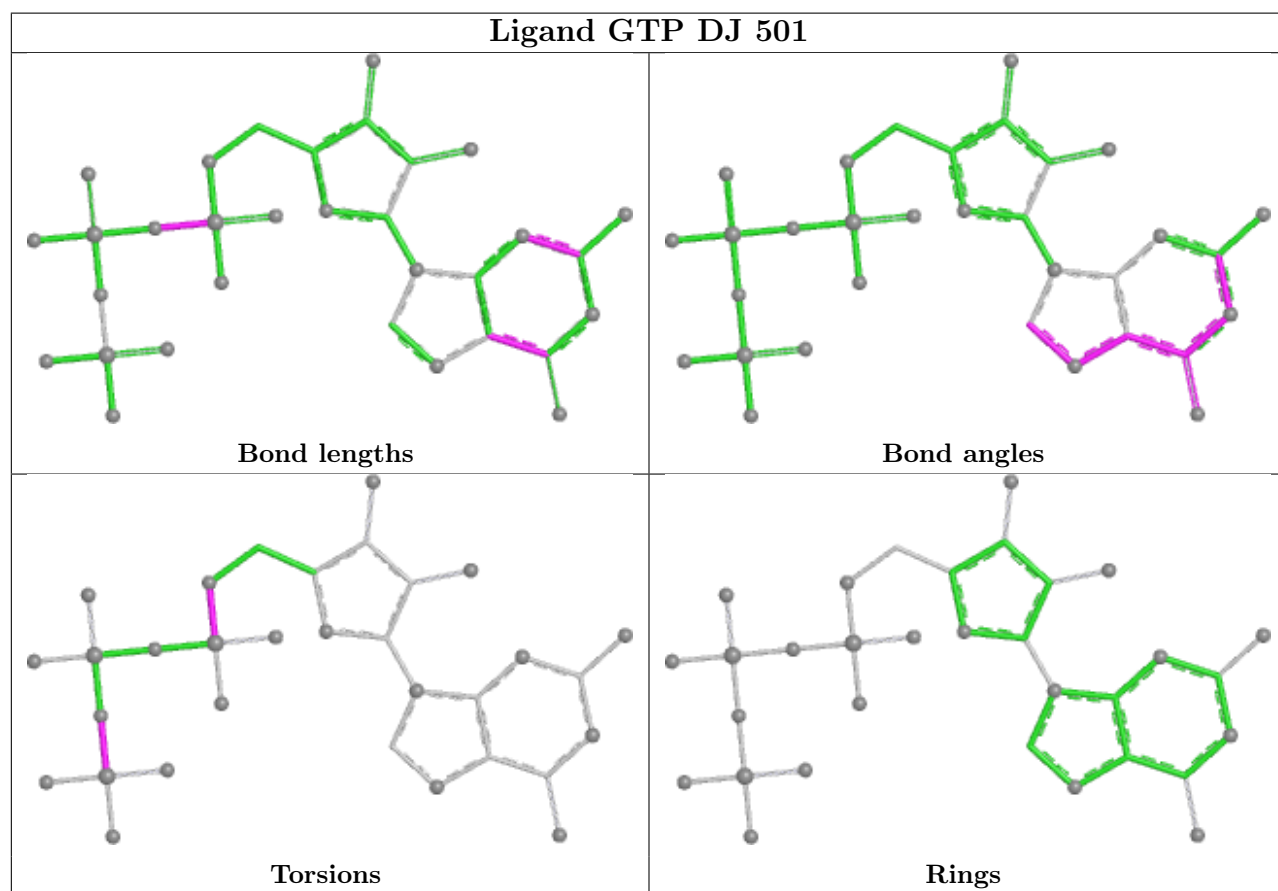
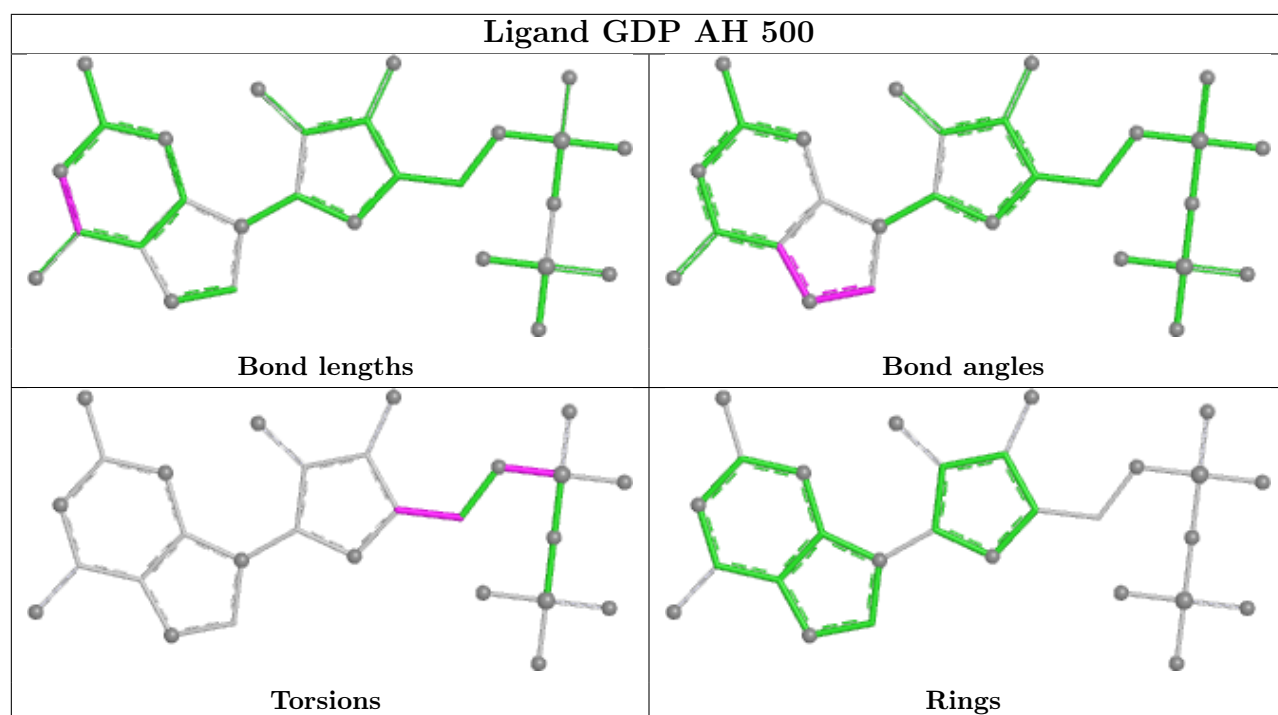
## Ligand GTP PG 501



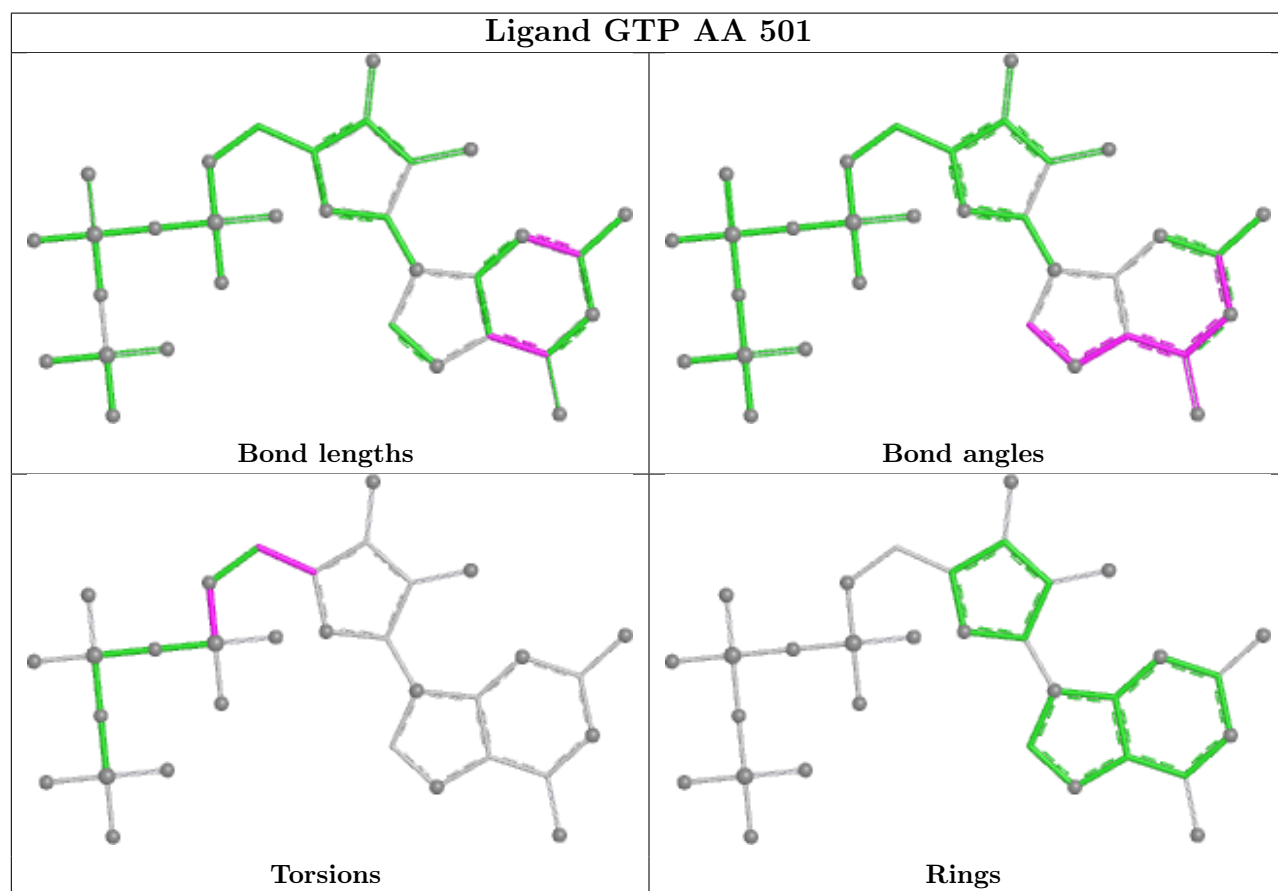
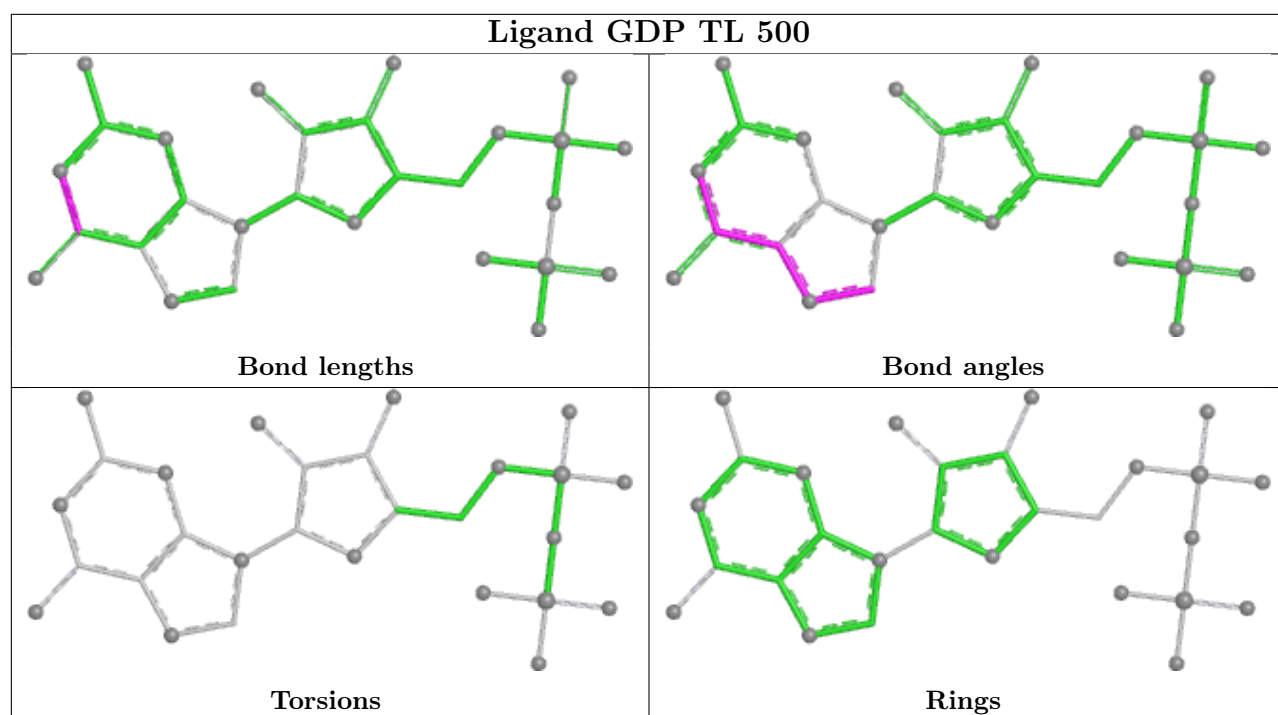






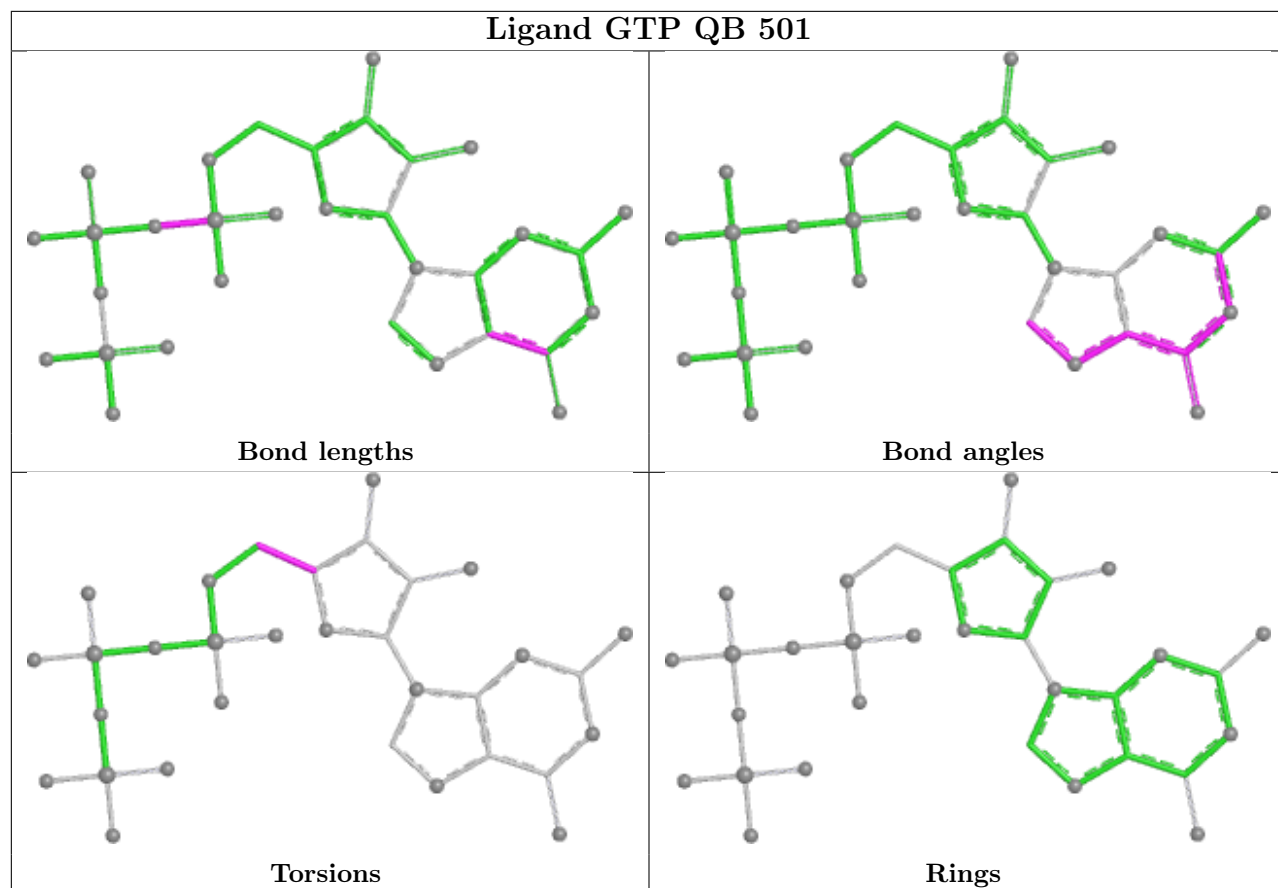




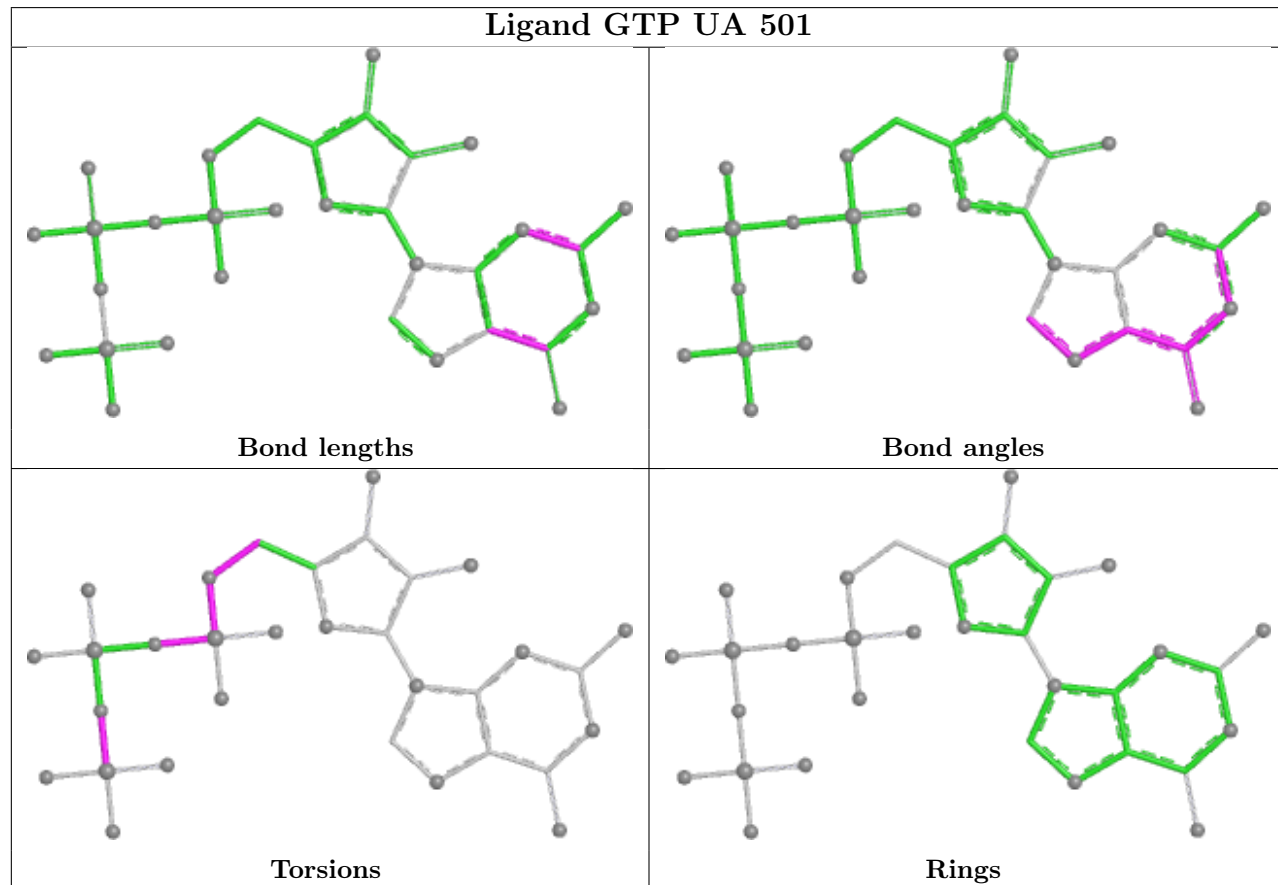




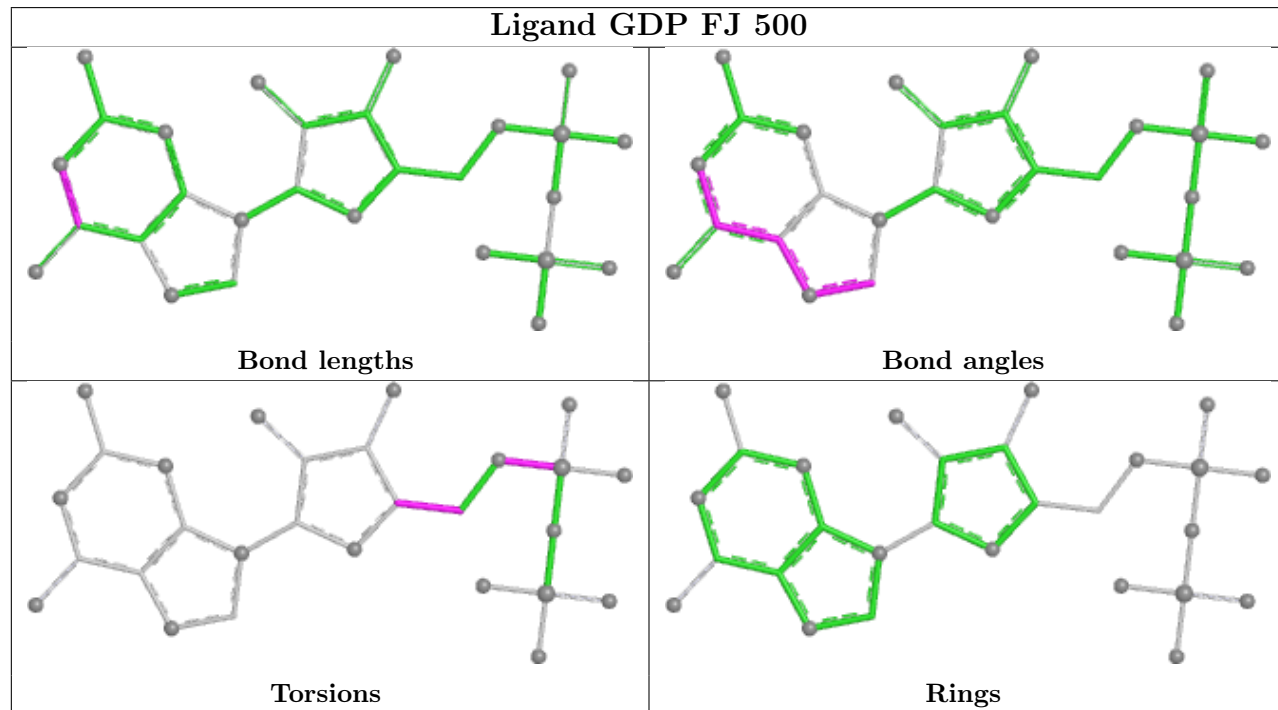
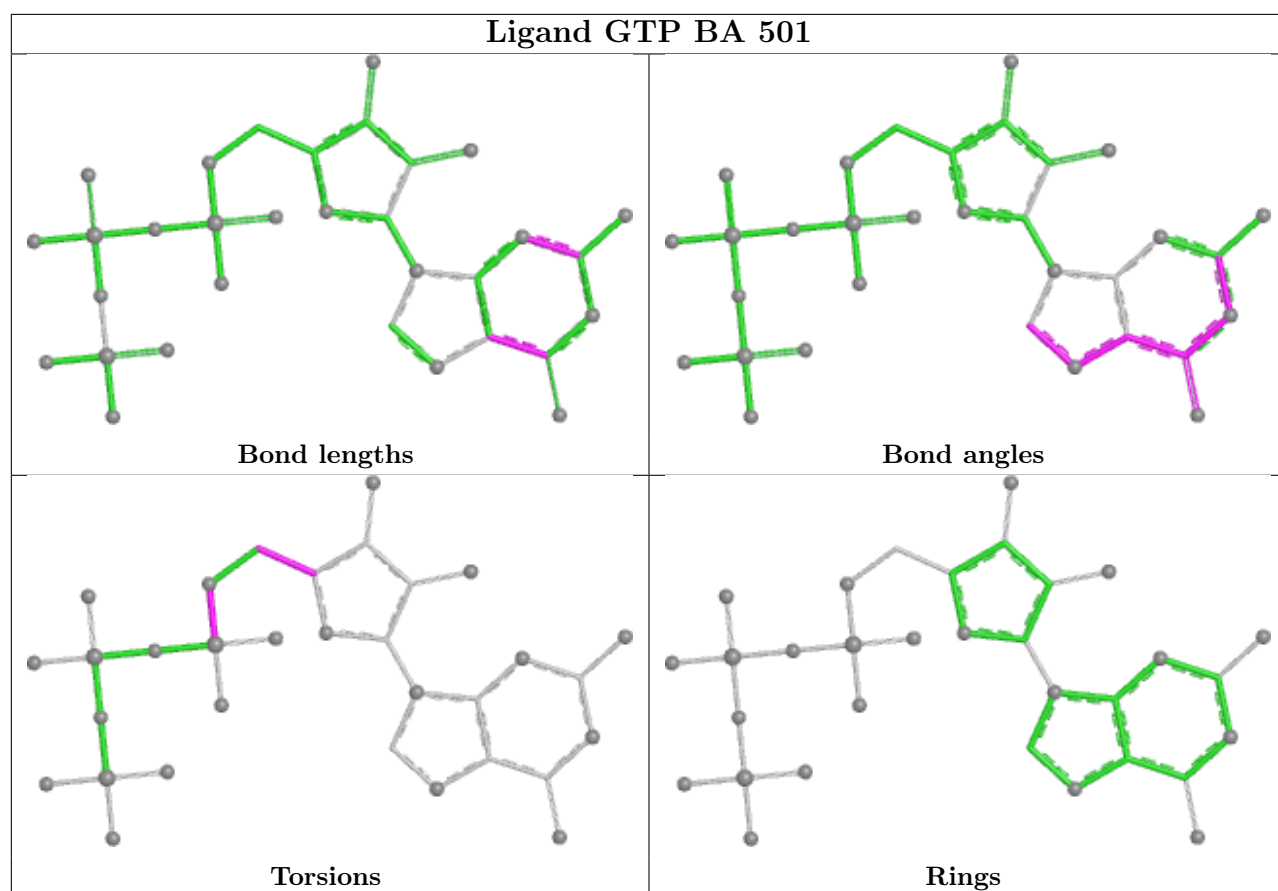
## Ligand GTP QB 501



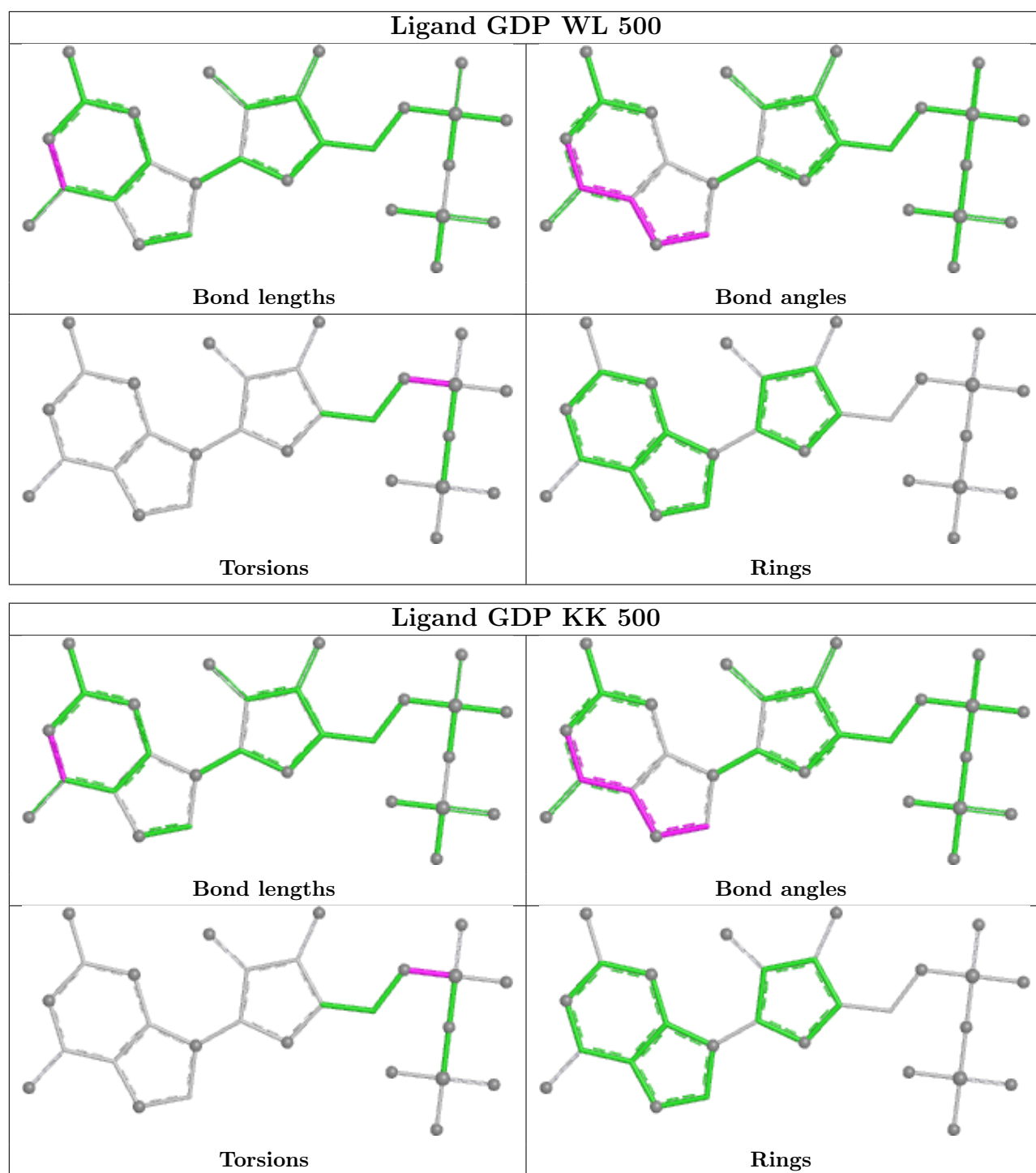
## Ligand GTP UA 501



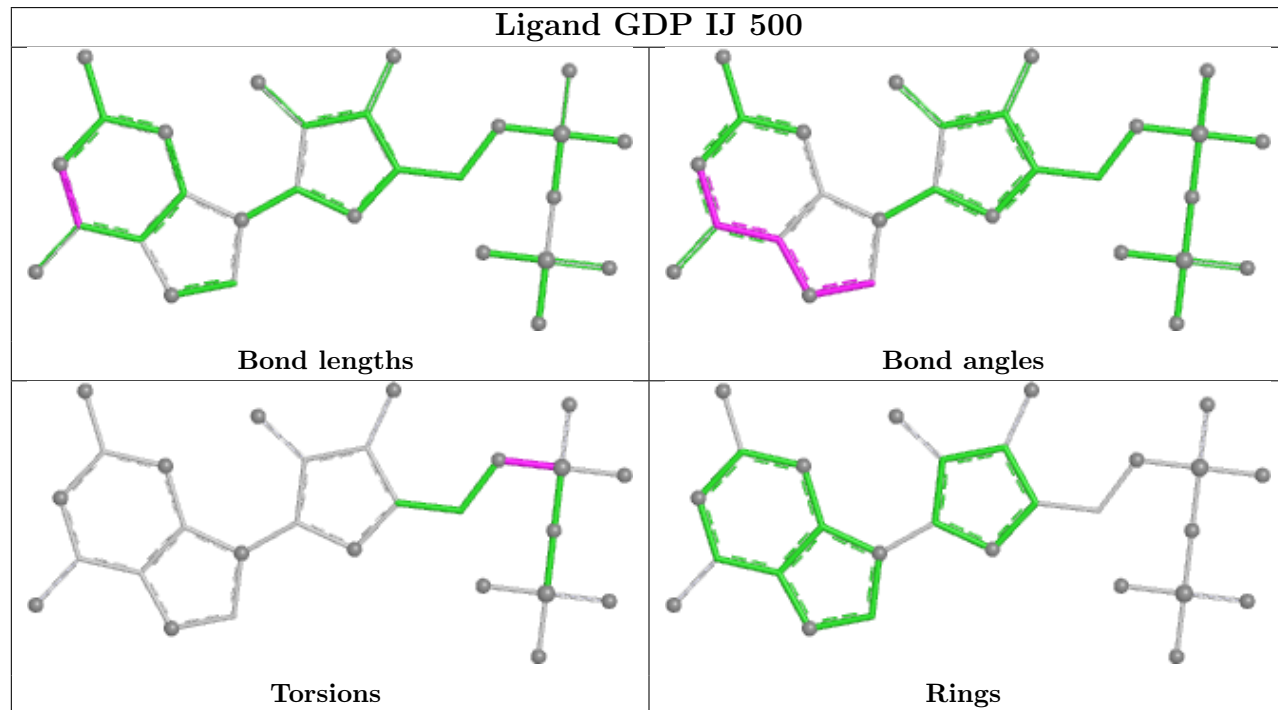
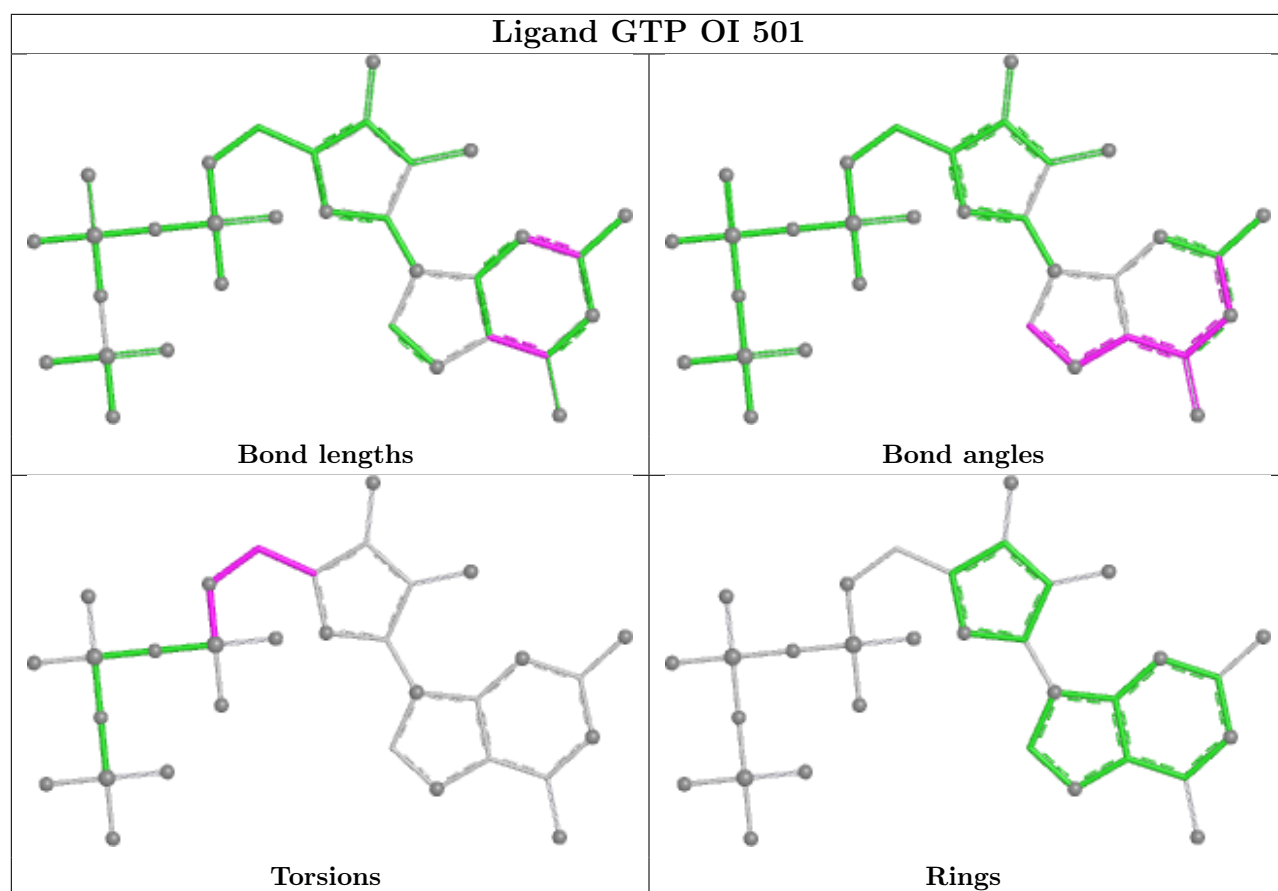






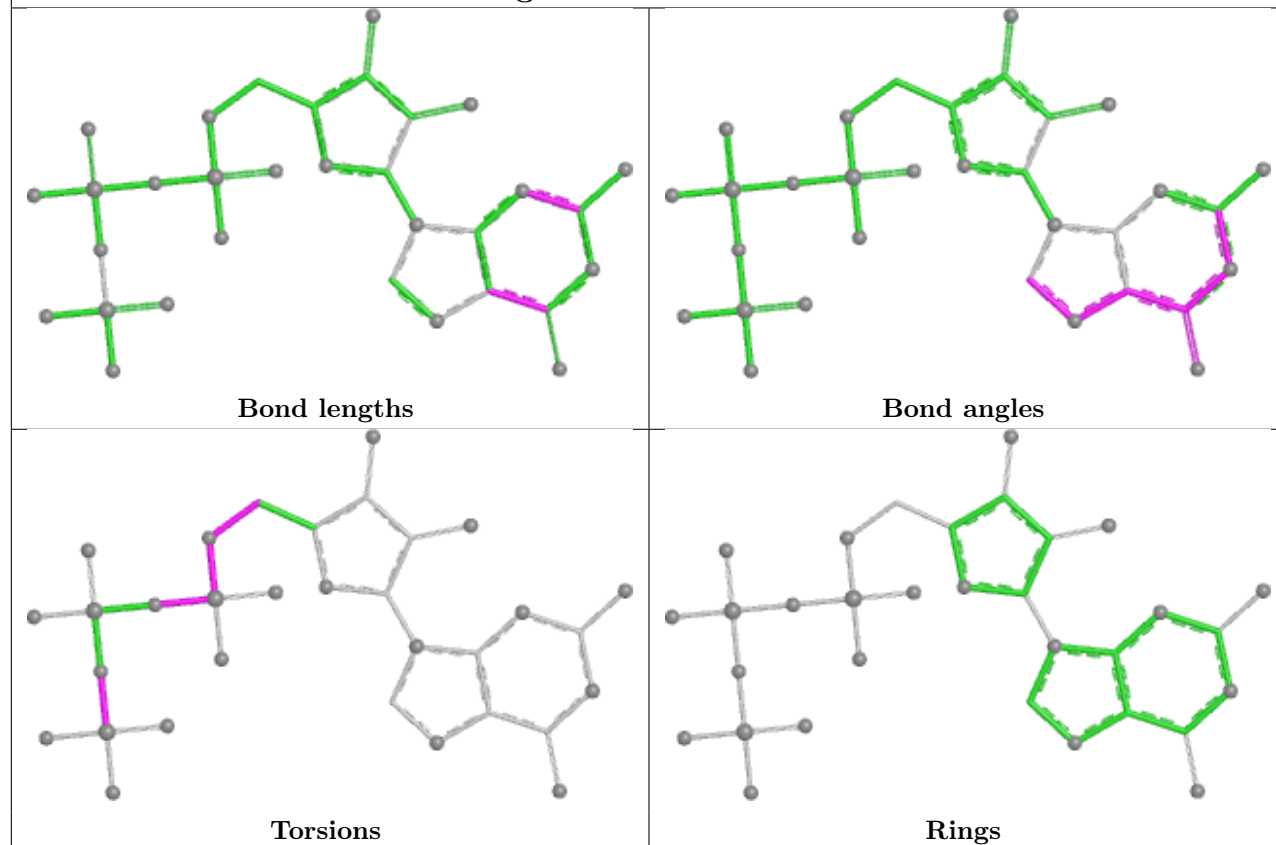




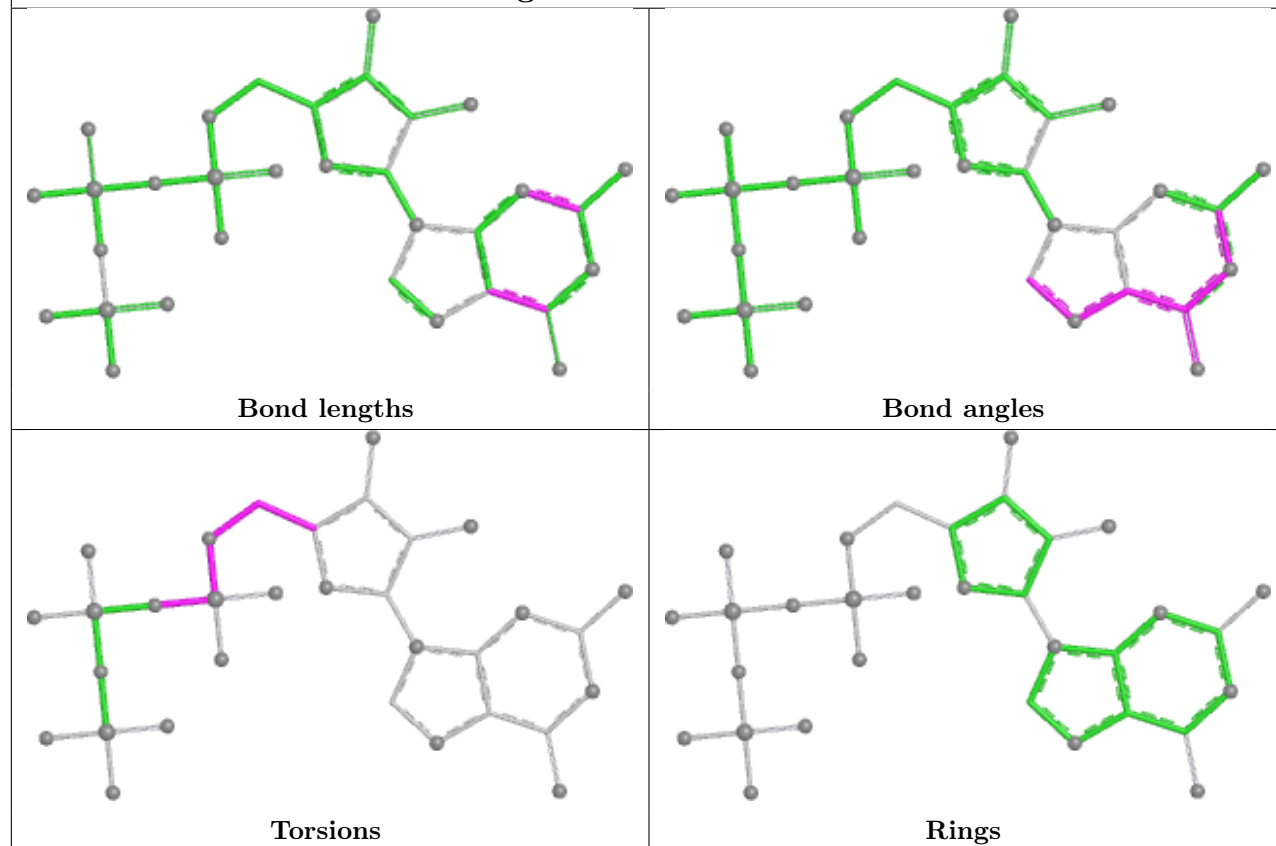




## Ligand GTP NA 501

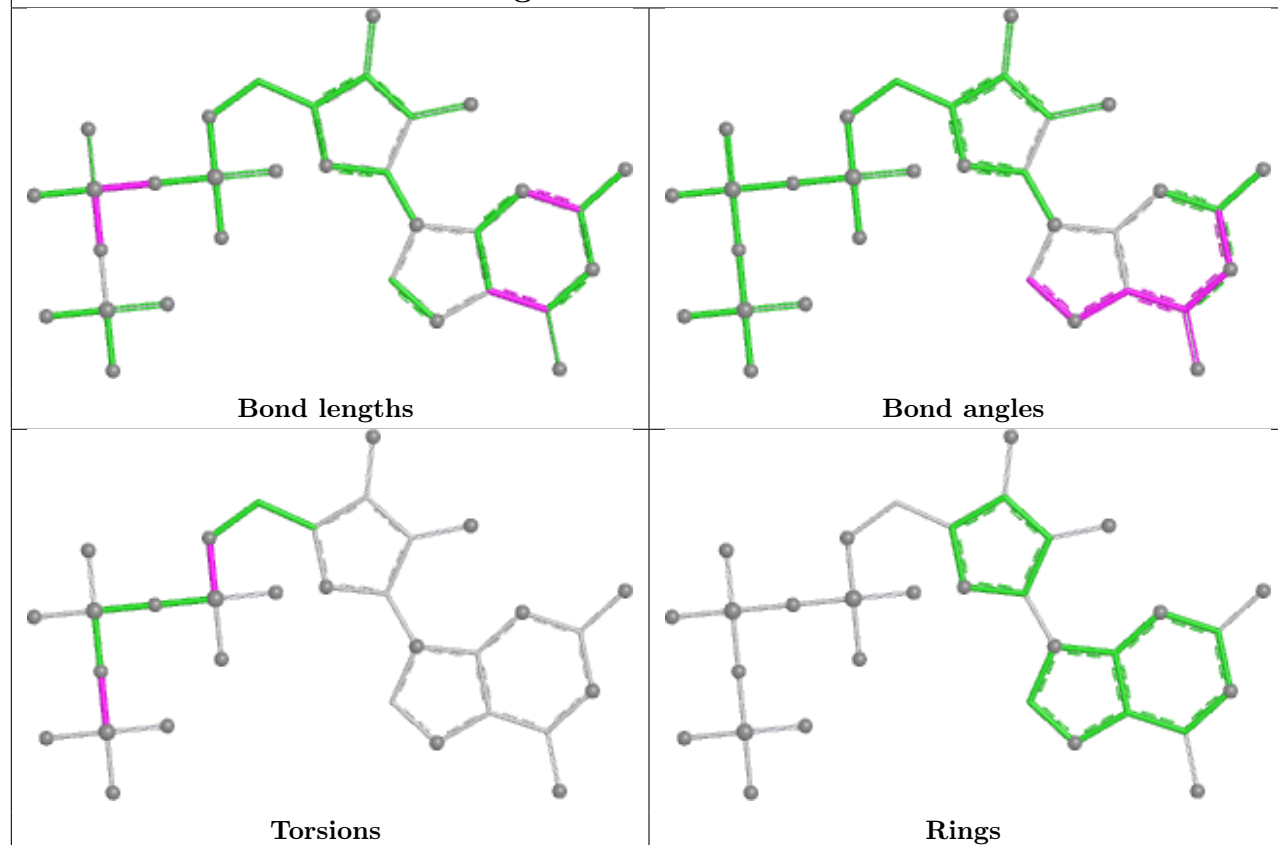


## Ligand GTP TK 501

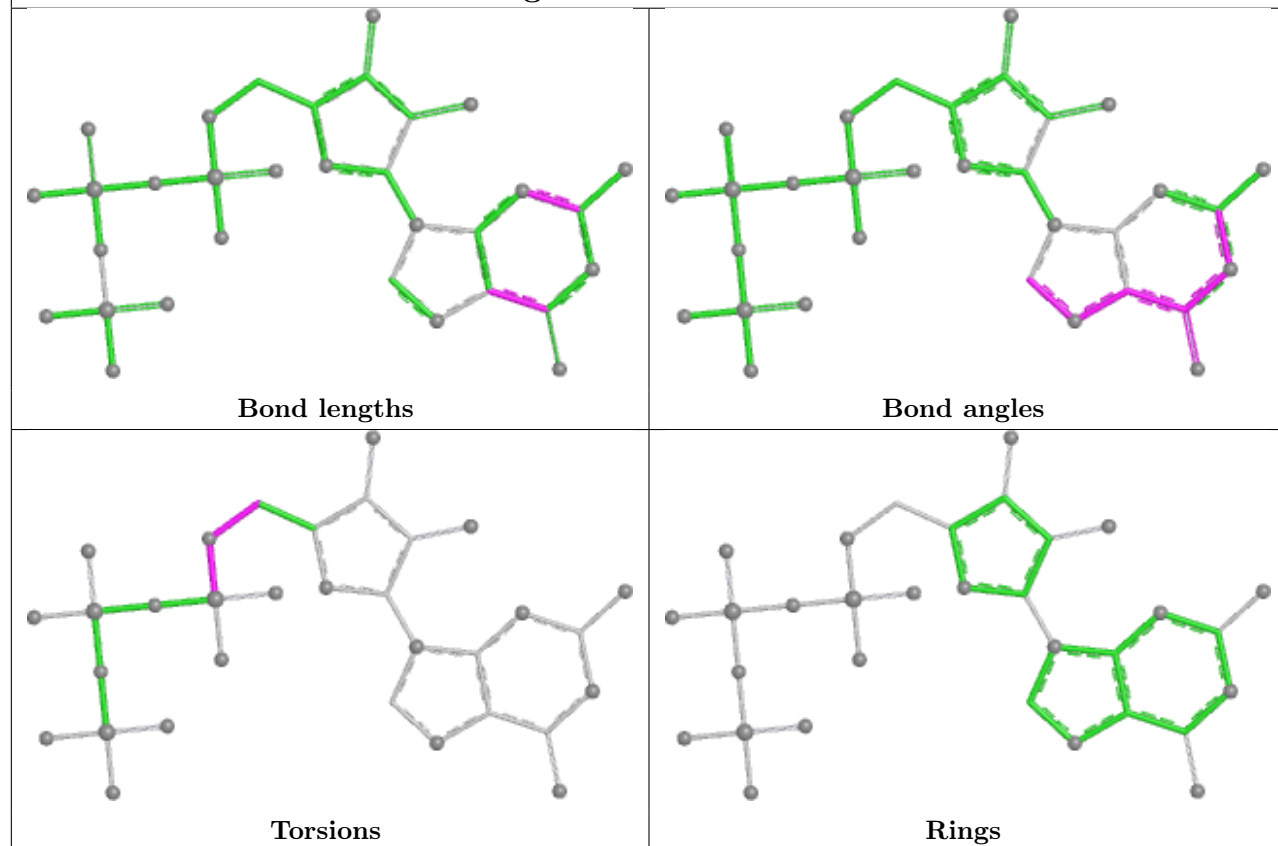




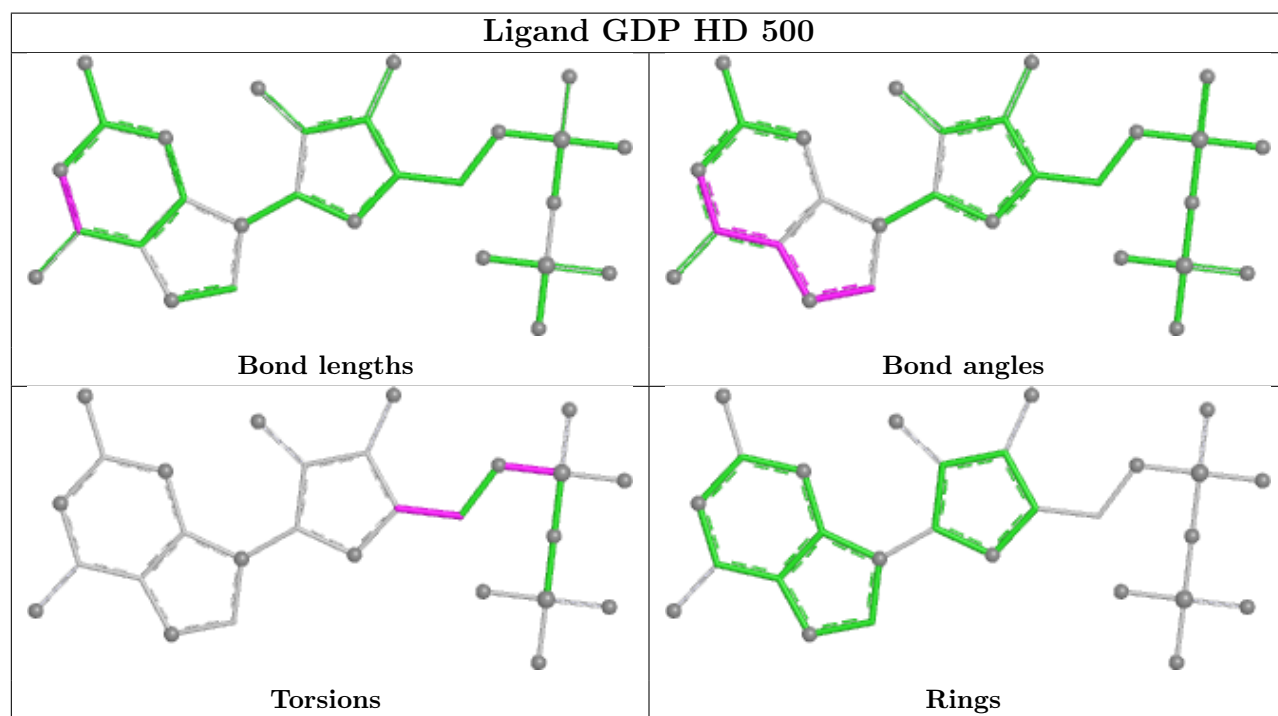
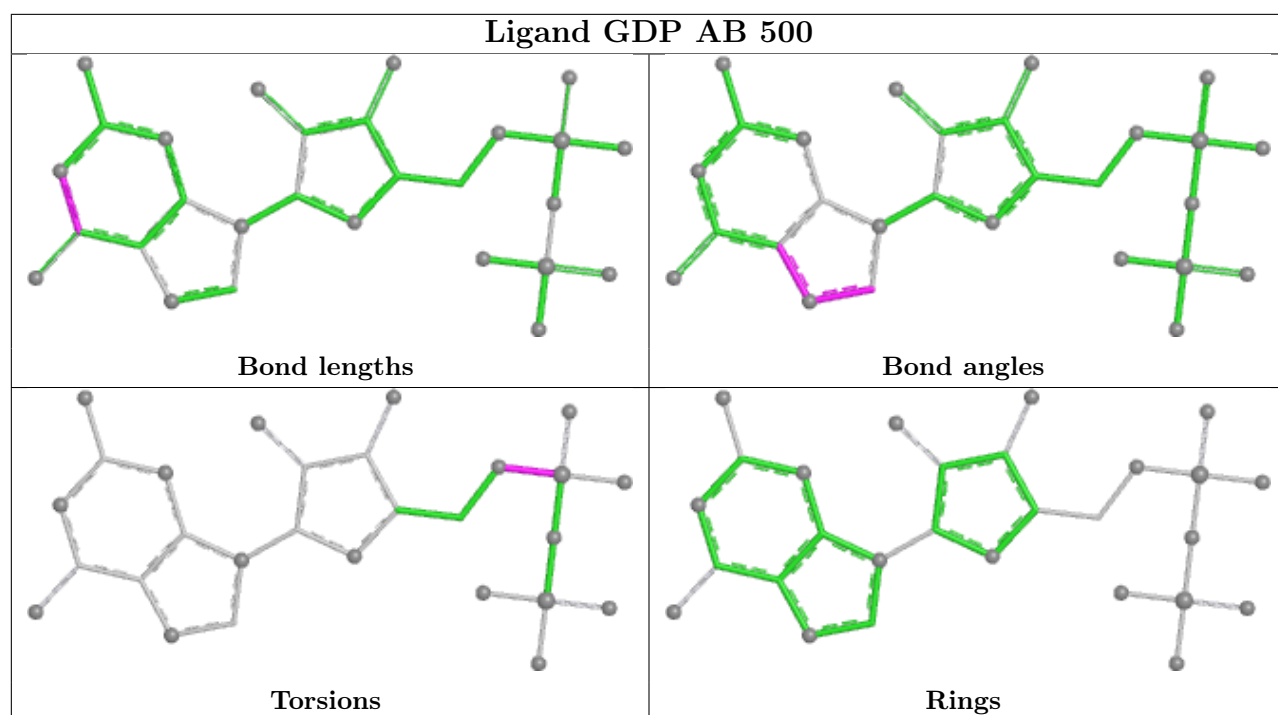
## Ligand GTP BM 501



## Ligand GTP LJ 501

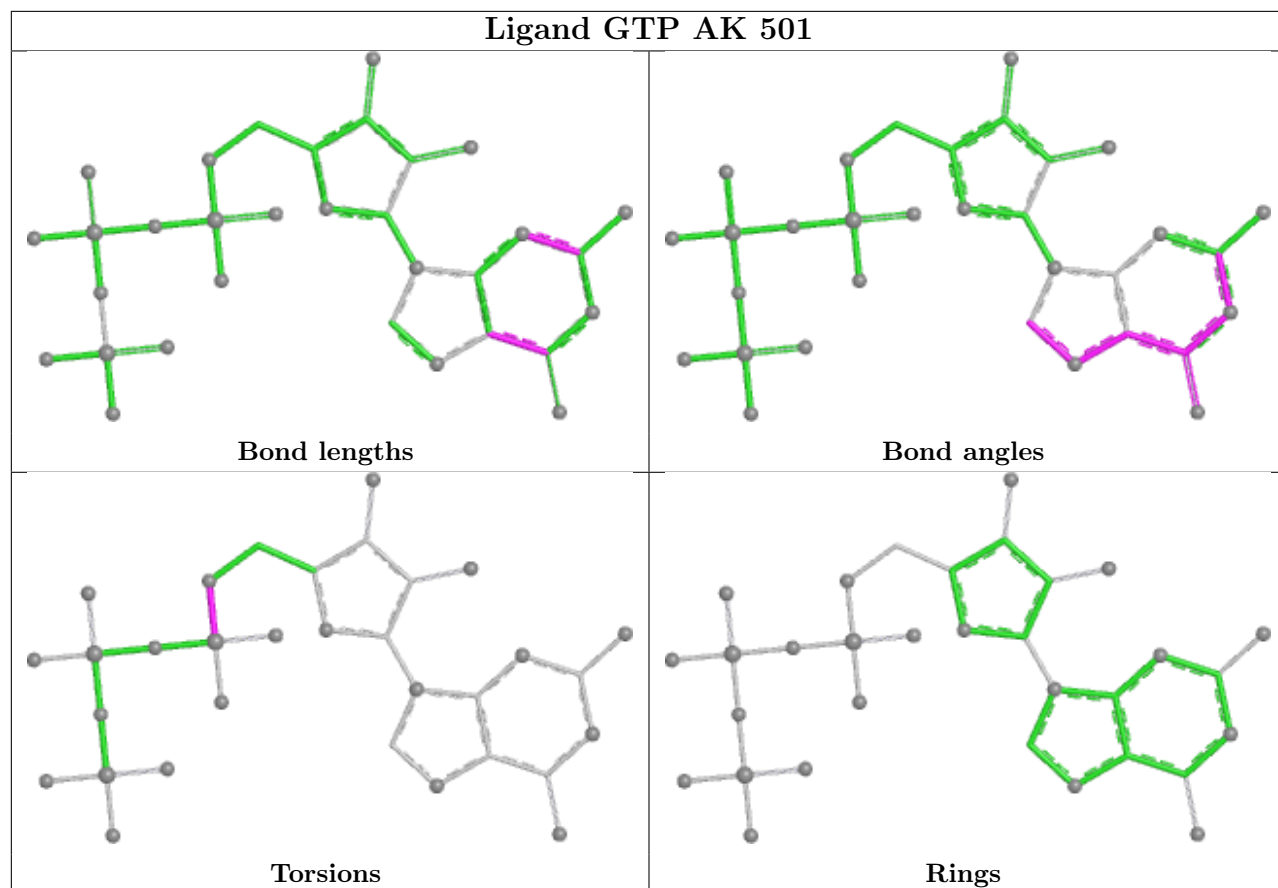




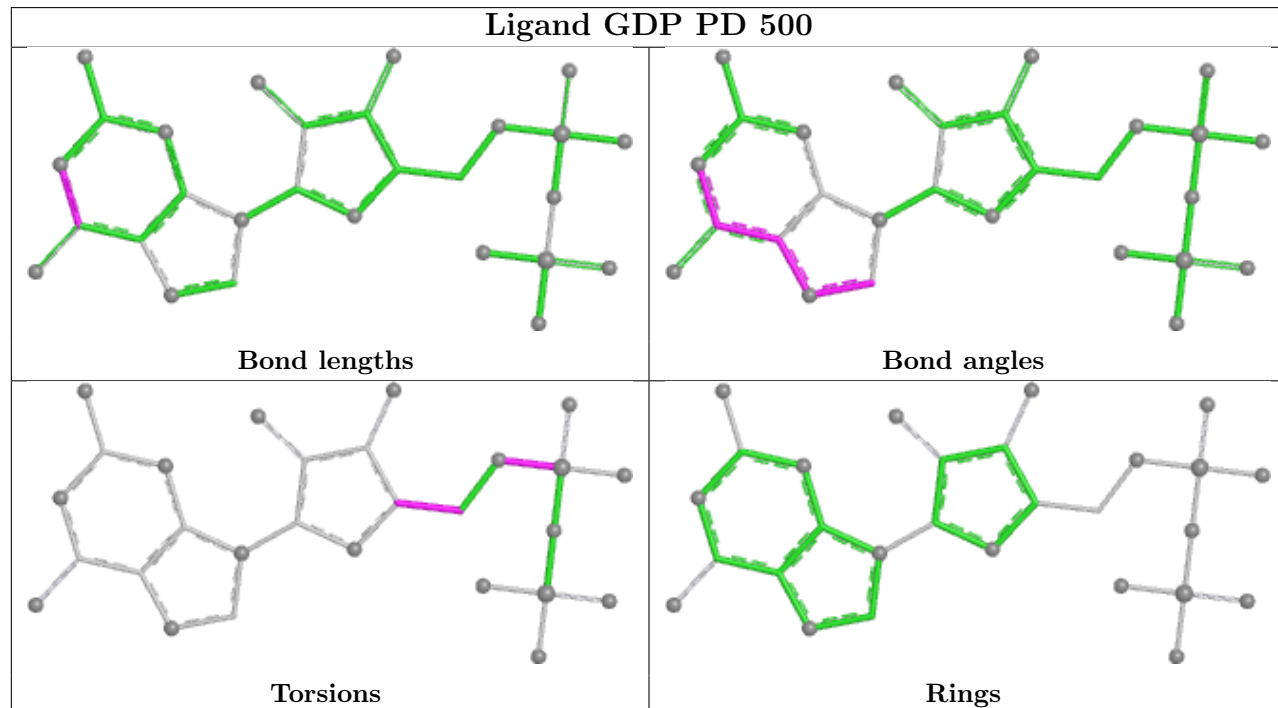




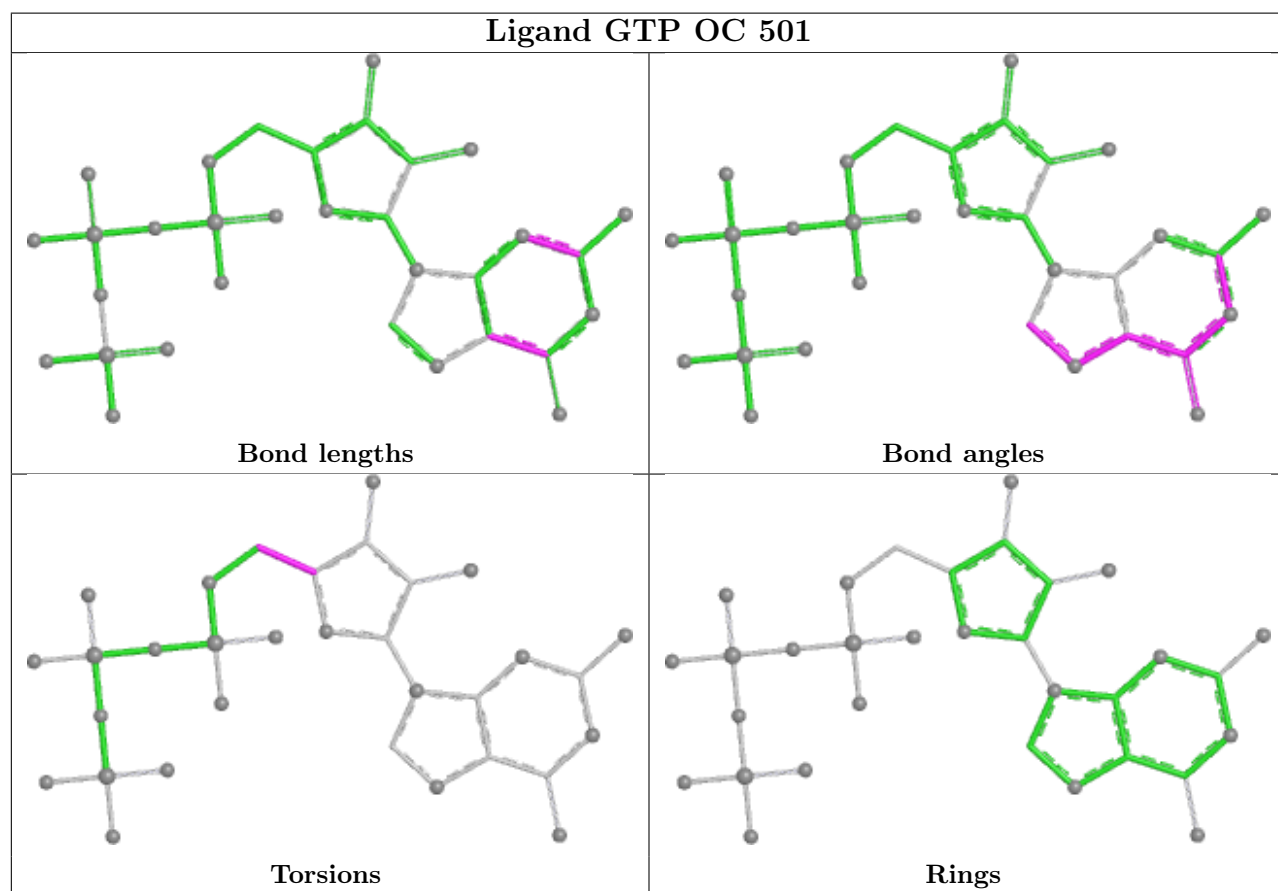
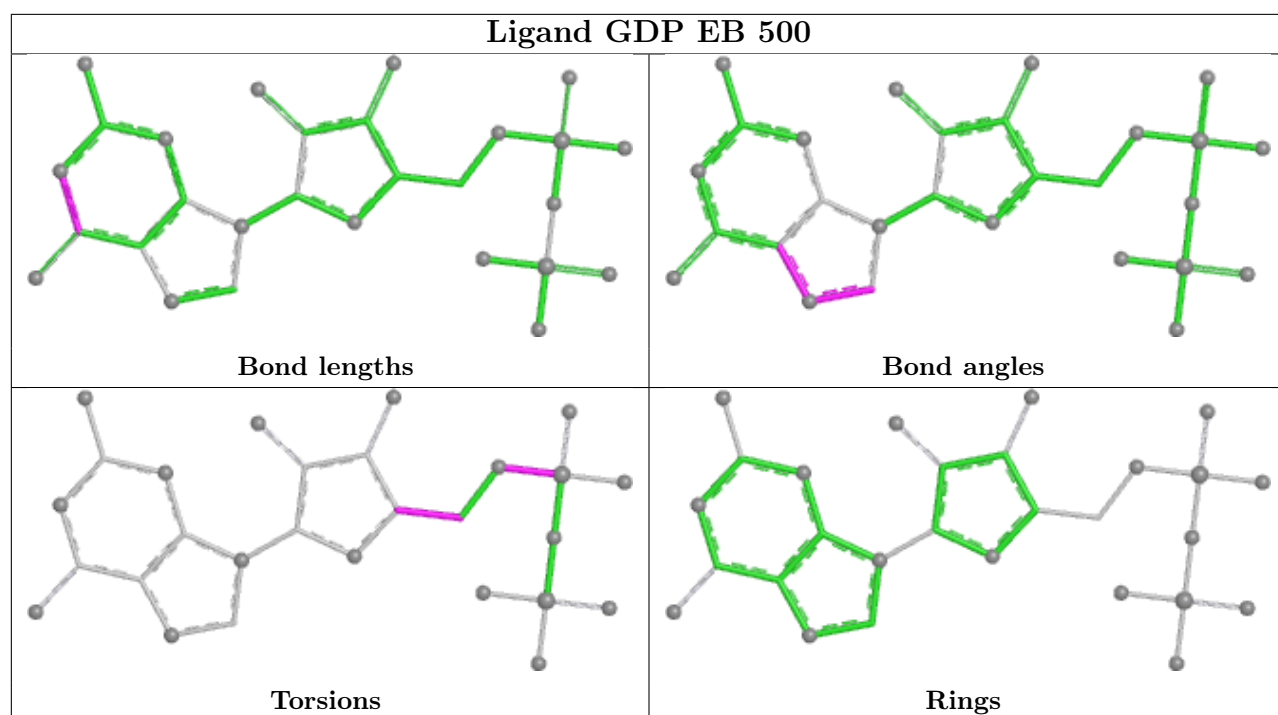
## Ligand GTP AK 501



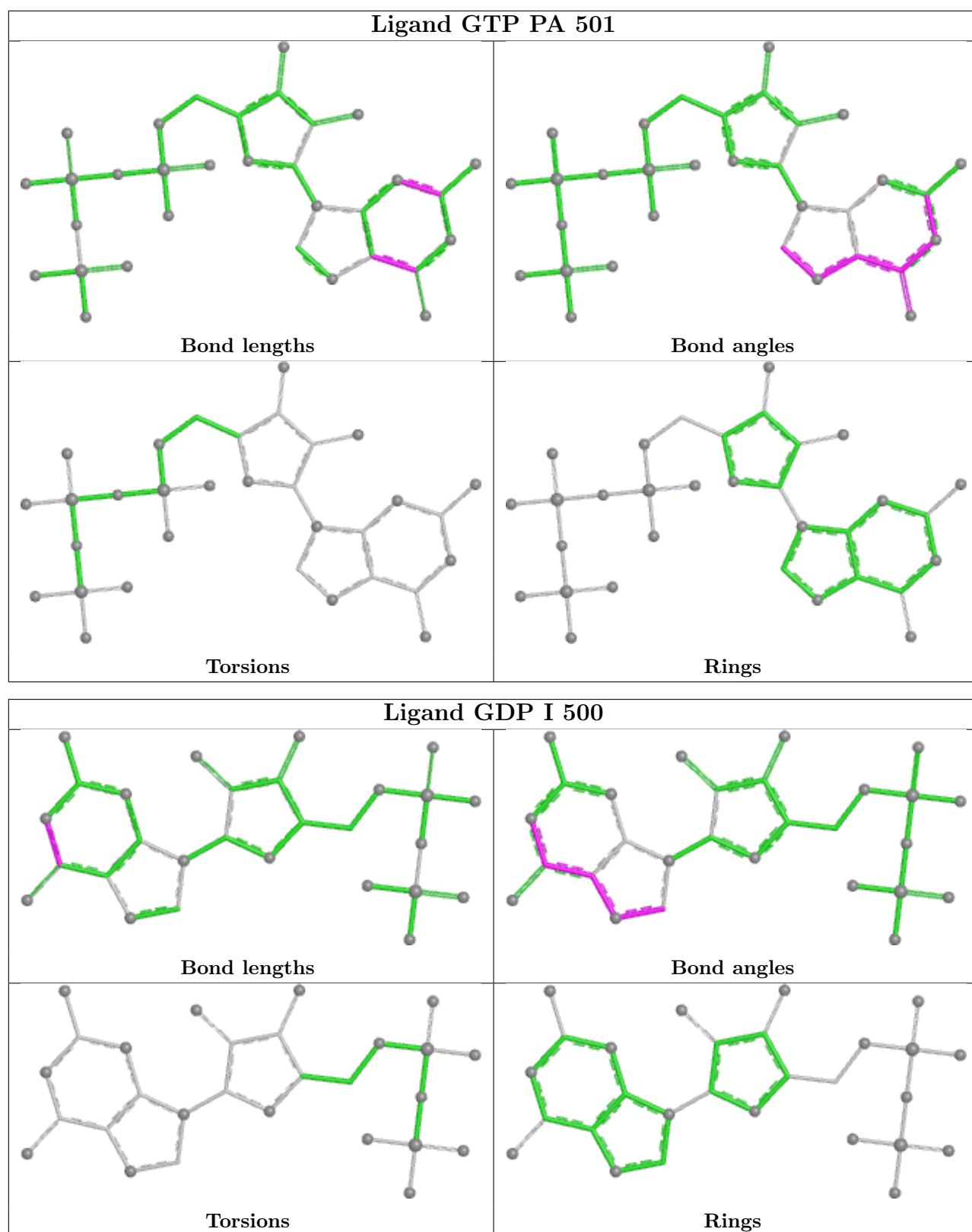
## Ligand GDP PD 500



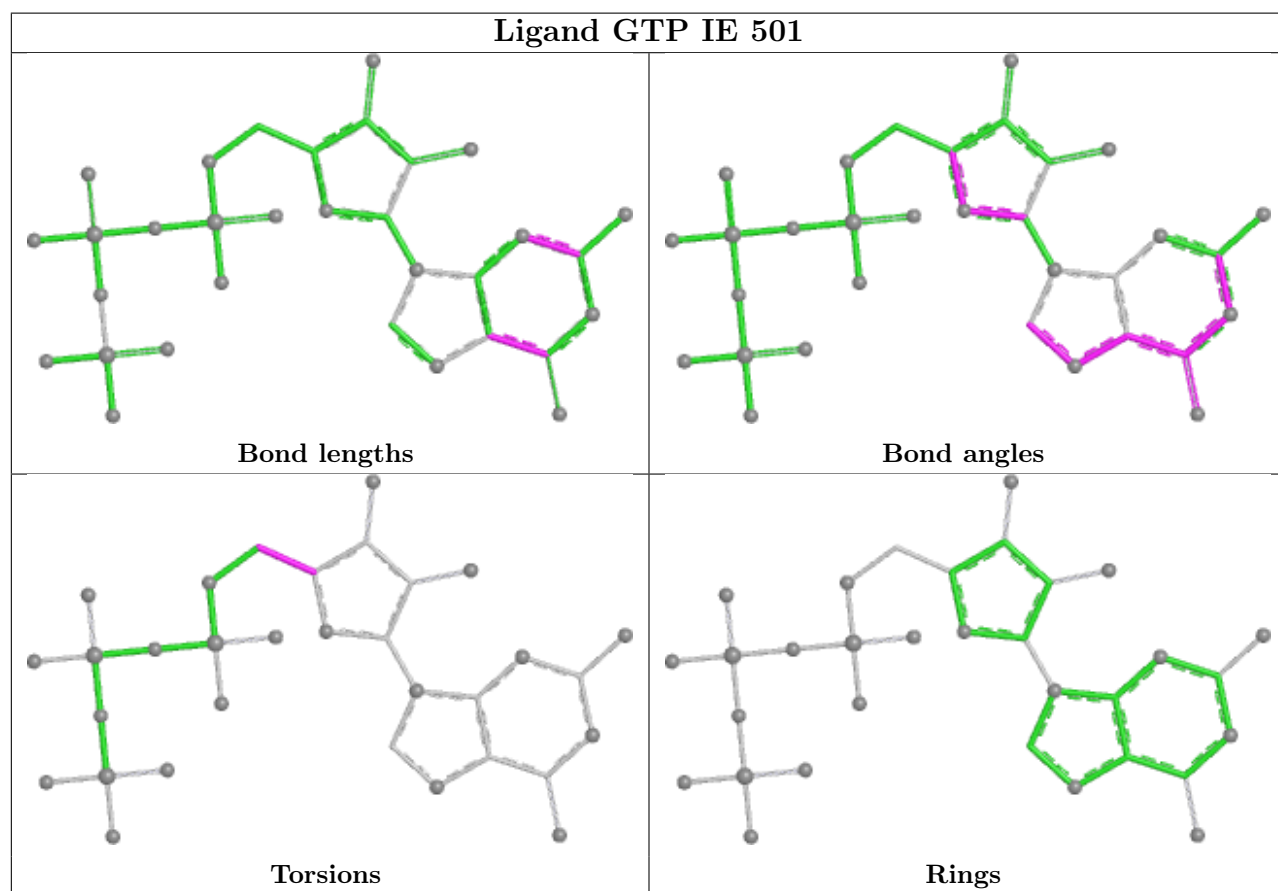
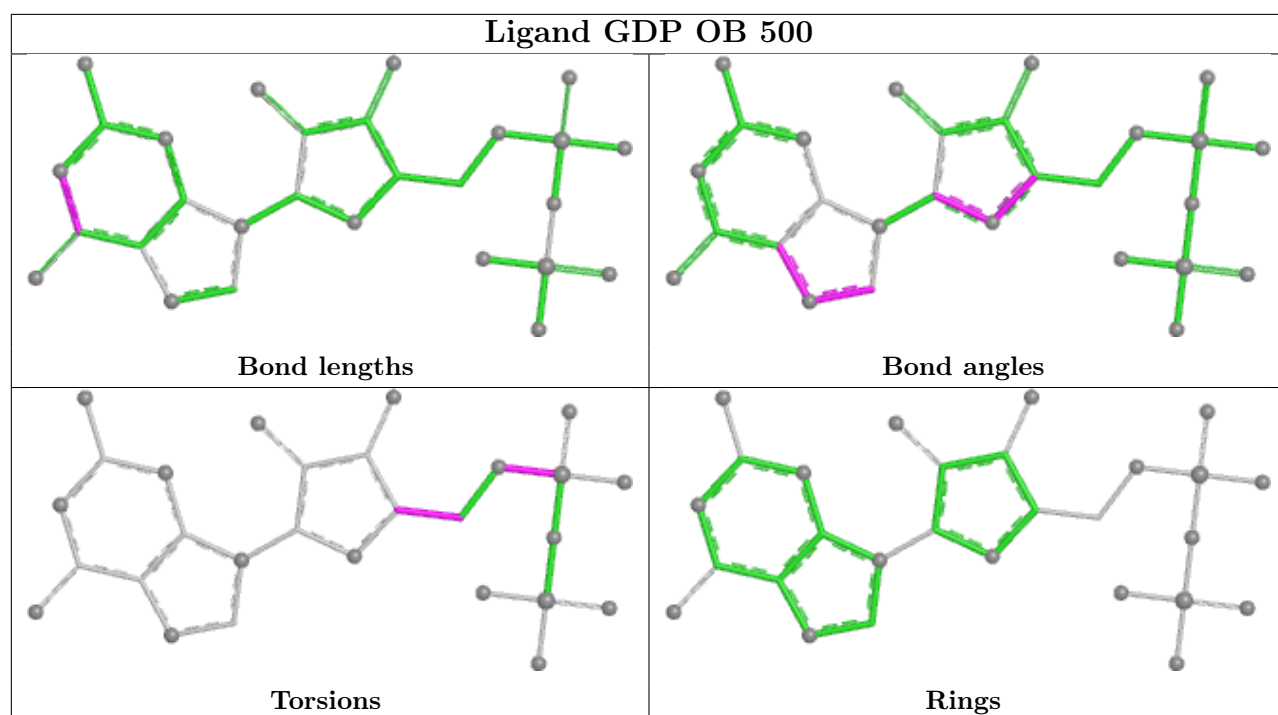




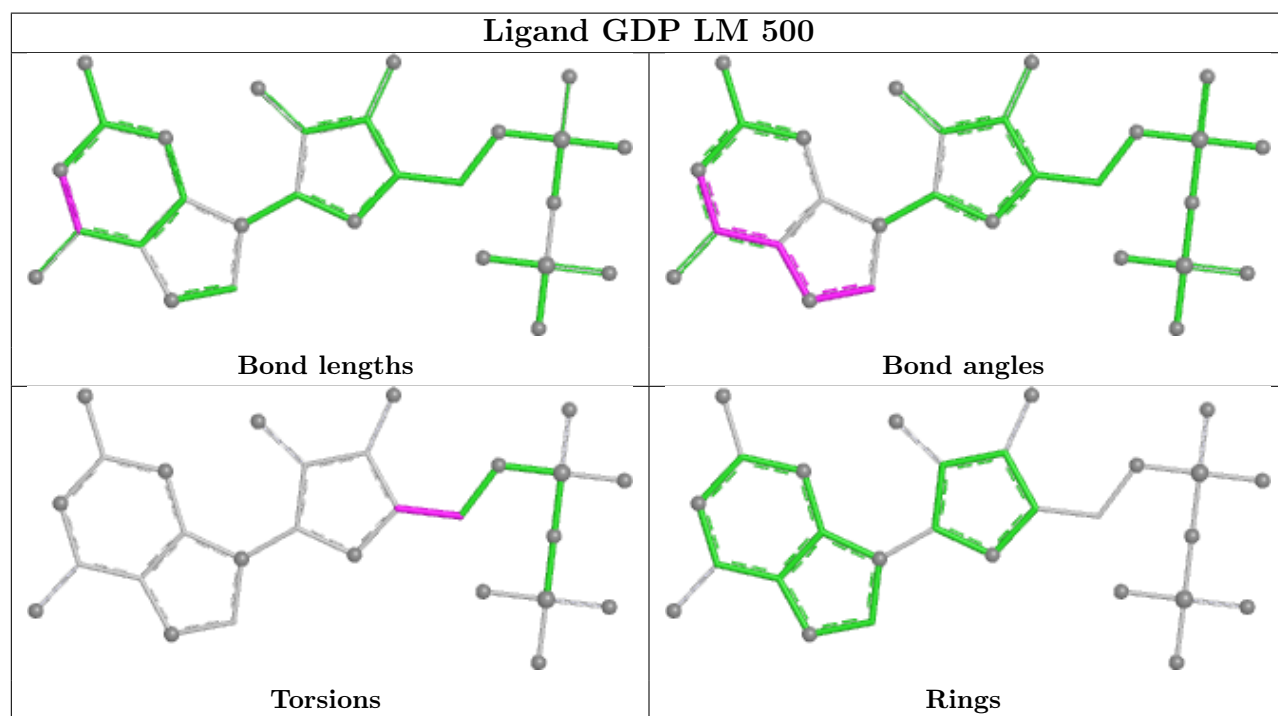
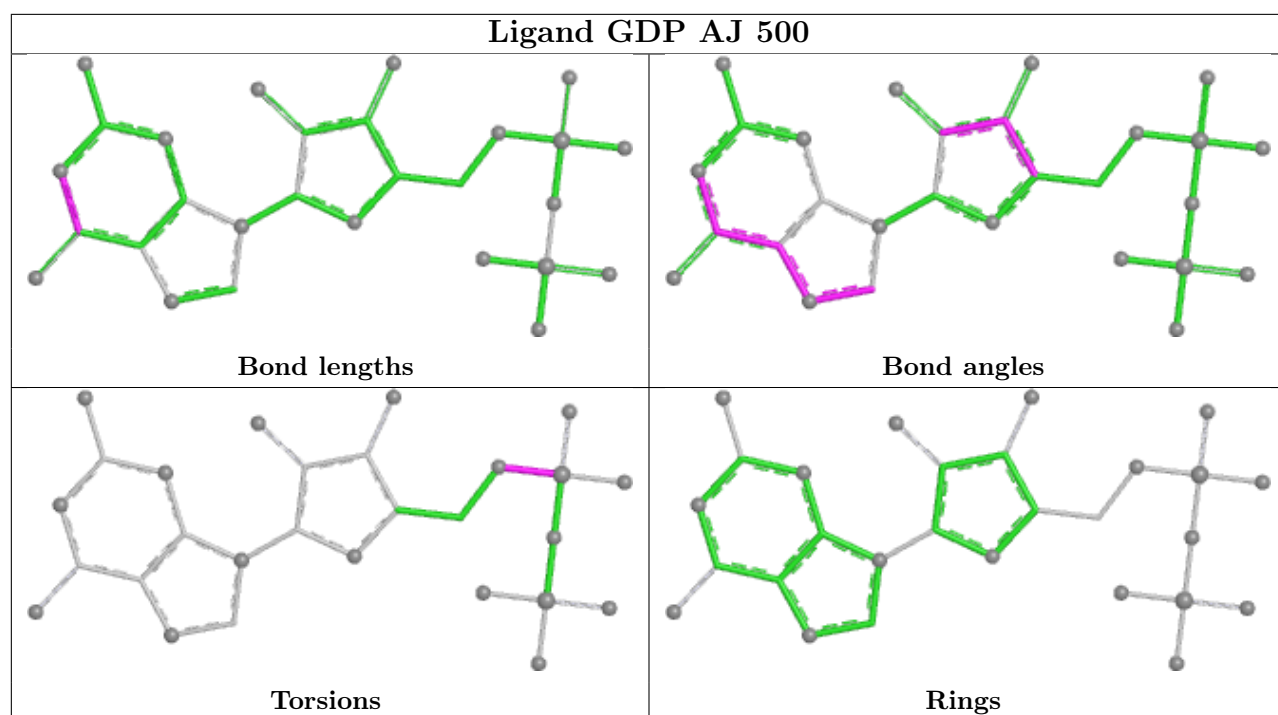






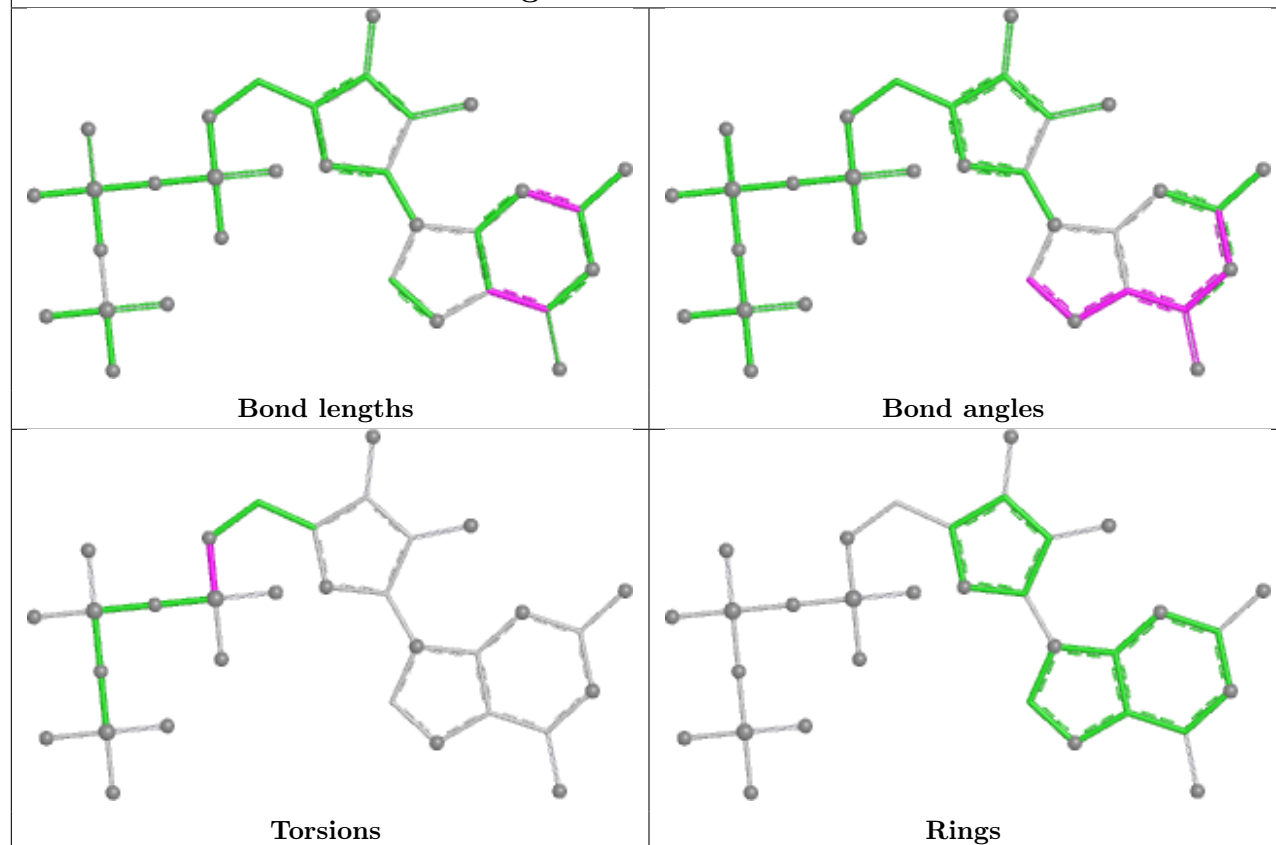




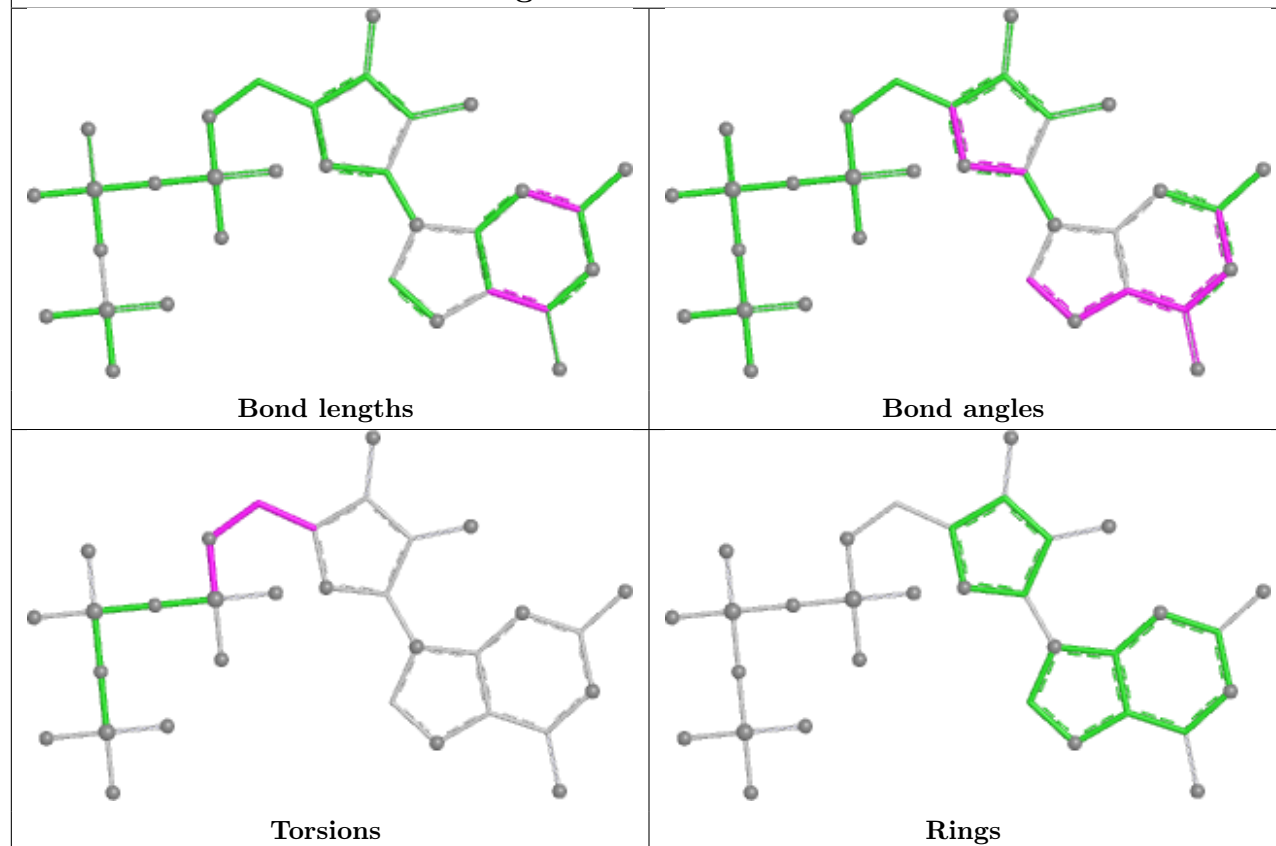




## Ligand GTP CJ 501

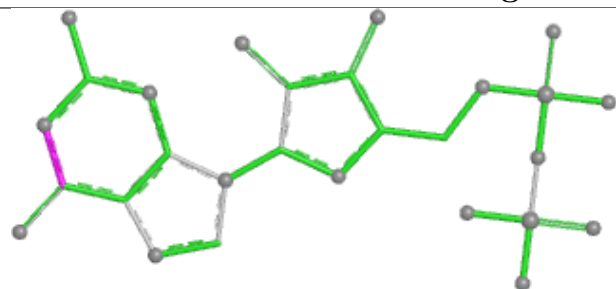


## Ligand GTP NK 501

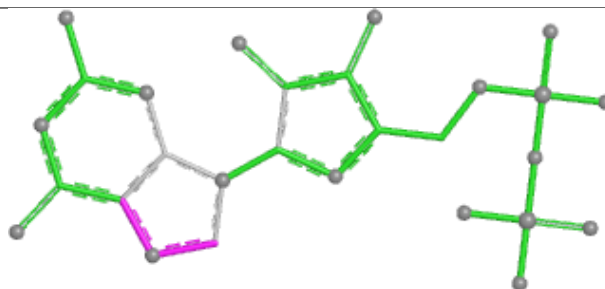




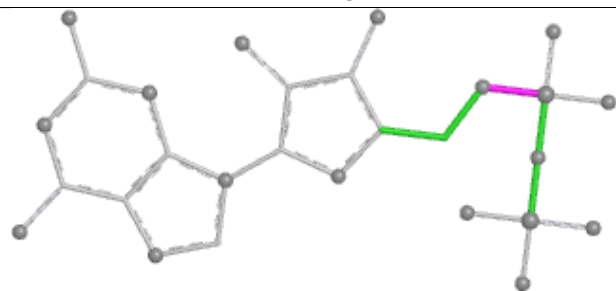
## Ligand GDP PB 500



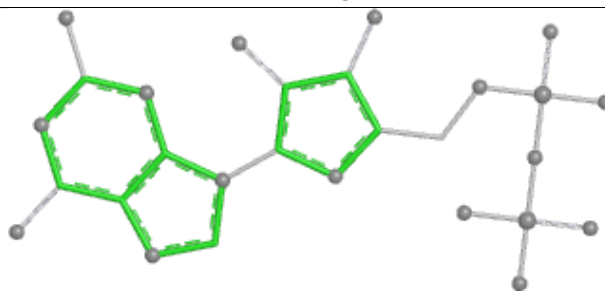
Bond lengths



Bond angles

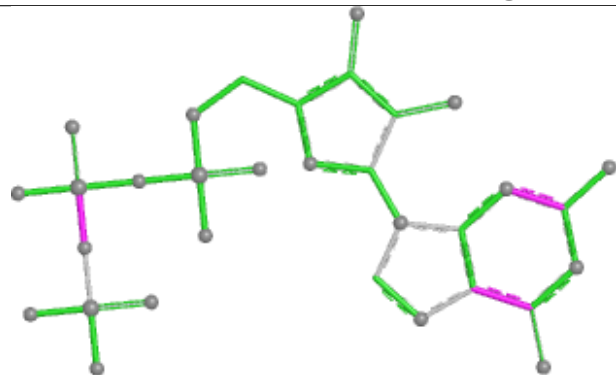


Torsions

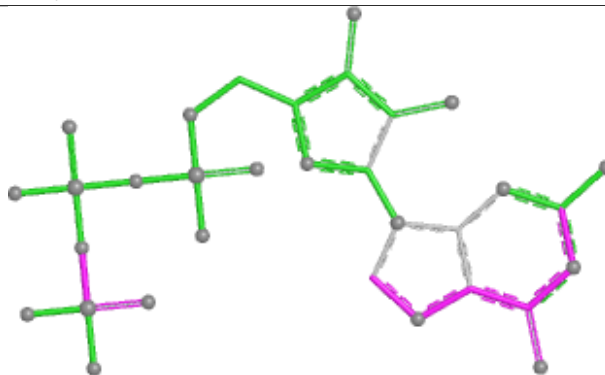


Rings

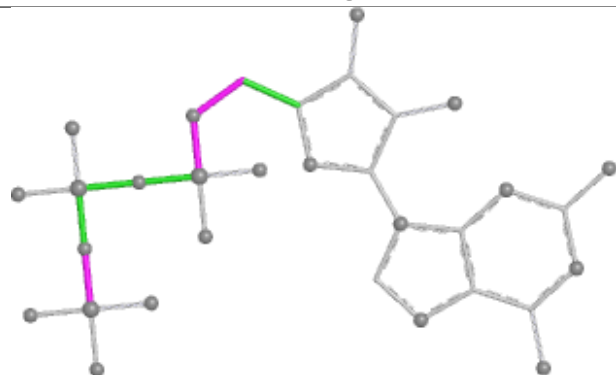
## Ligand GTP QD 501



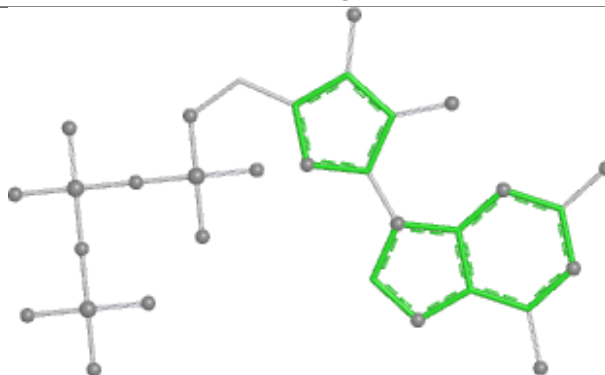
Bond lengths



Bond angles

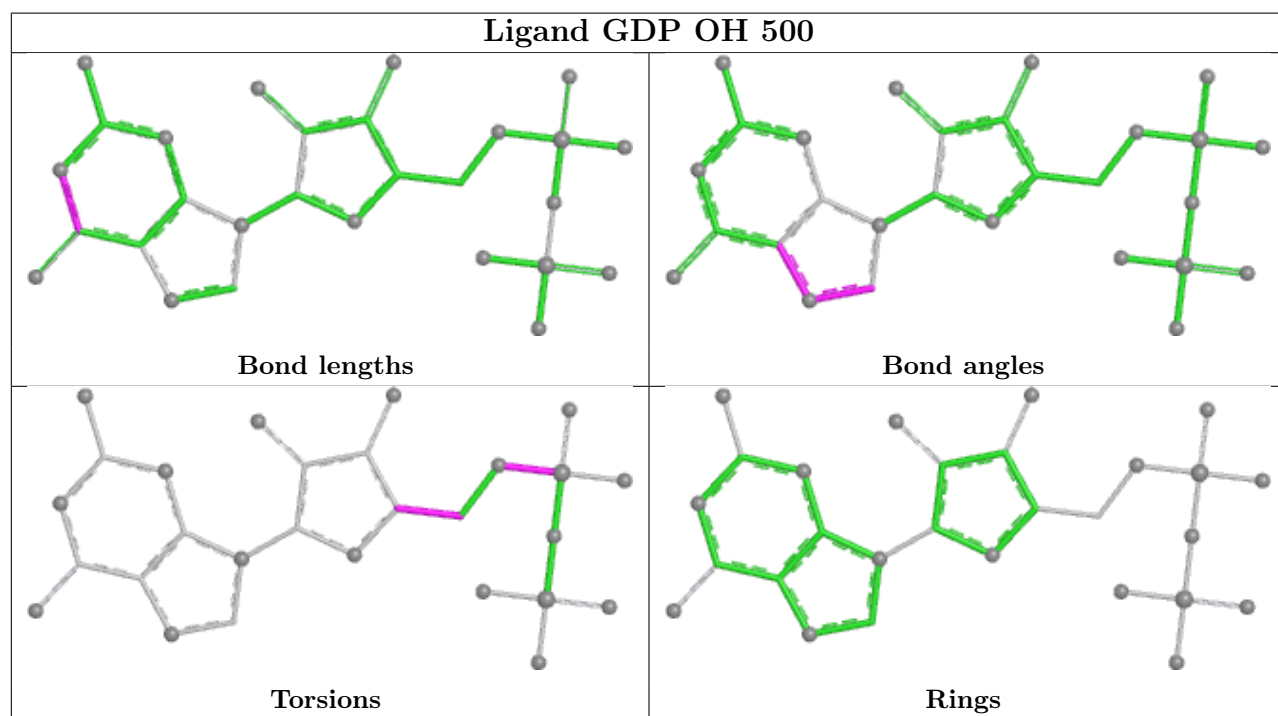
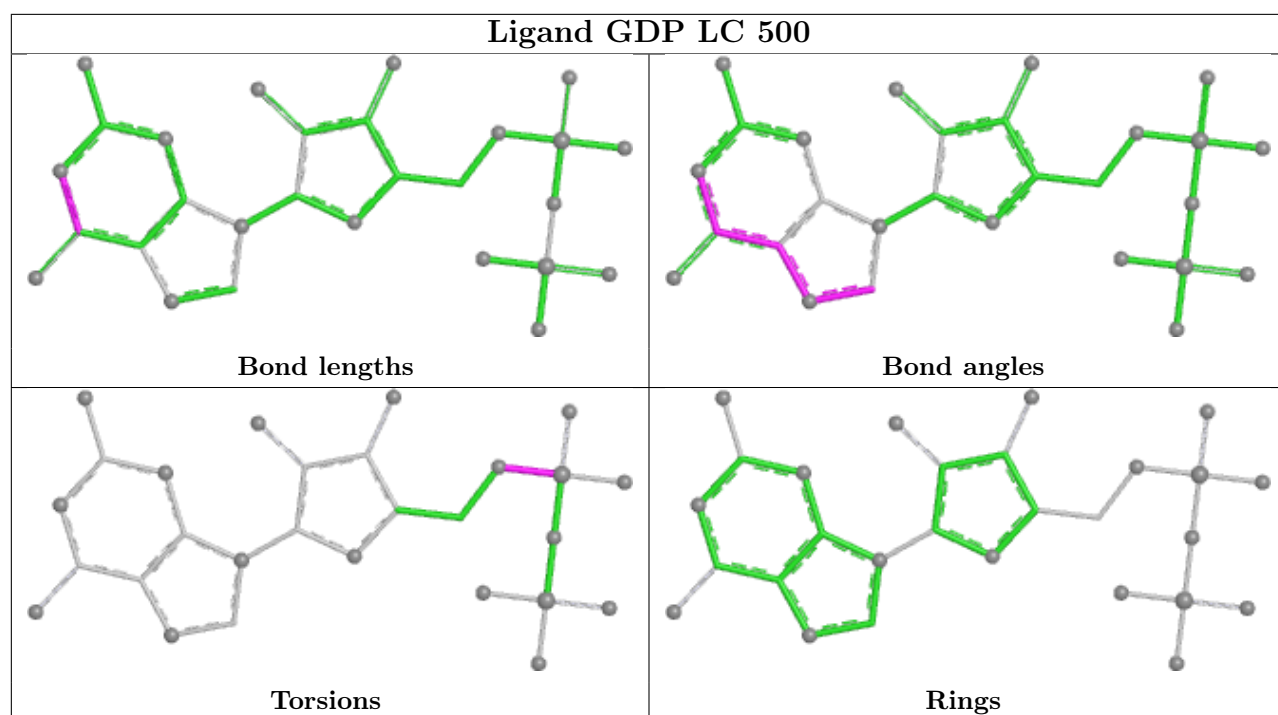


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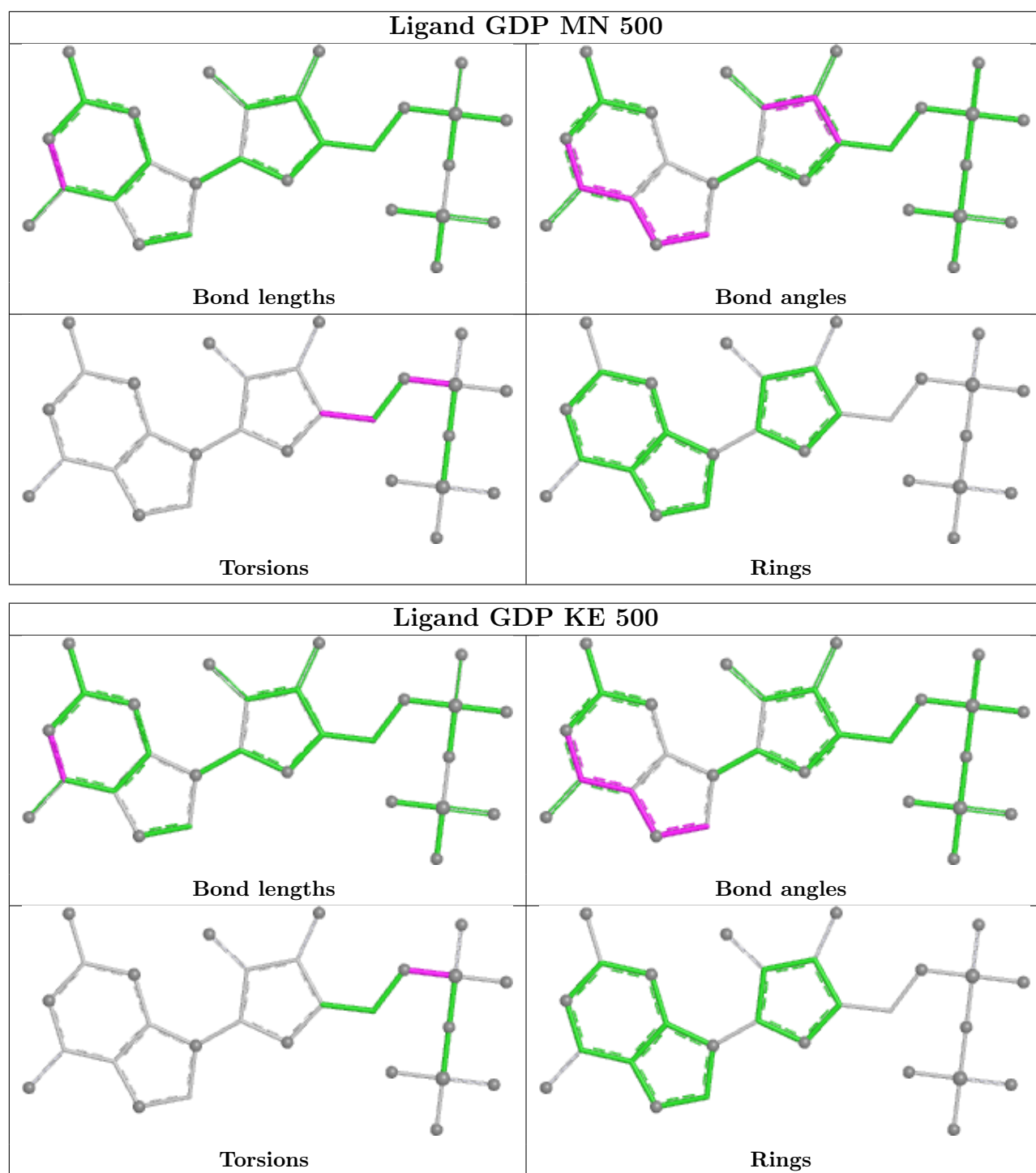


Rings

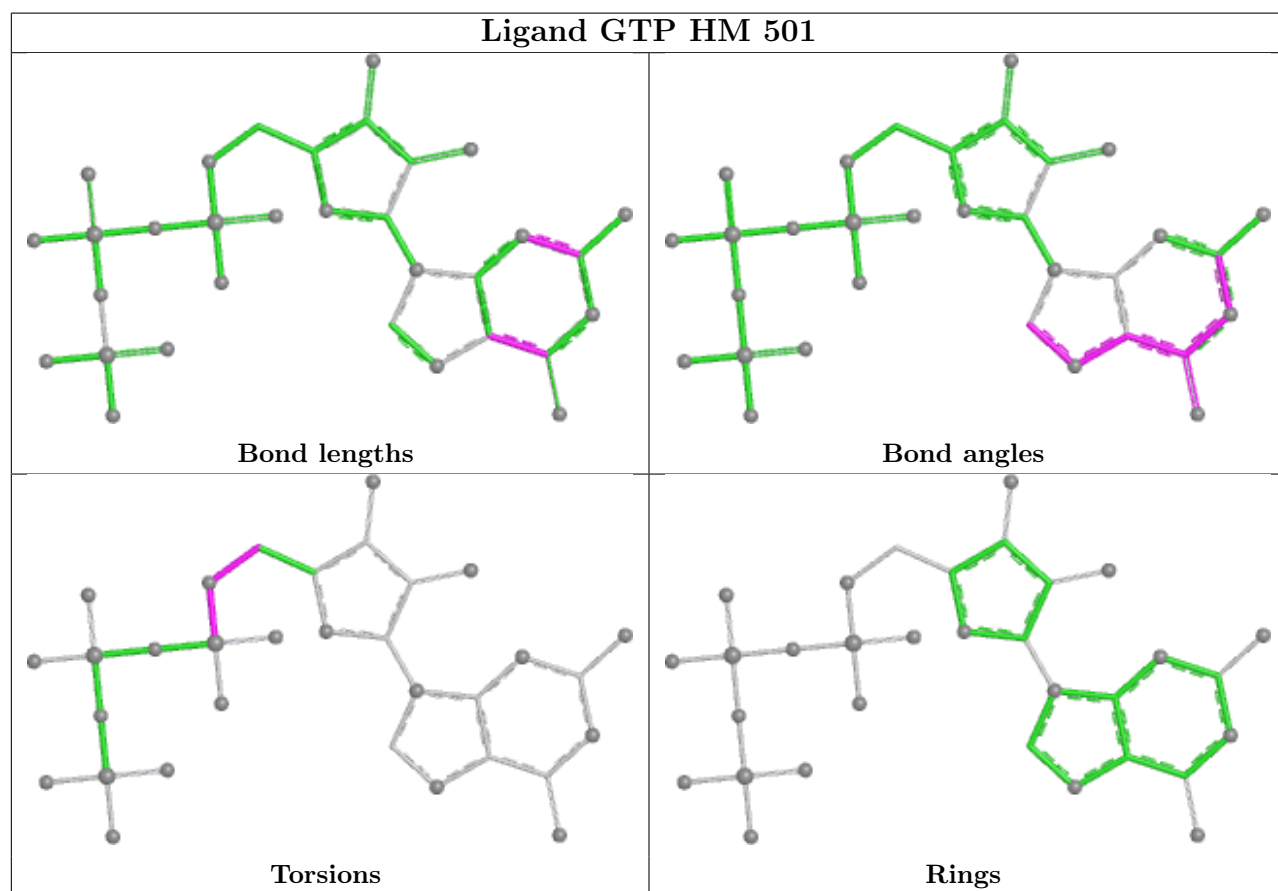
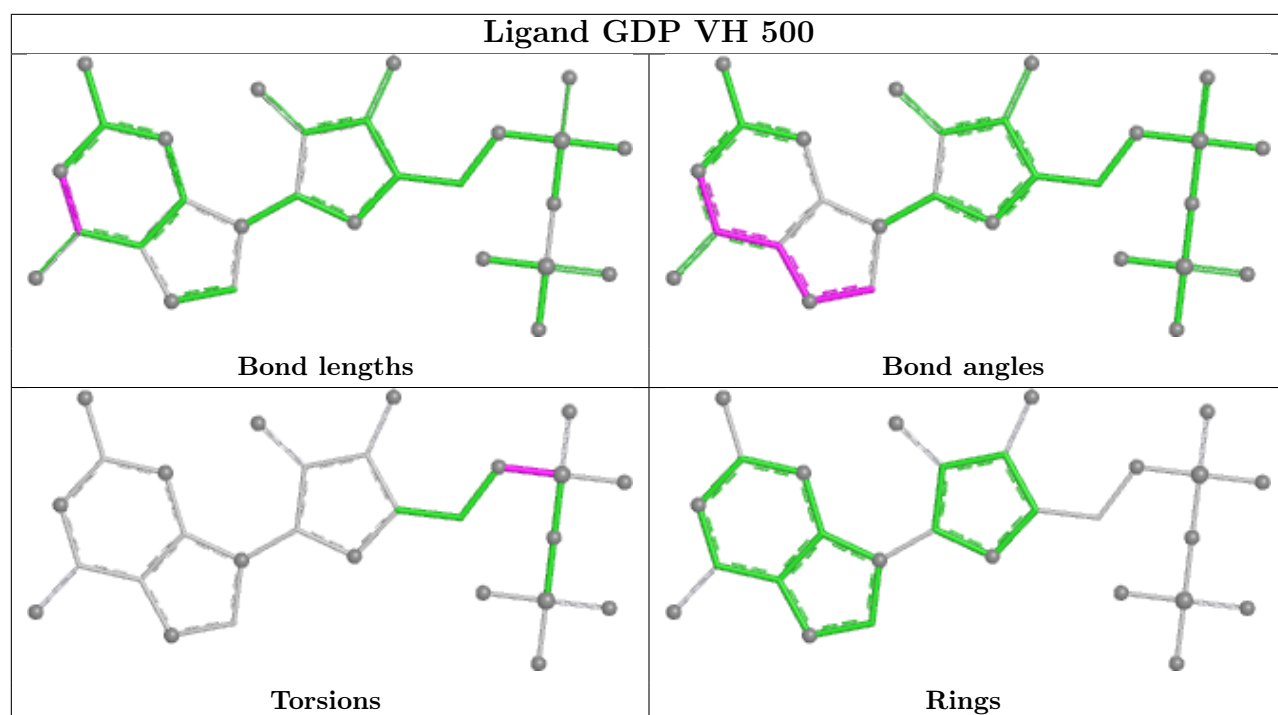






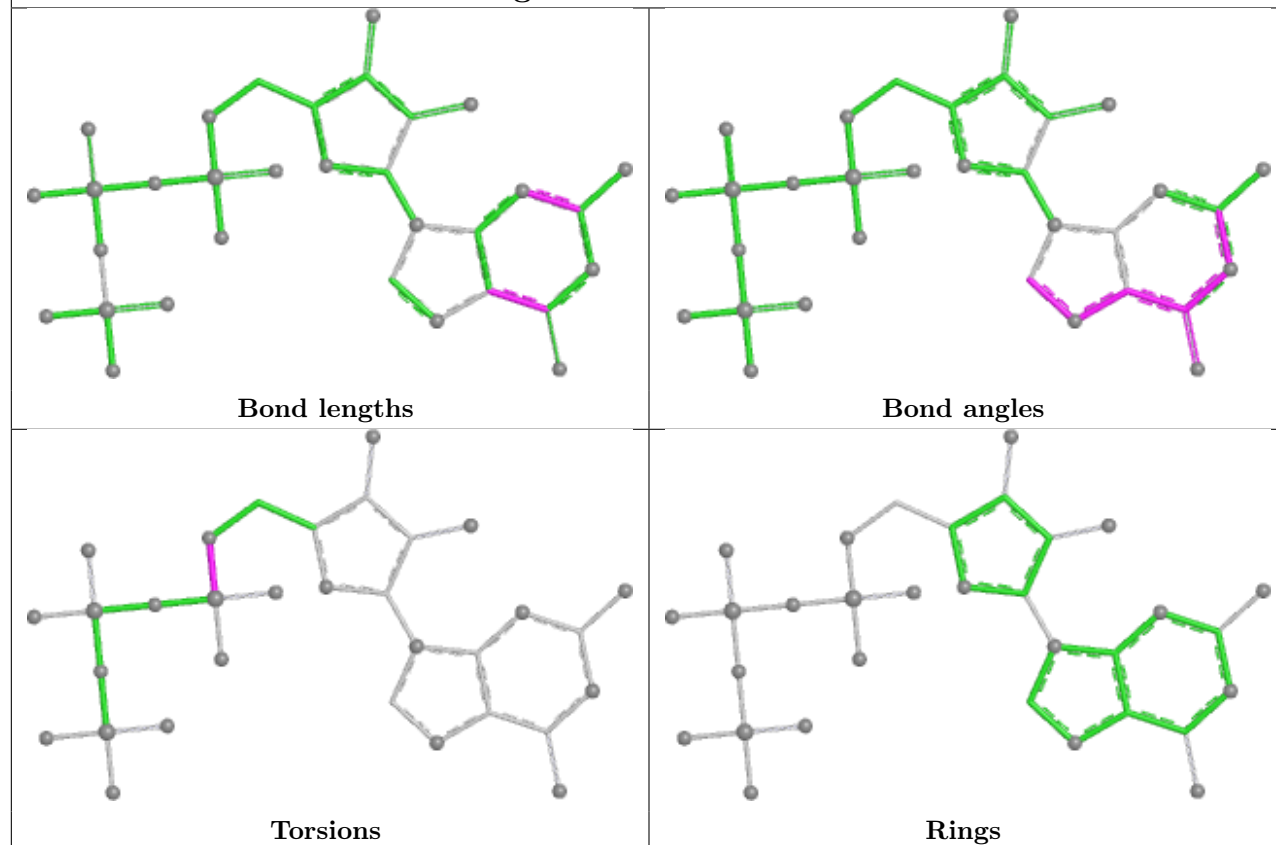




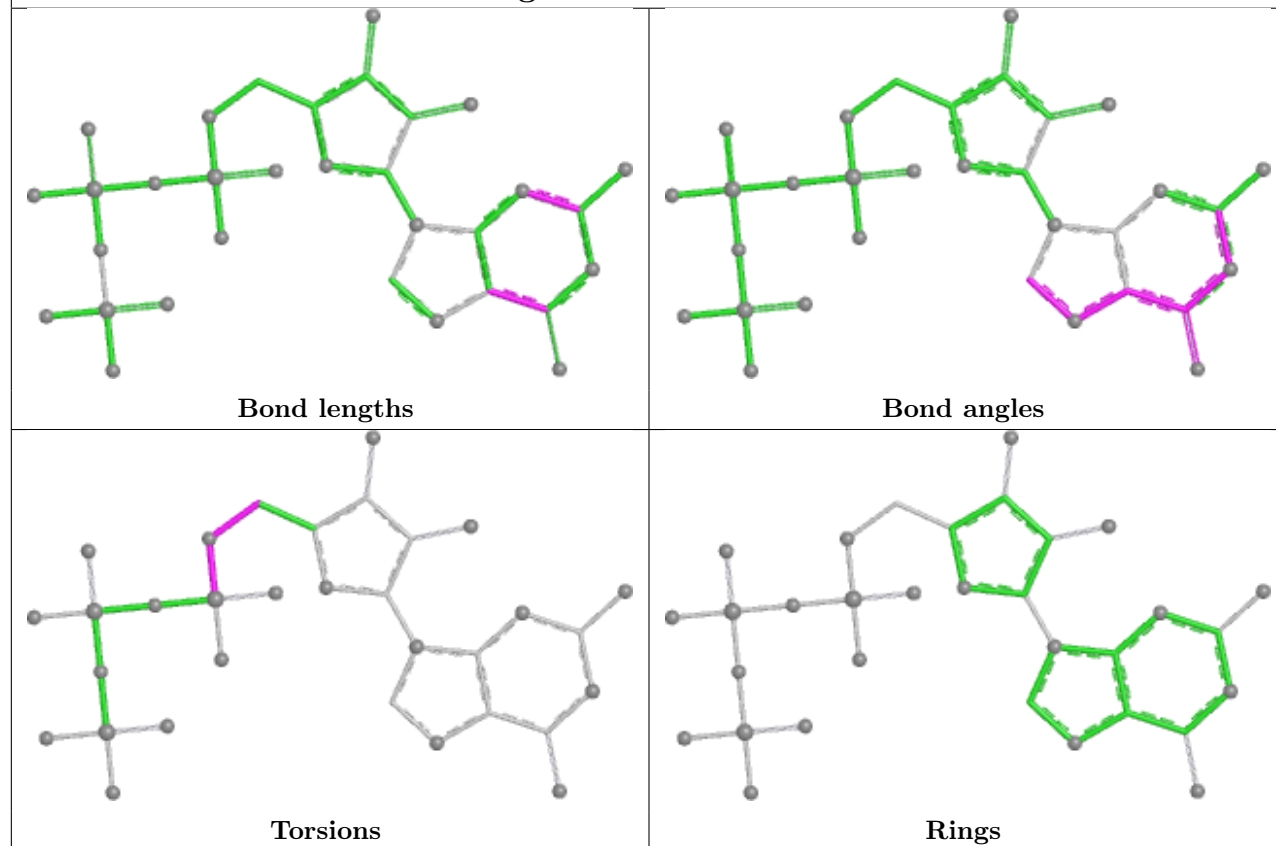




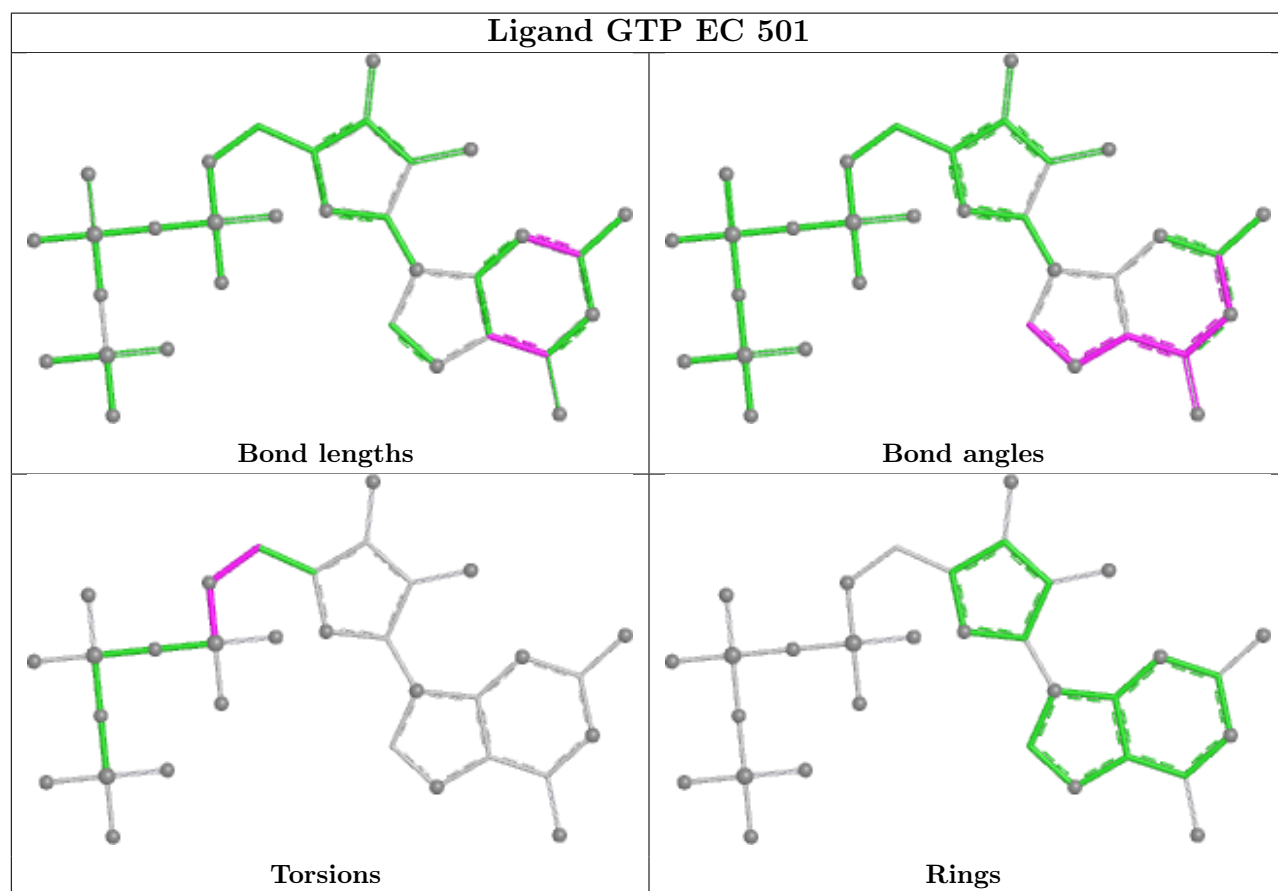
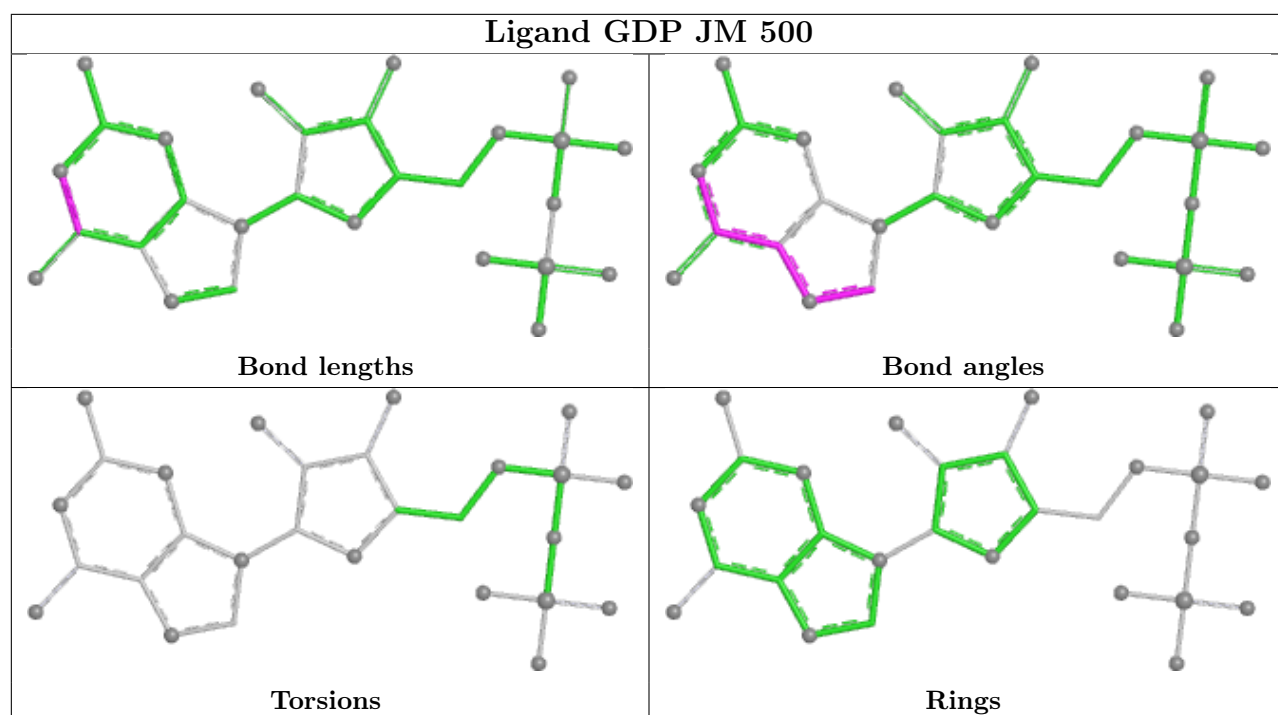
## Ligand GTP WA 501



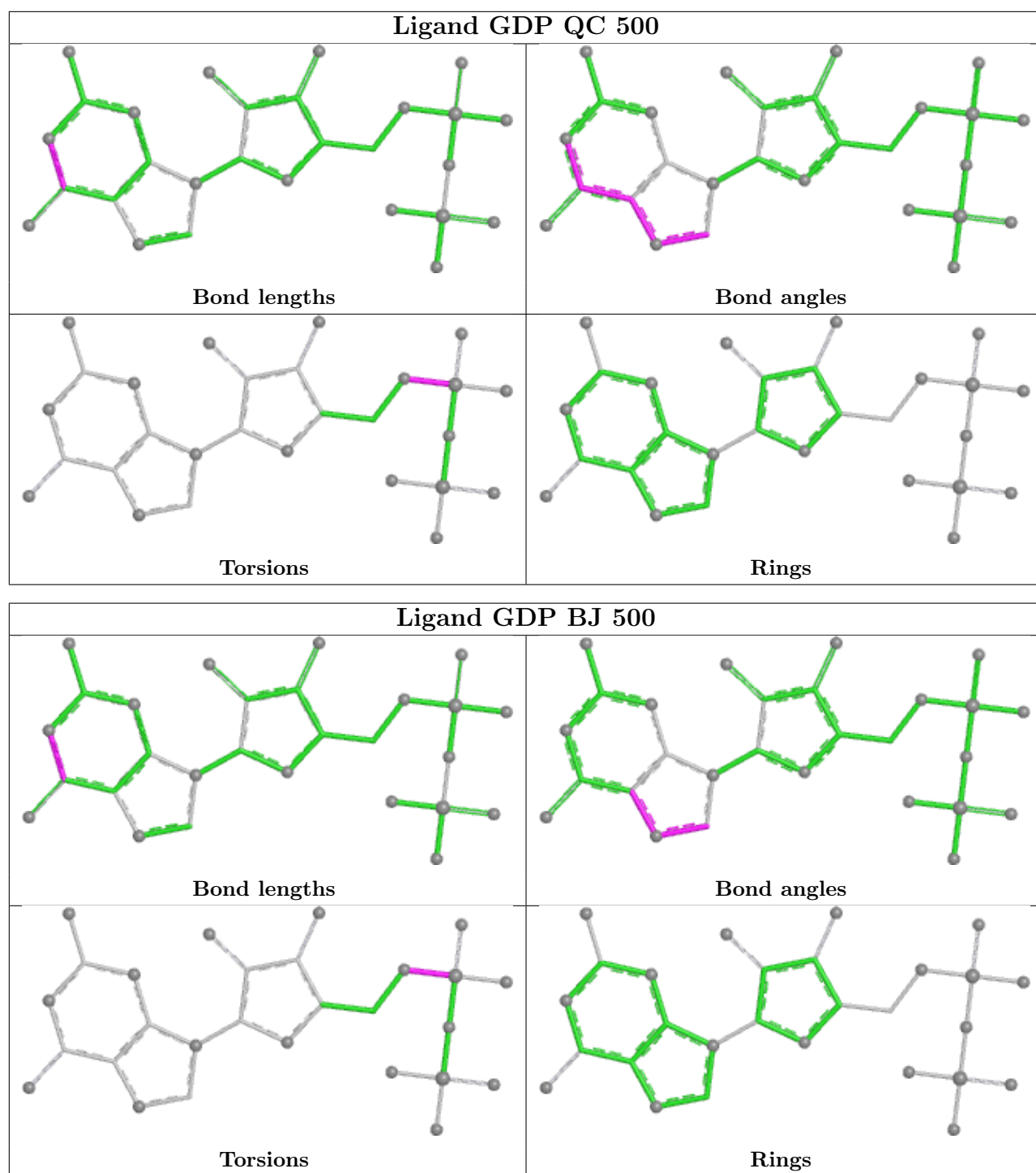
## Ligand GTP AE 501



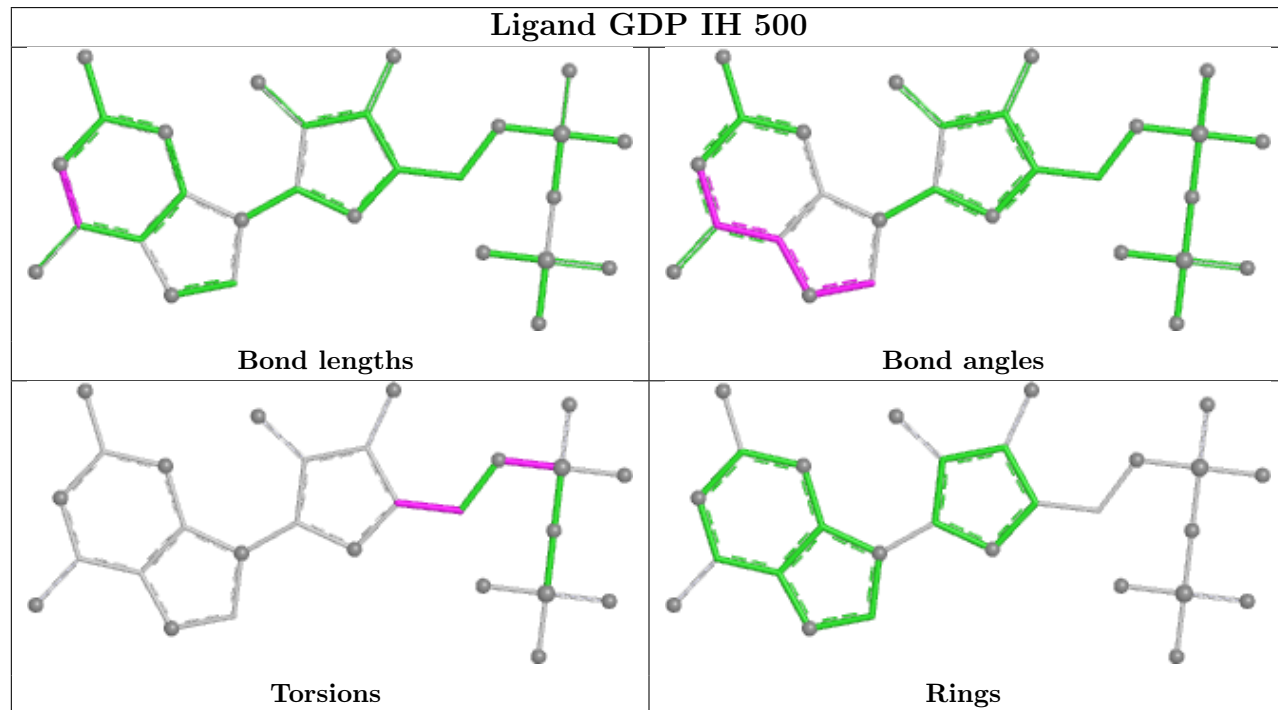
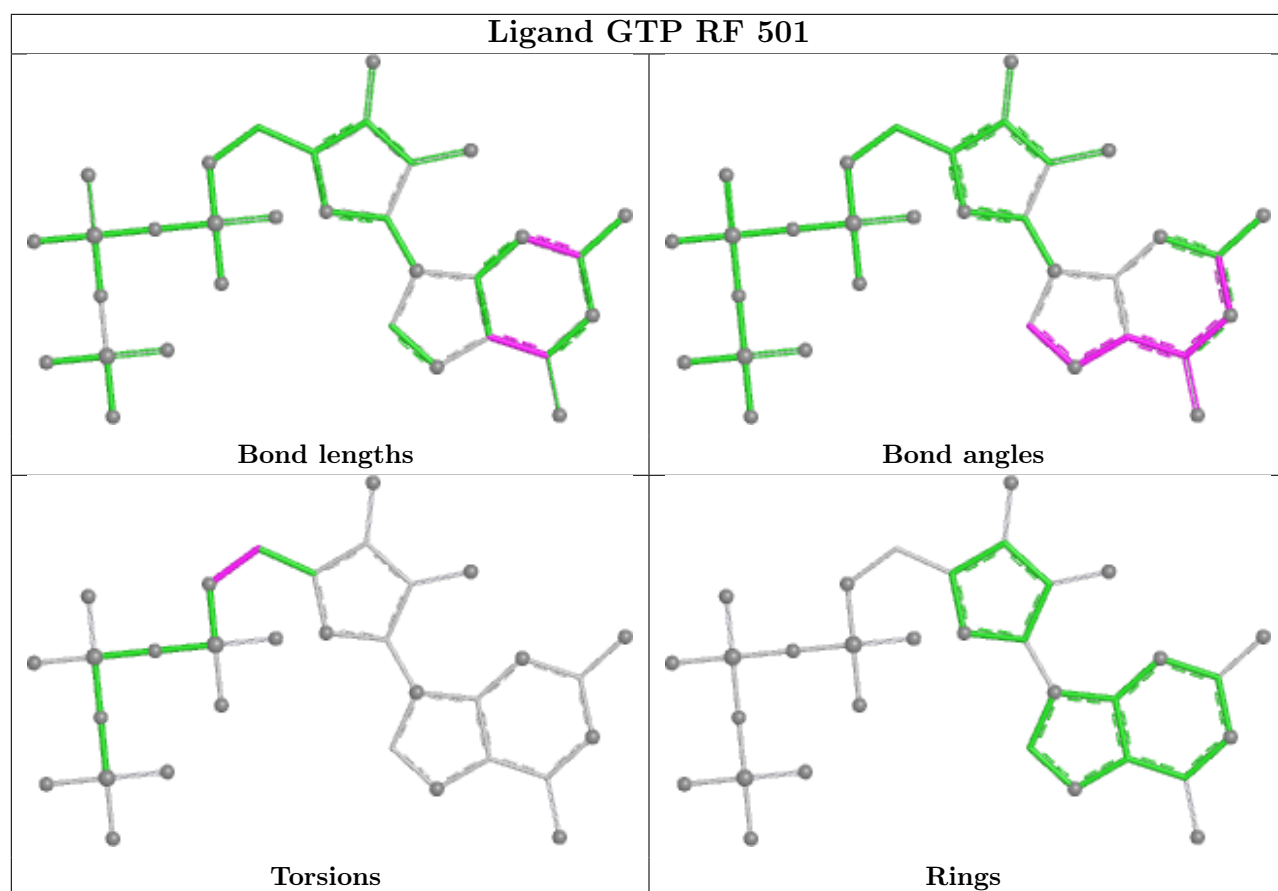




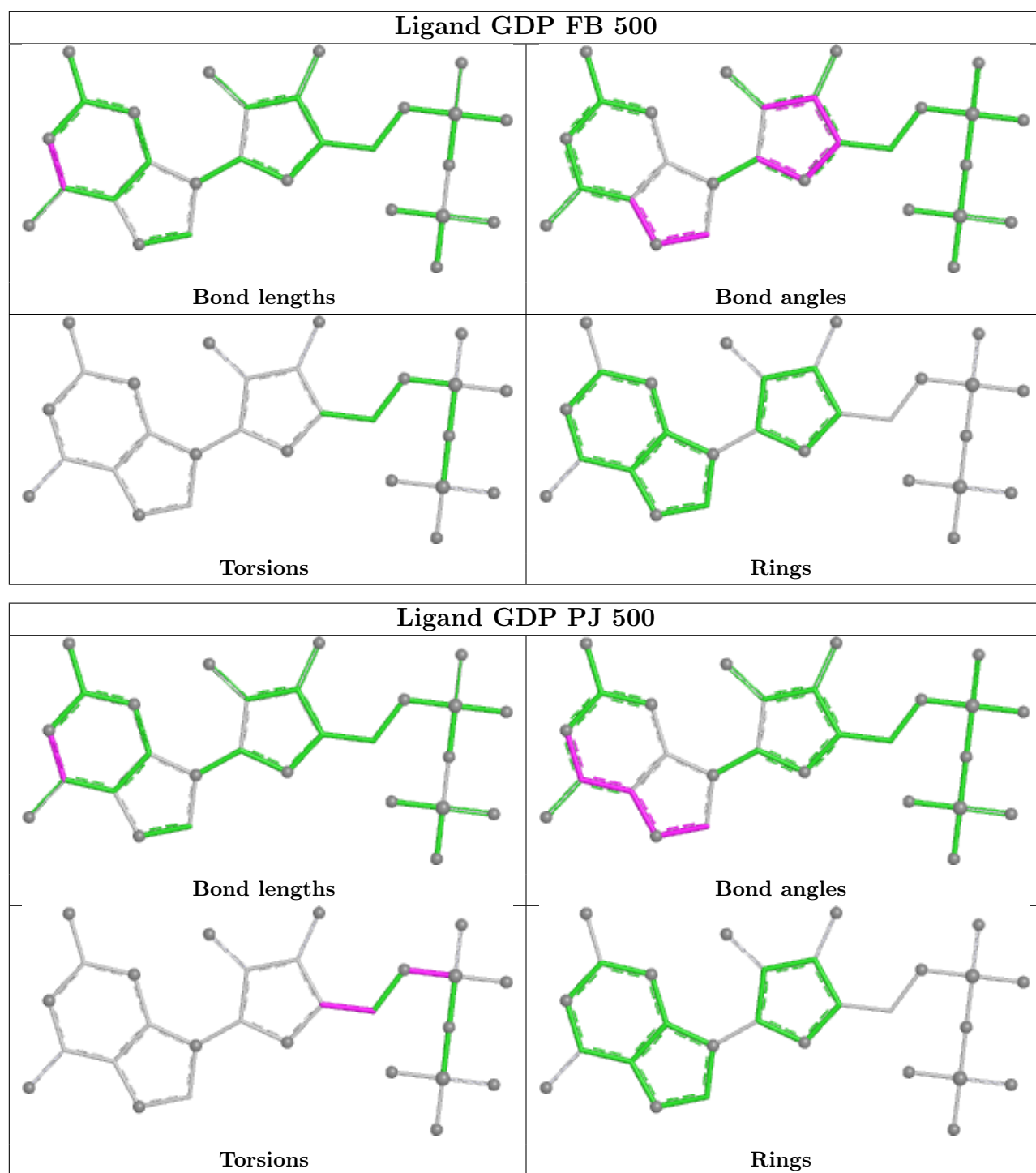




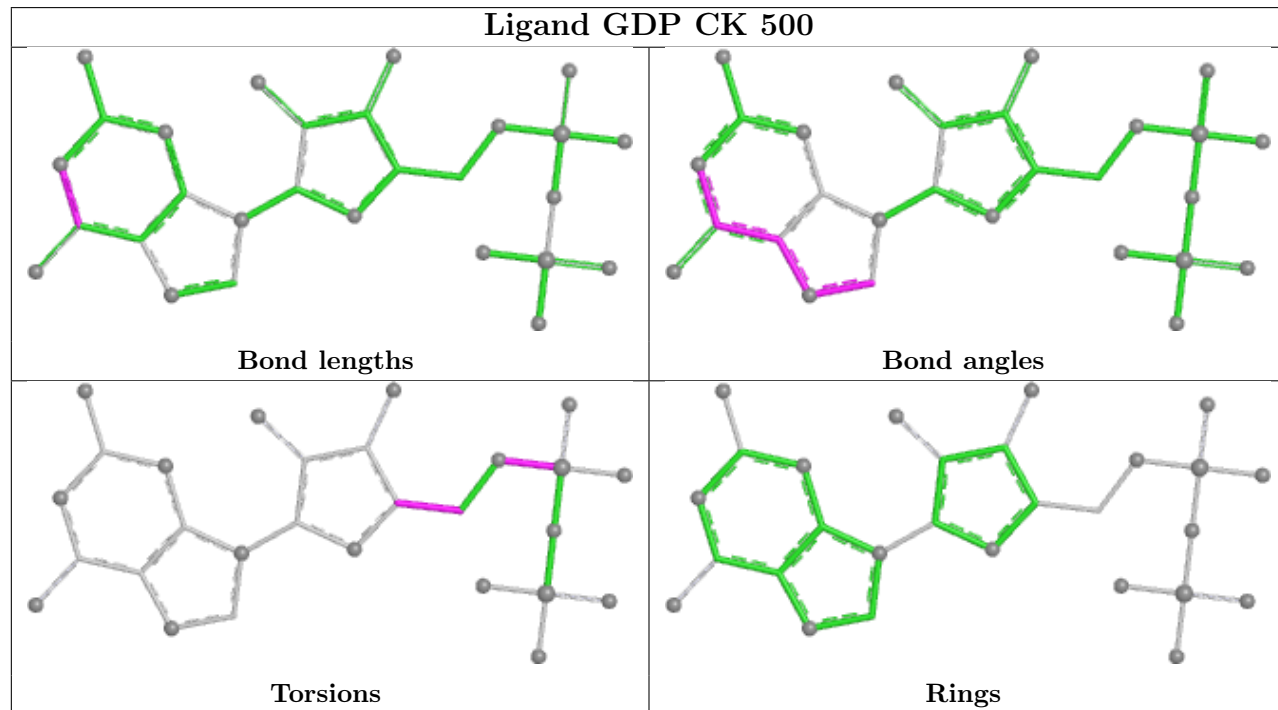
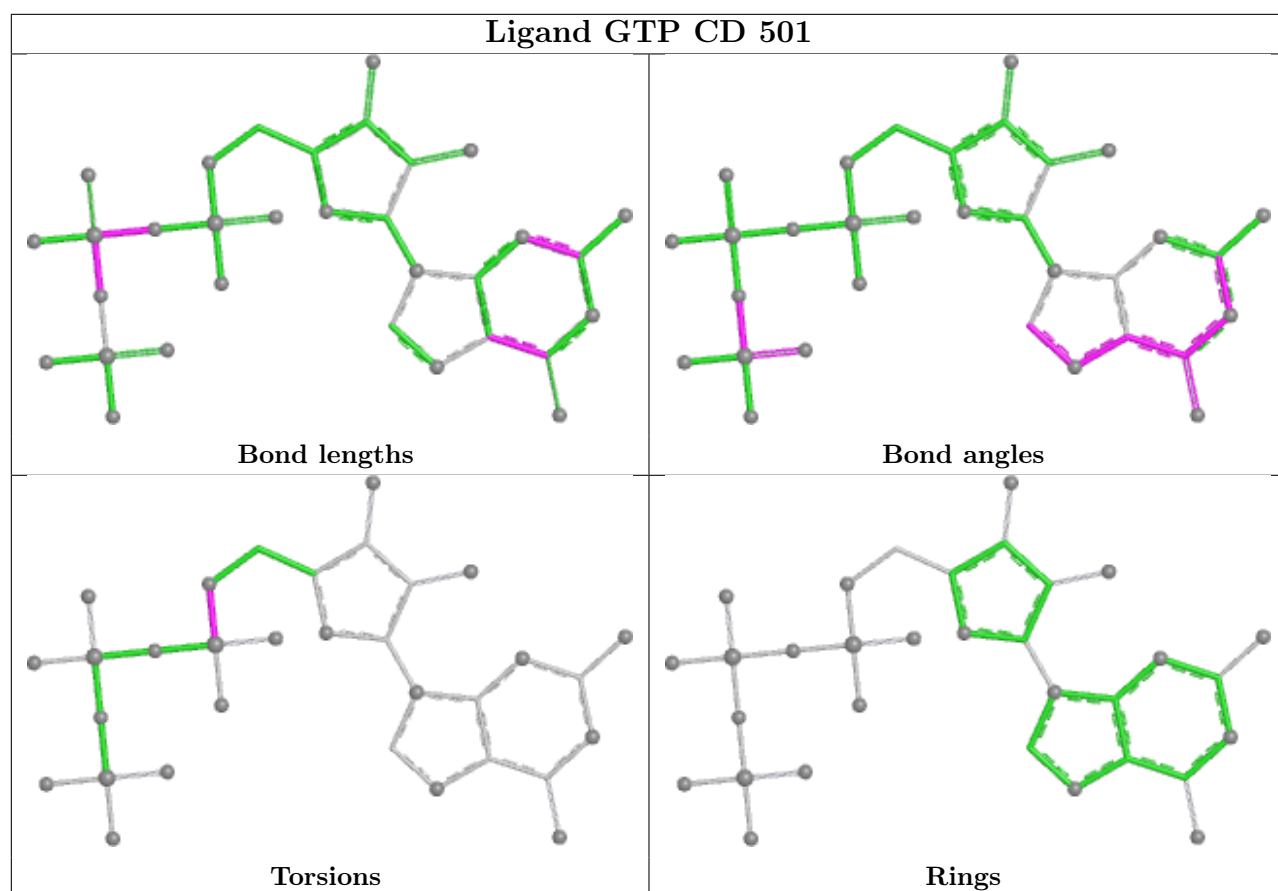




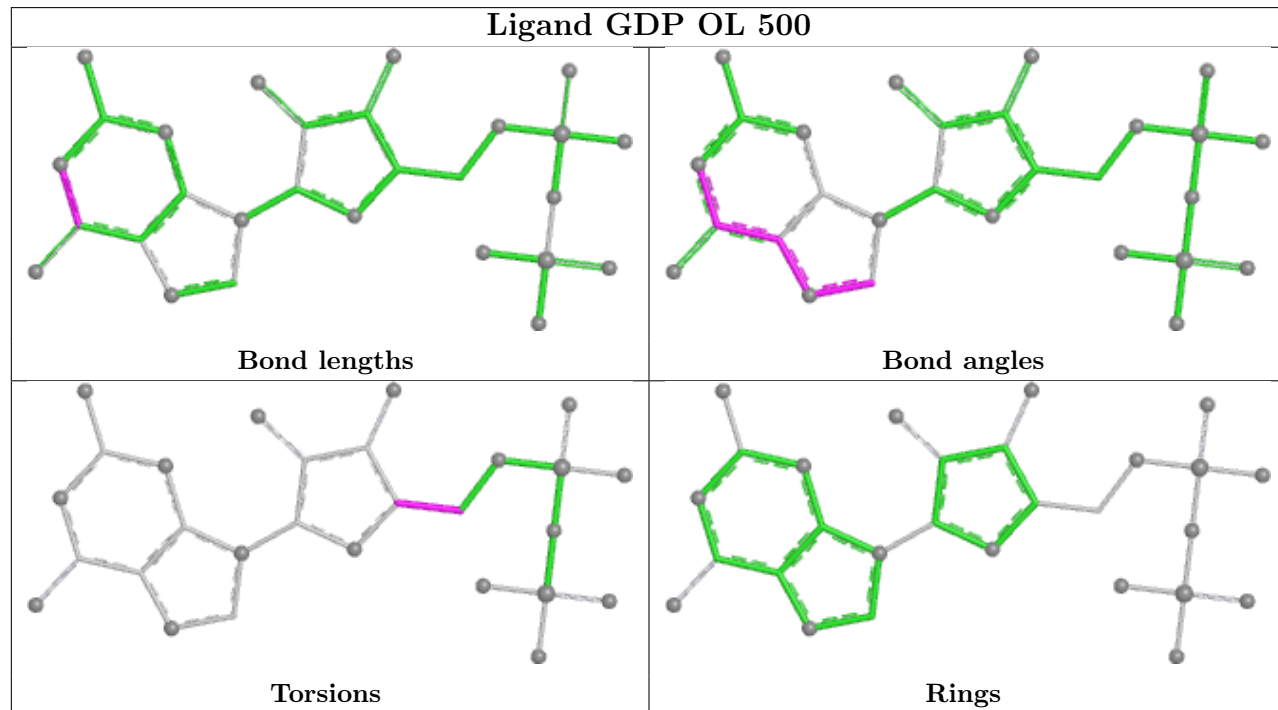
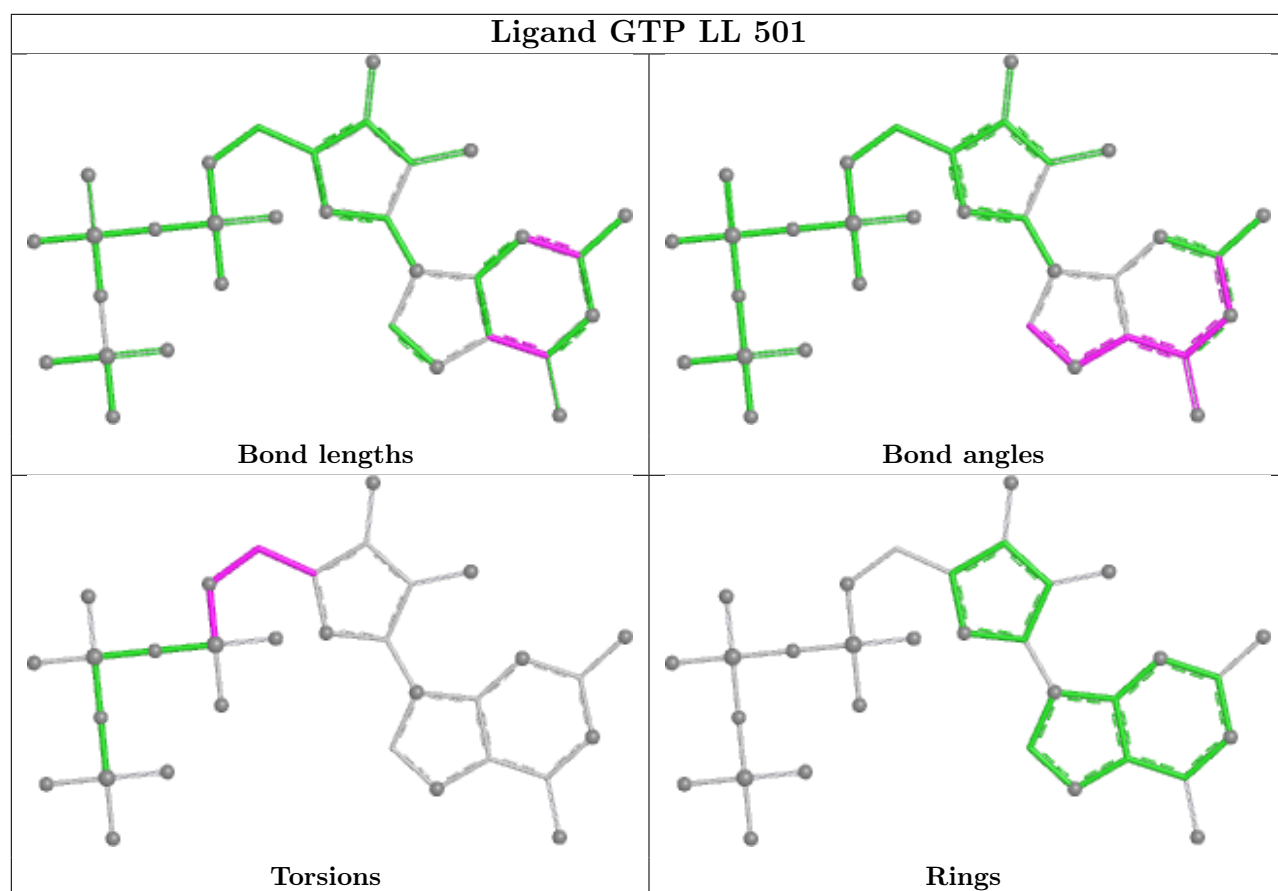




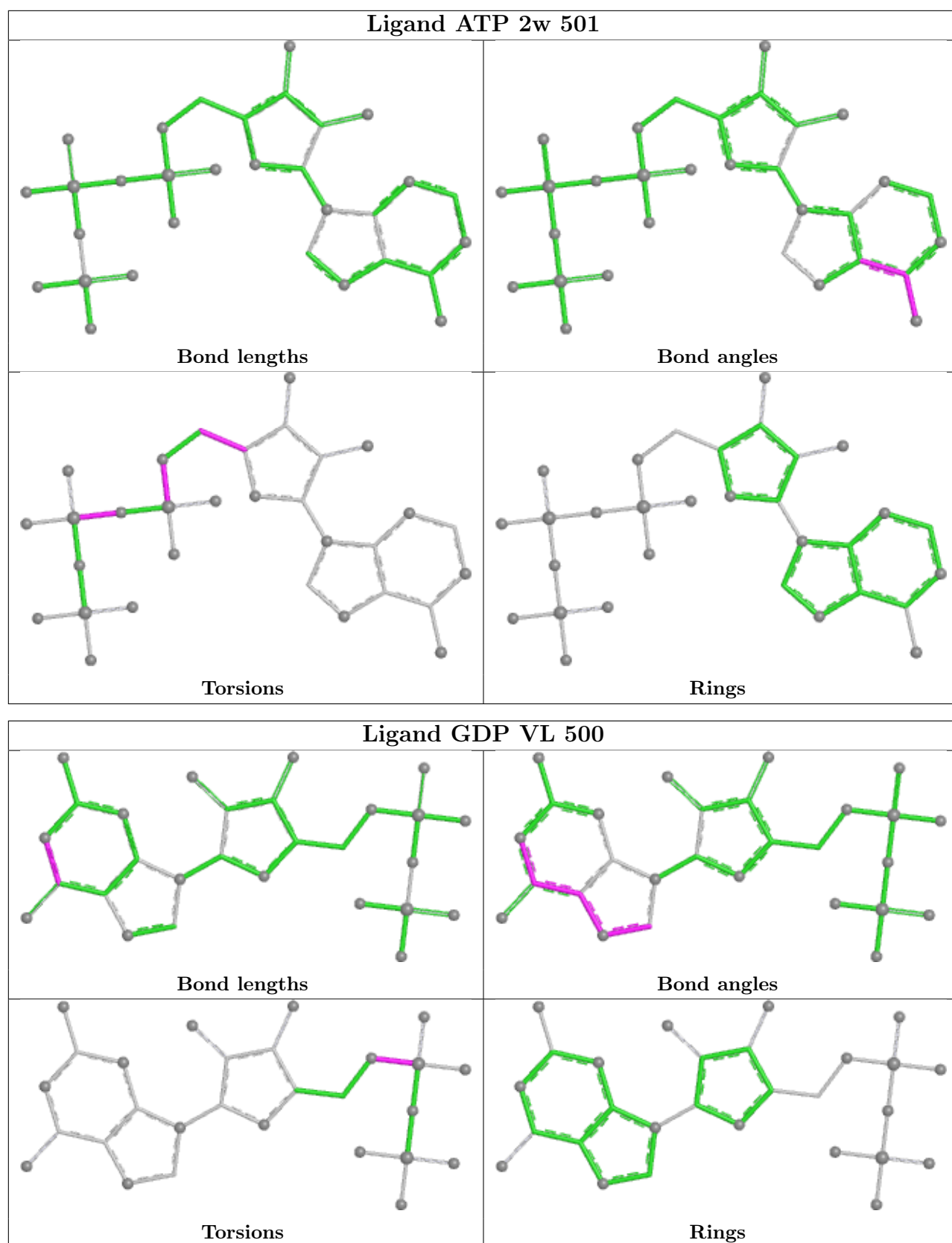






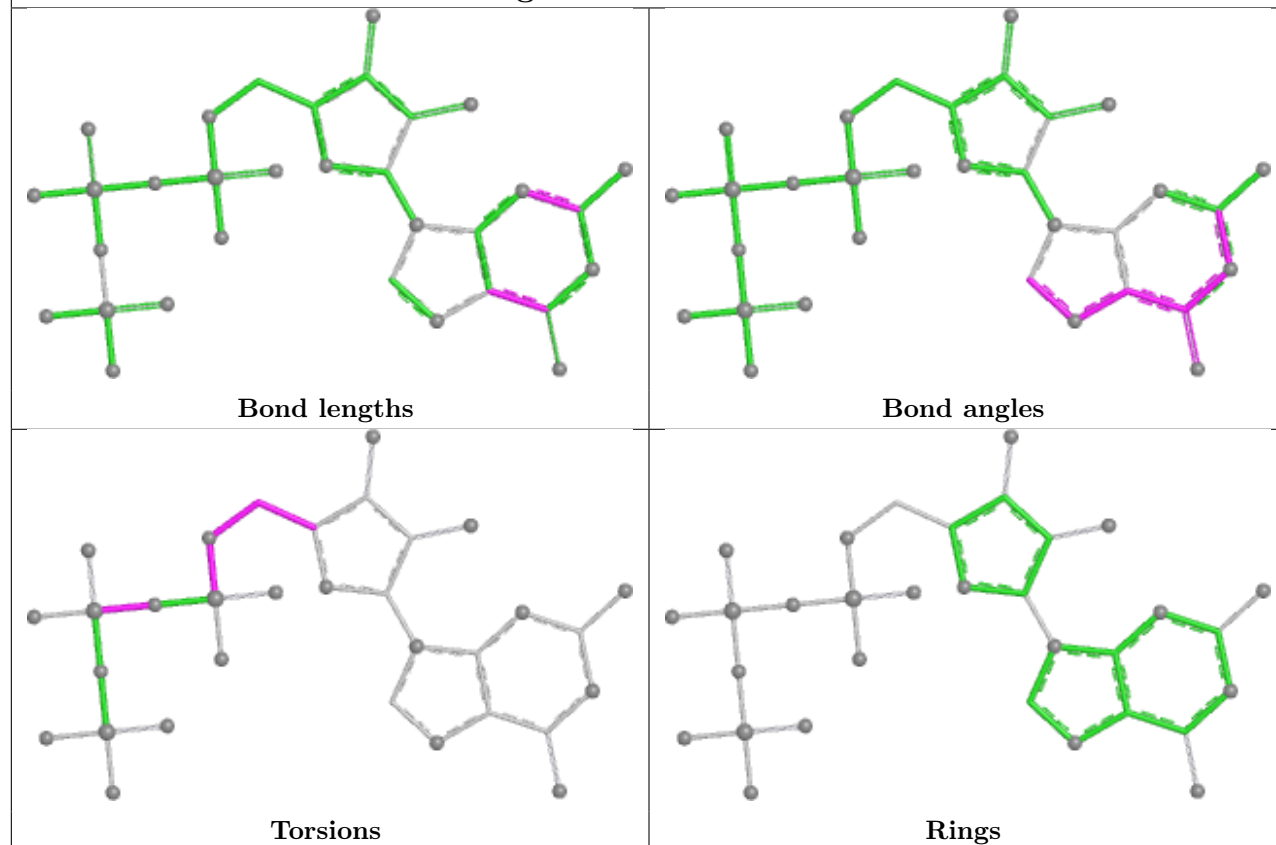




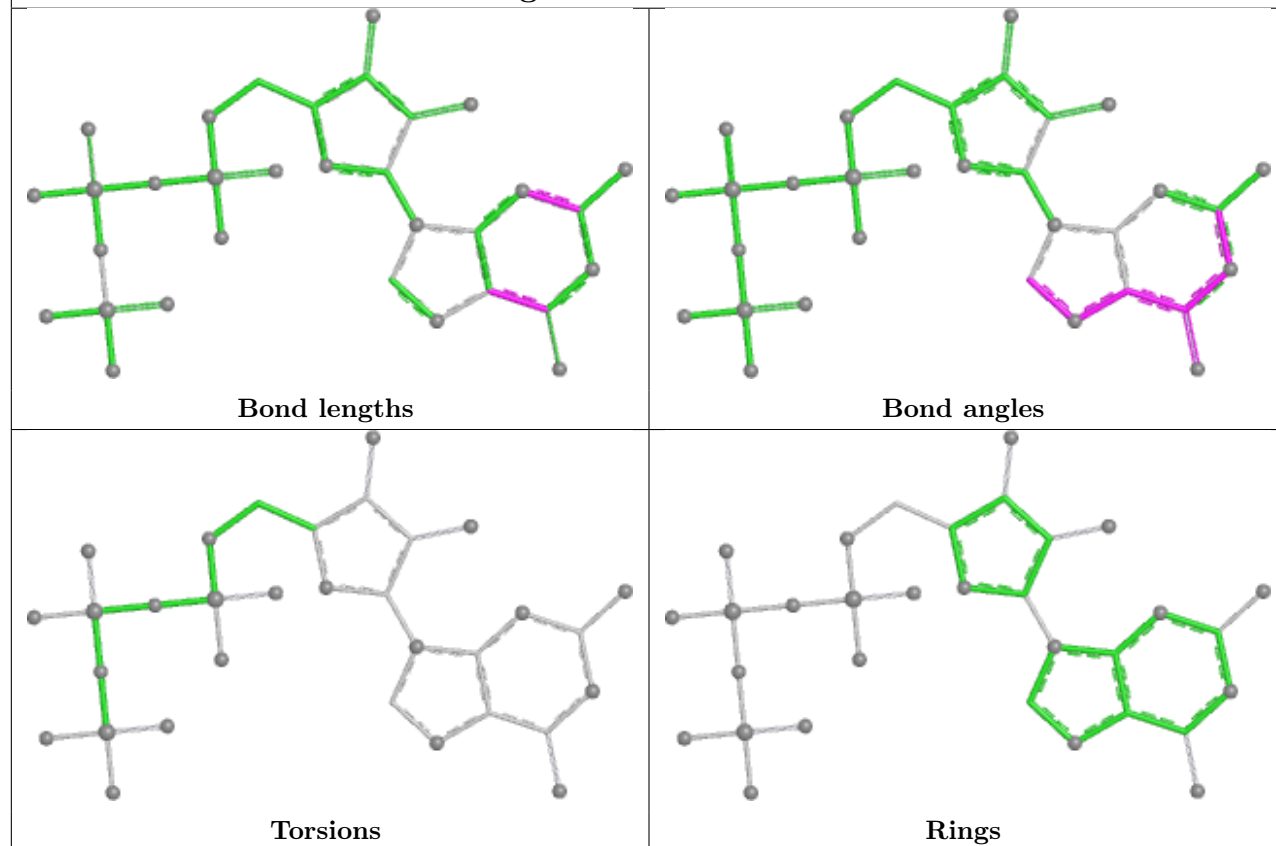




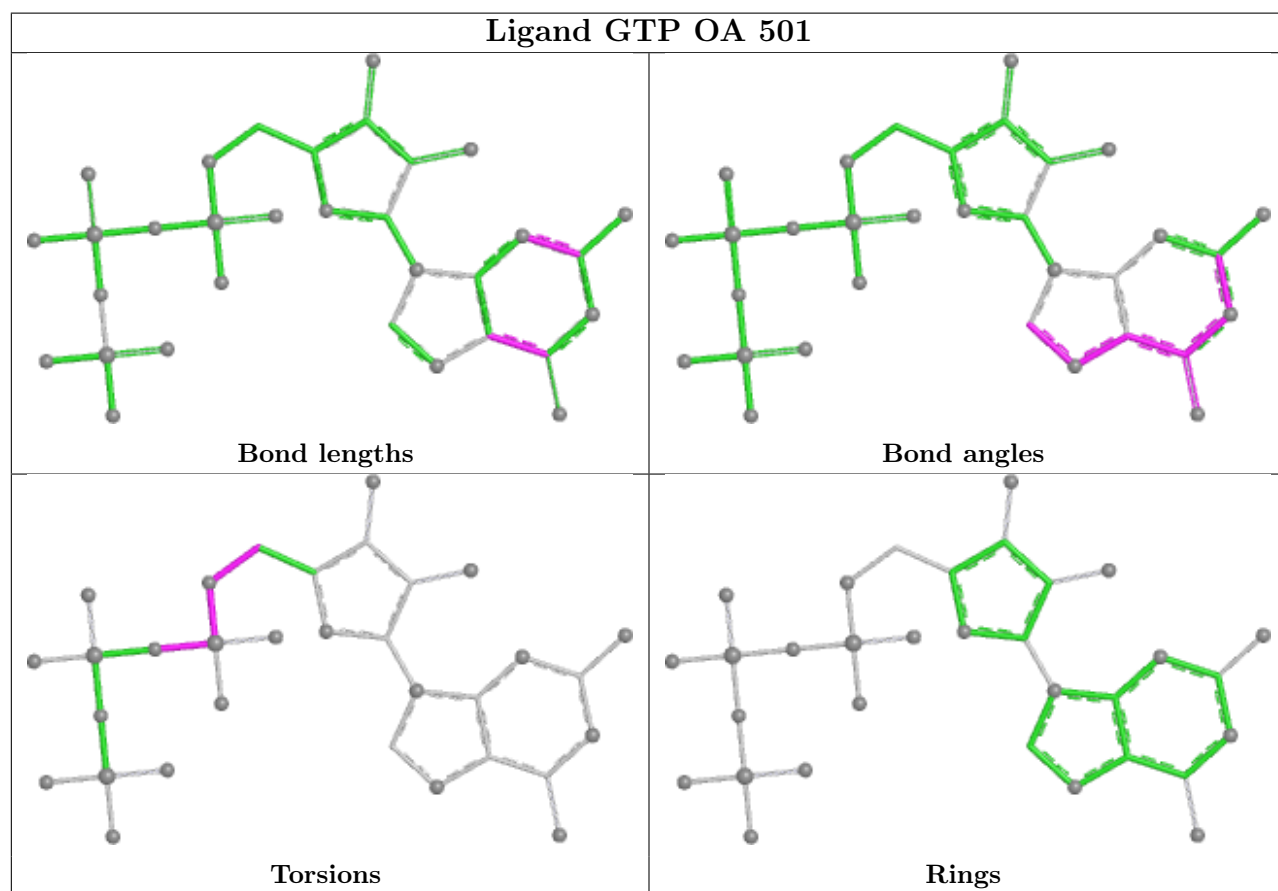
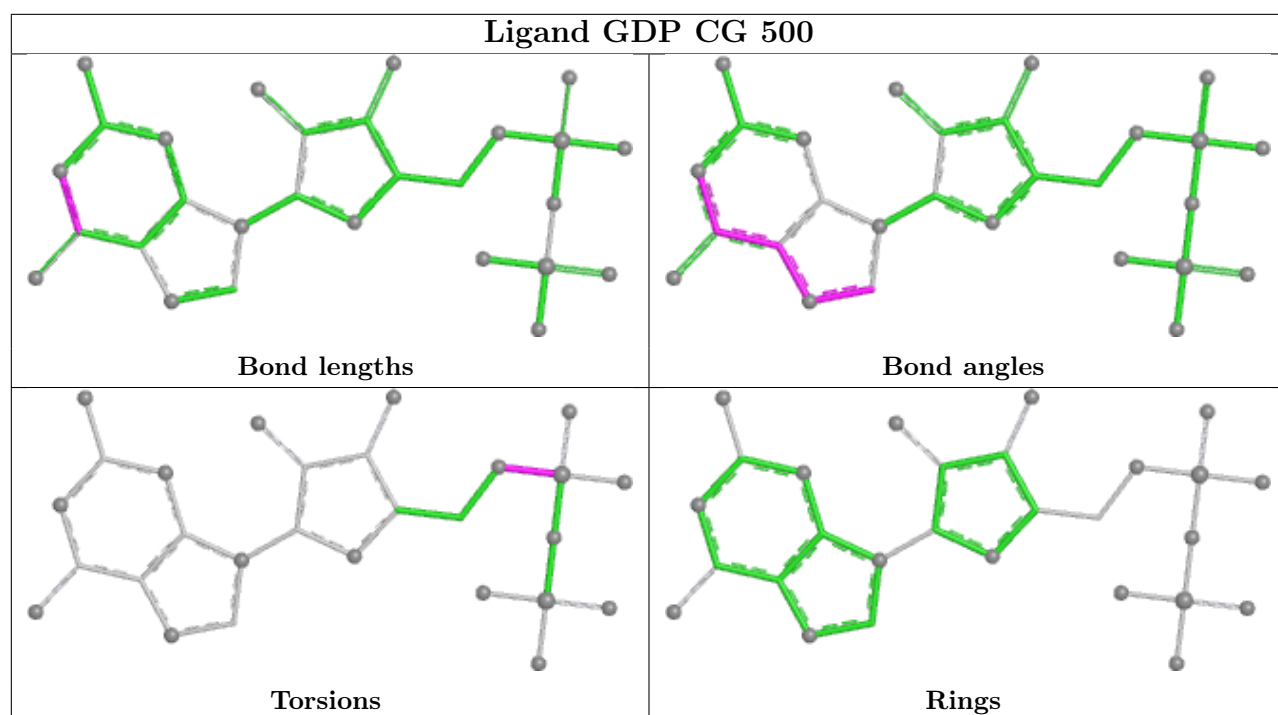
## Ligand GTP AG 501



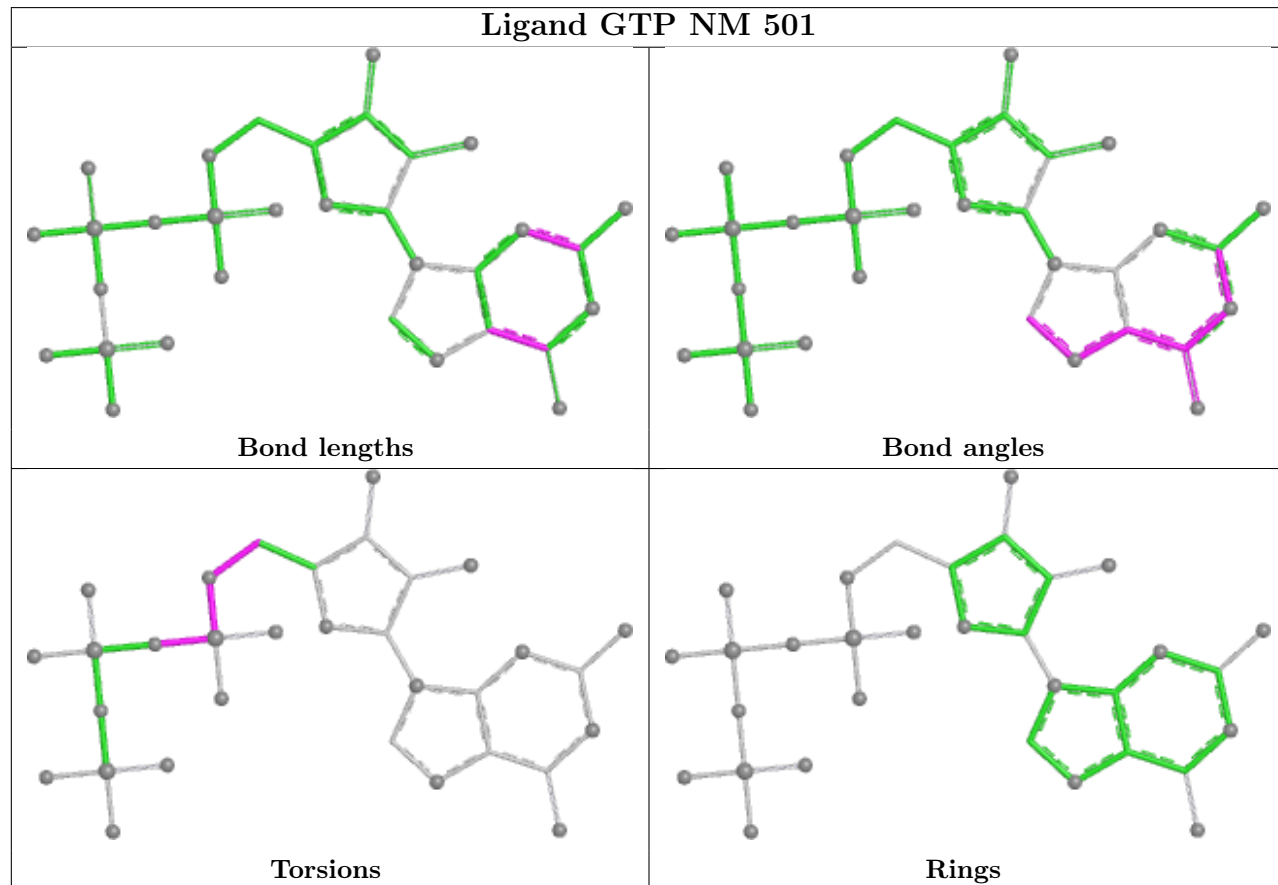
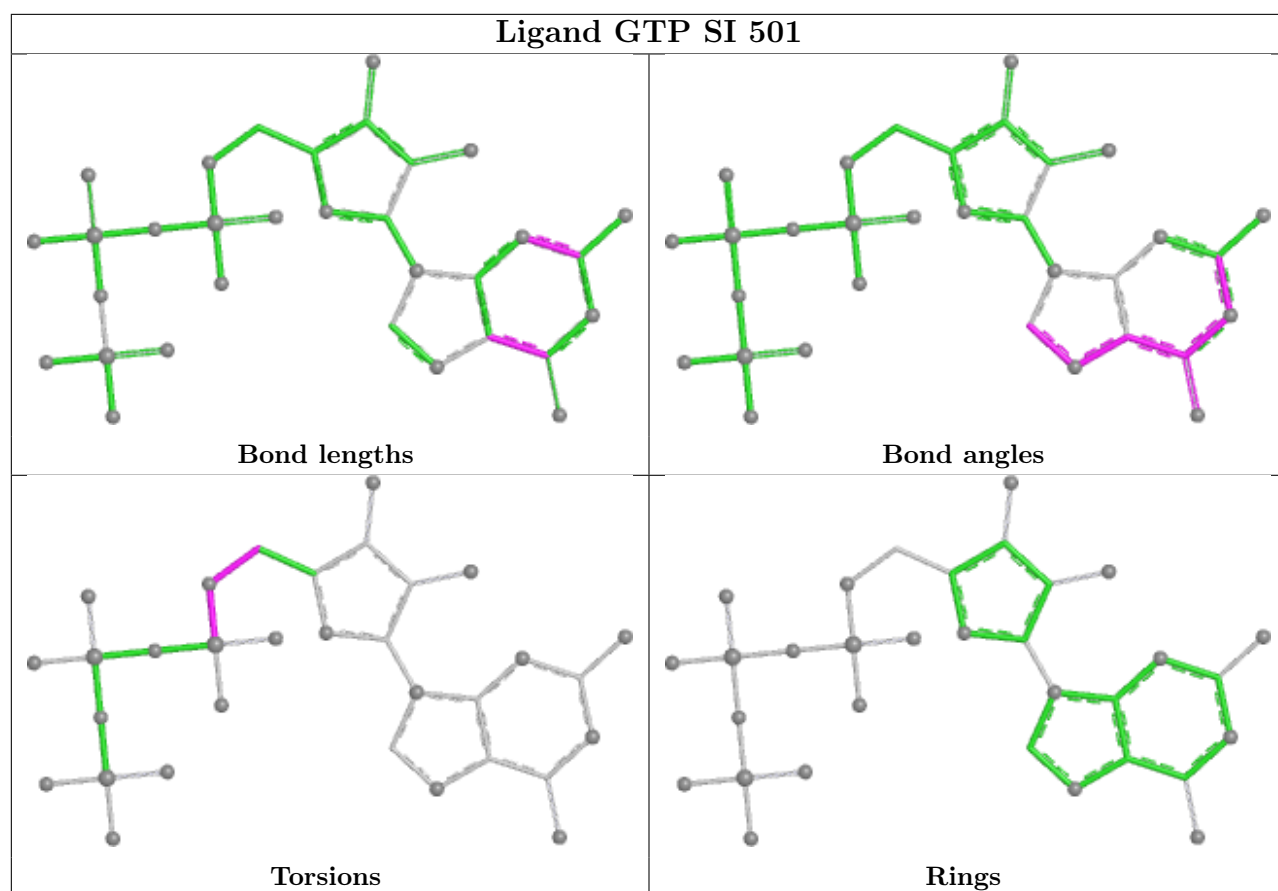
## Ligand GTP SK 501



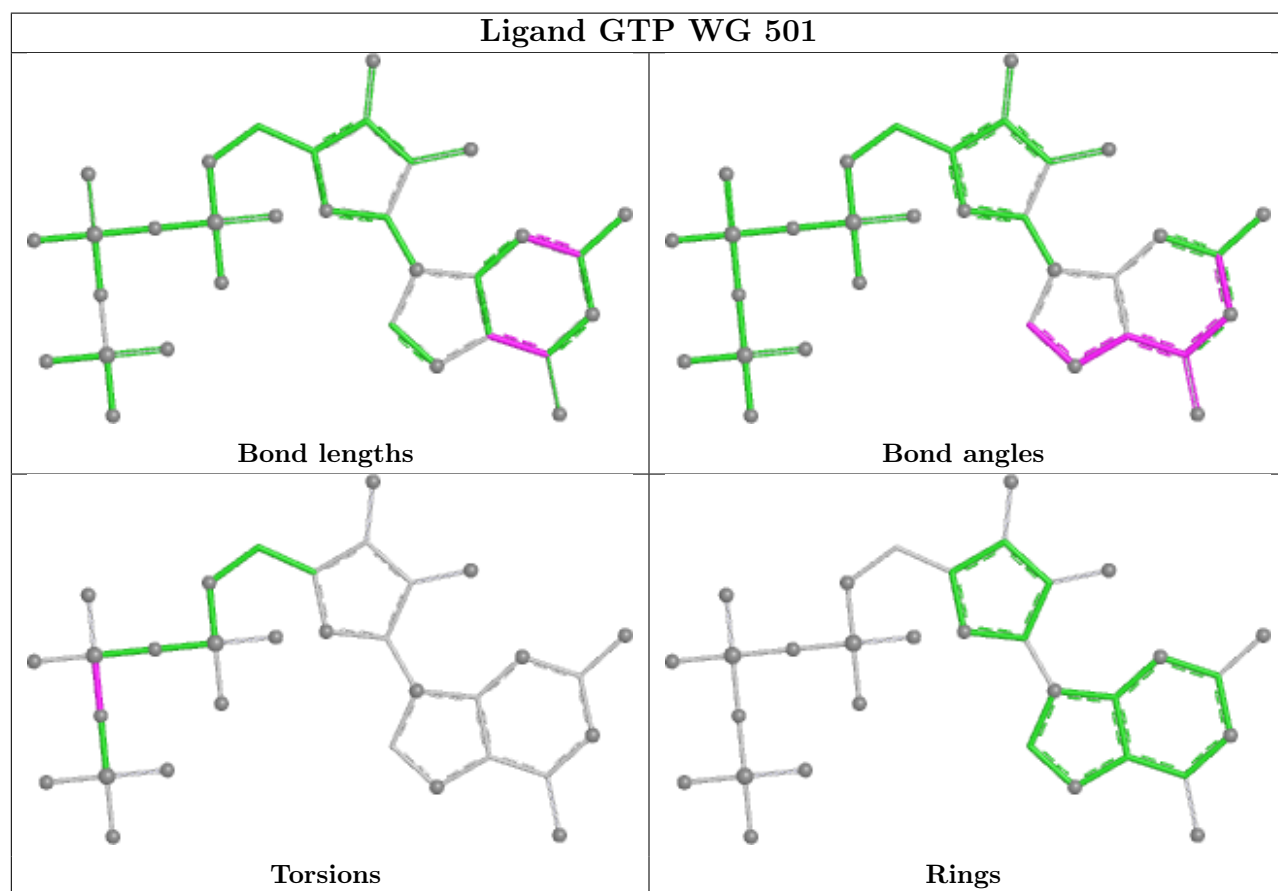
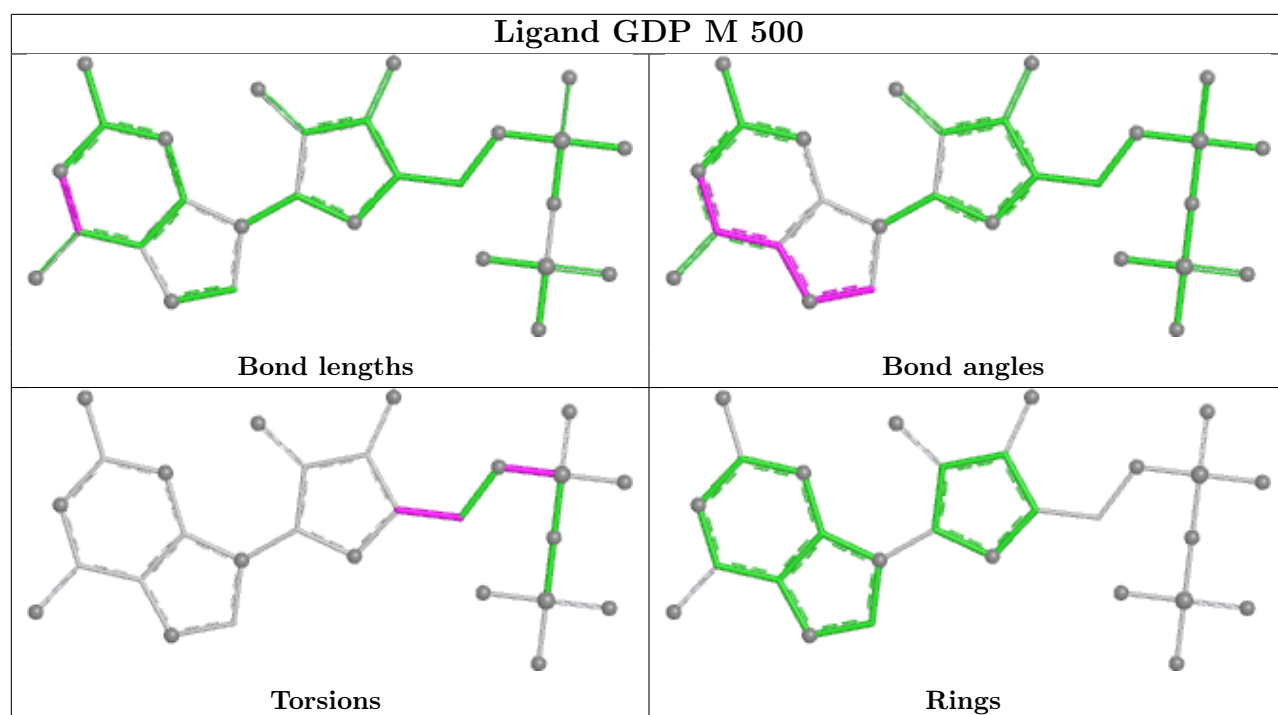




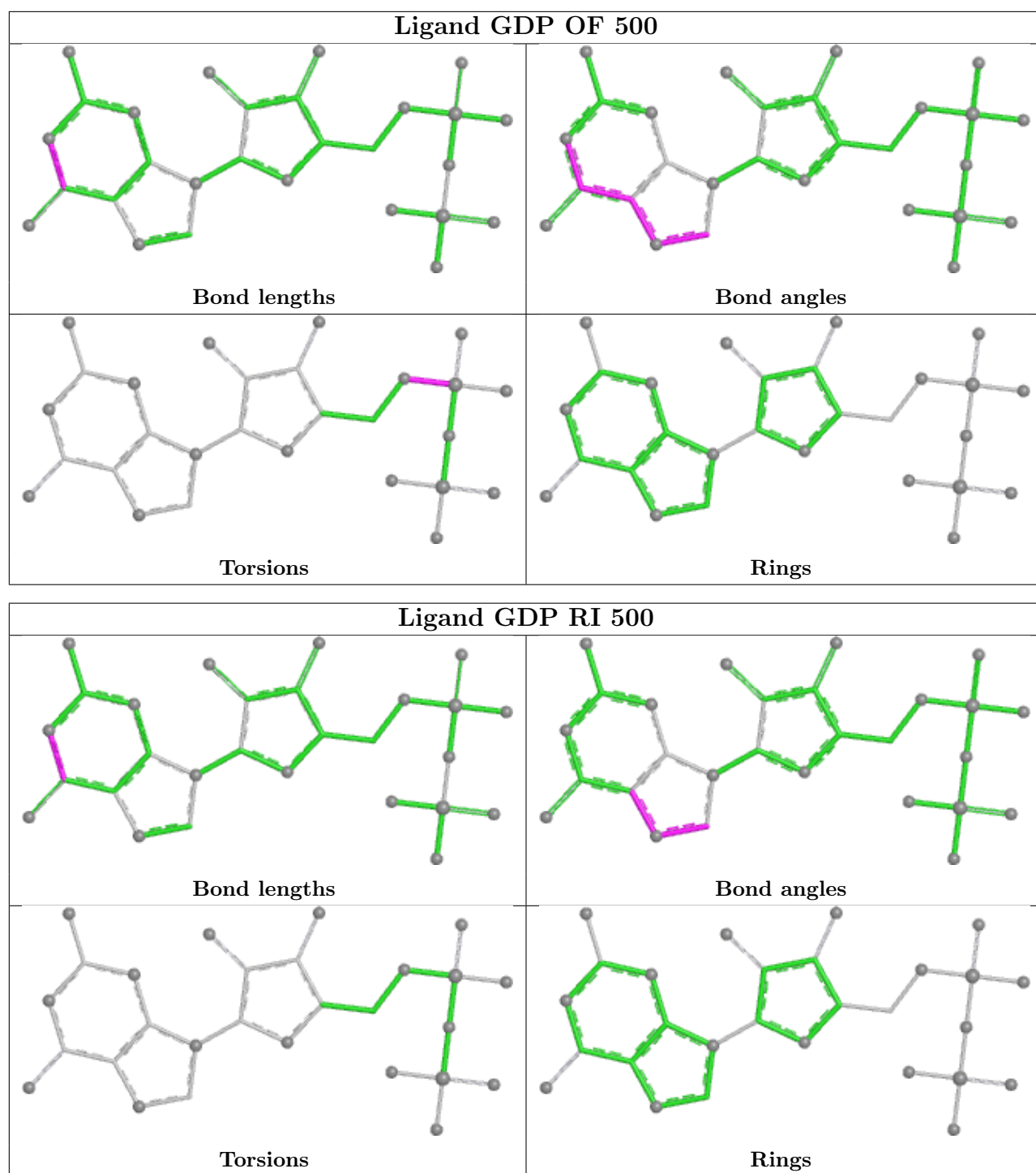




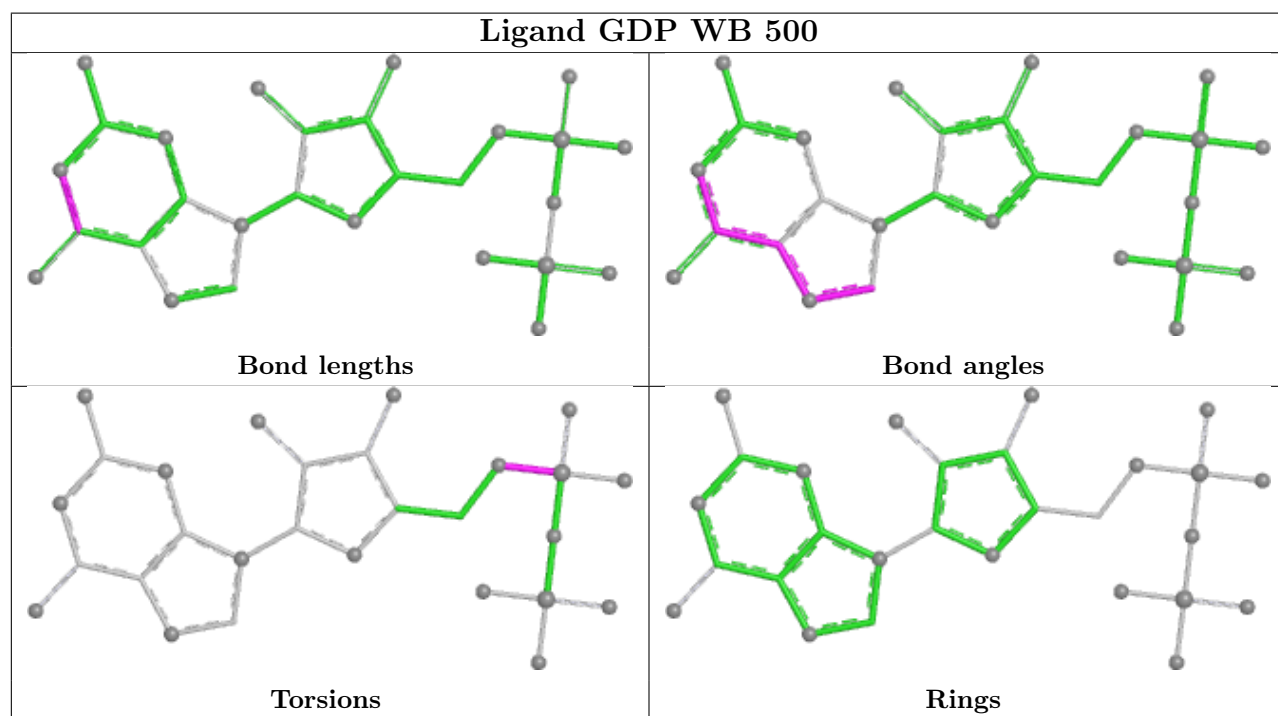
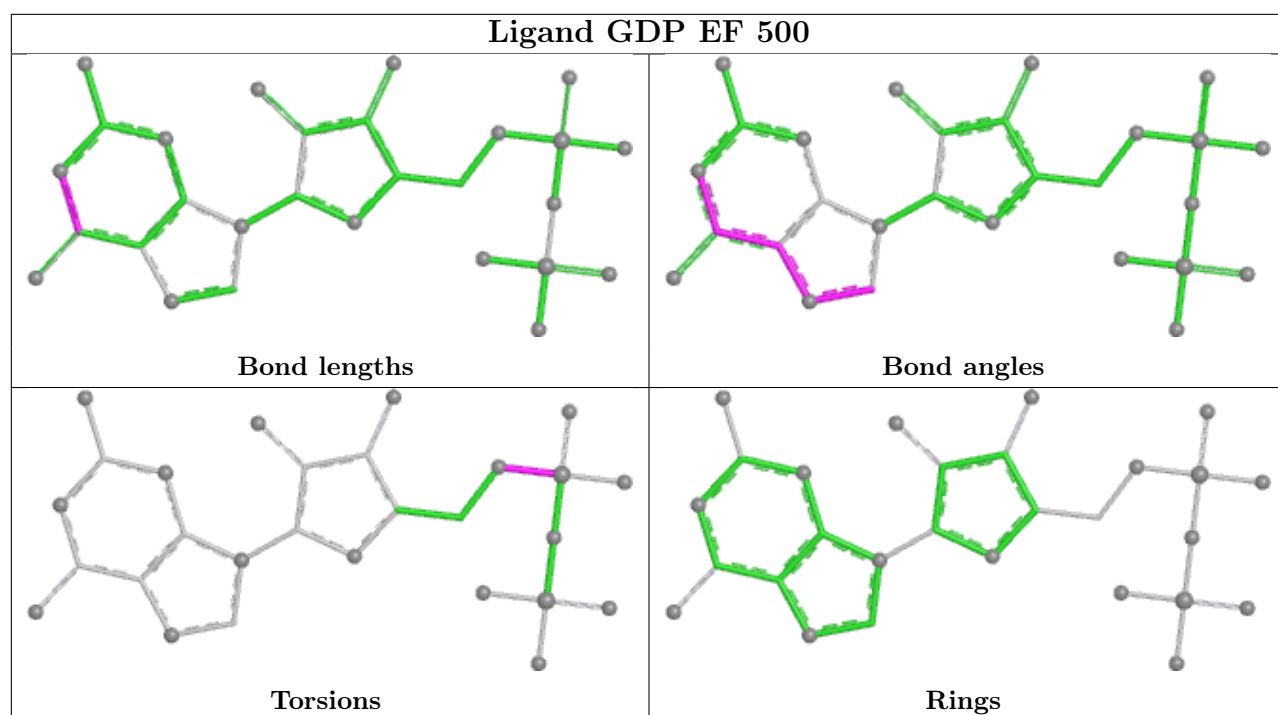




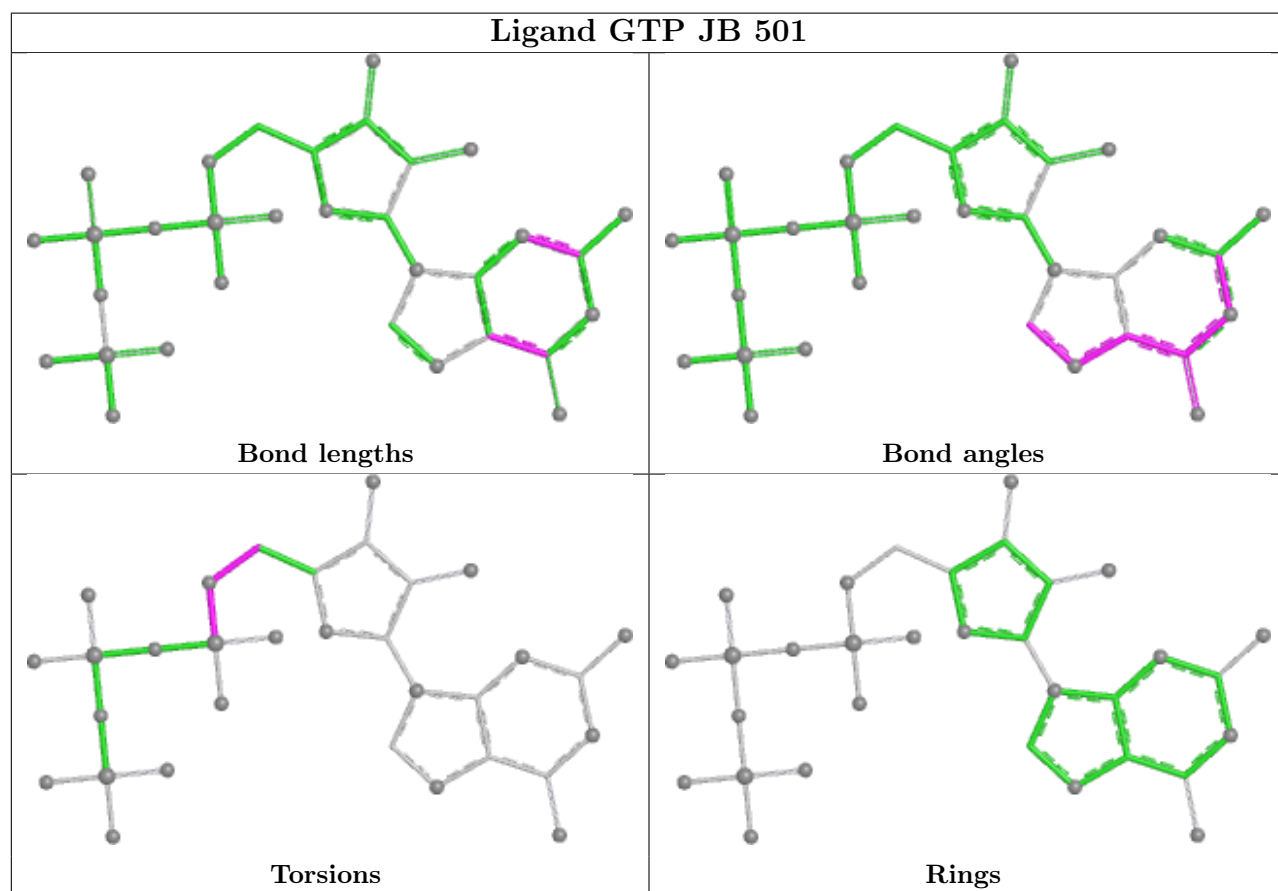
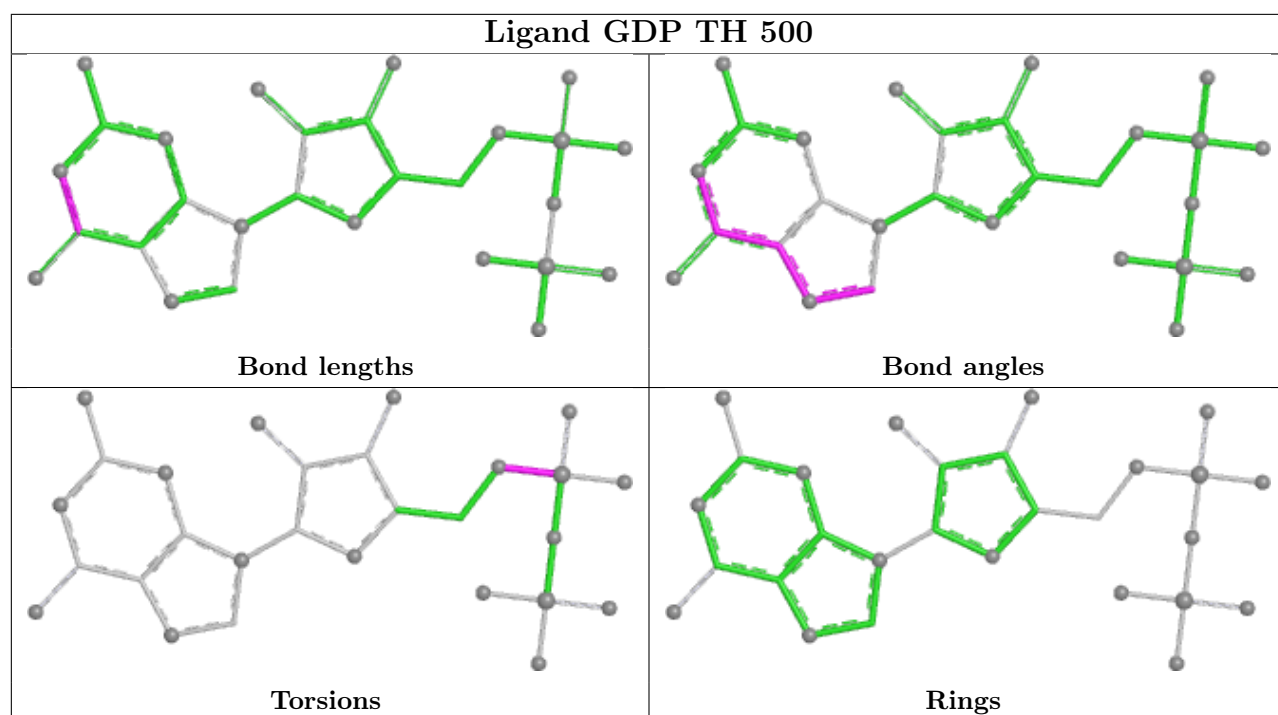




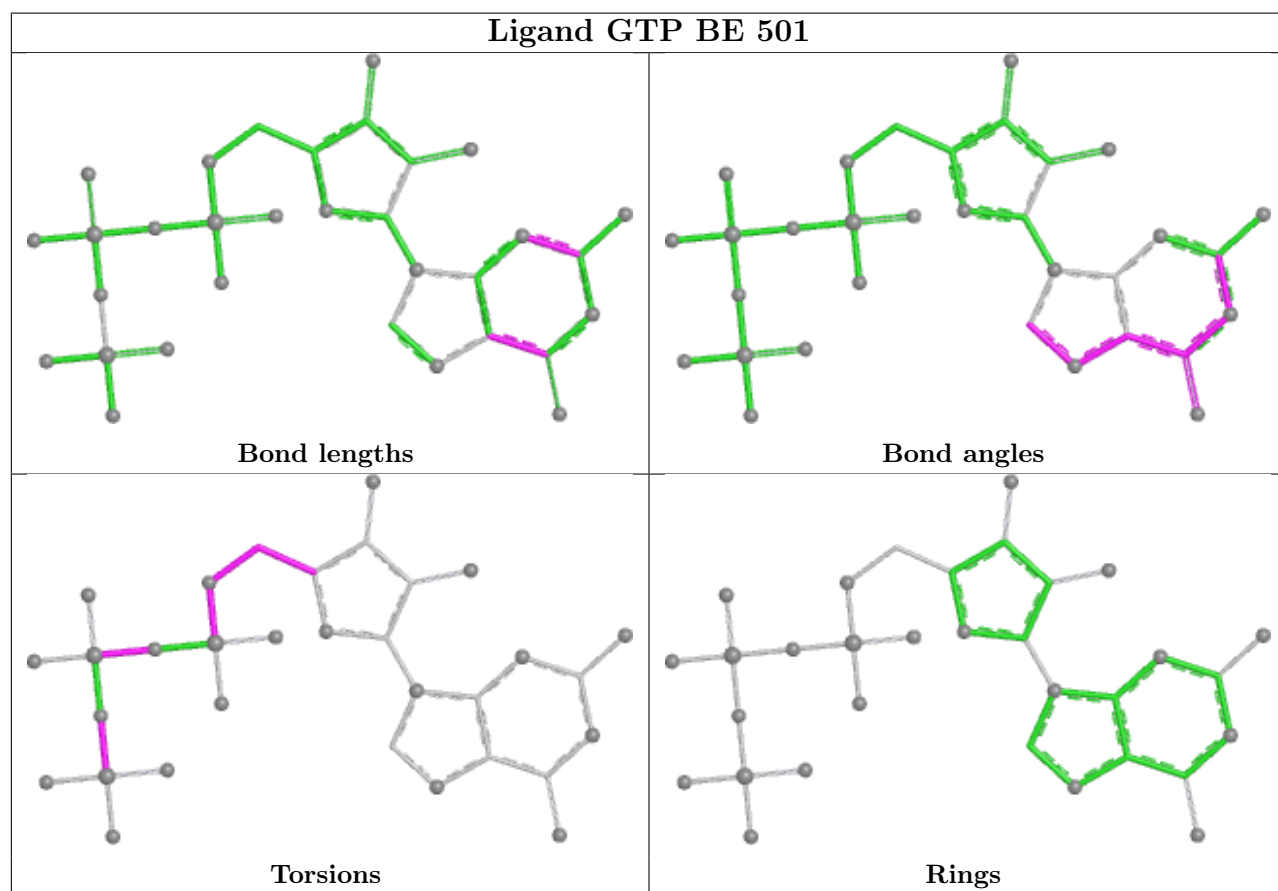
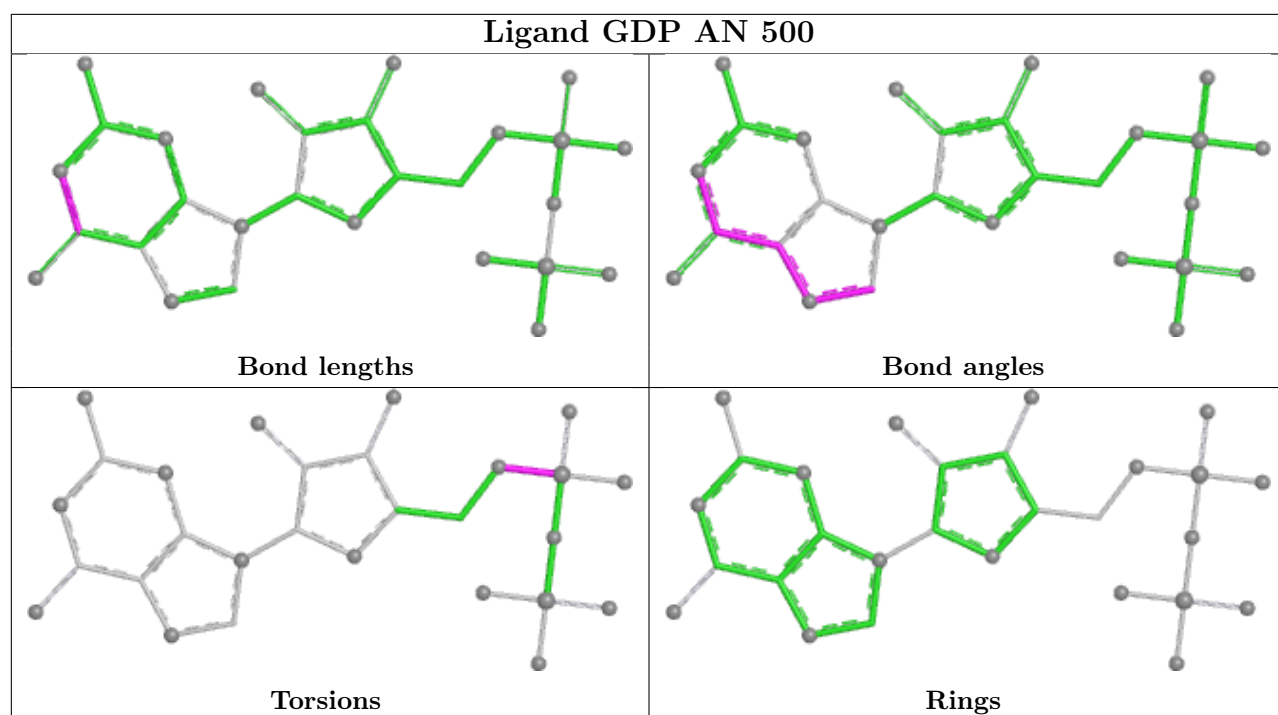




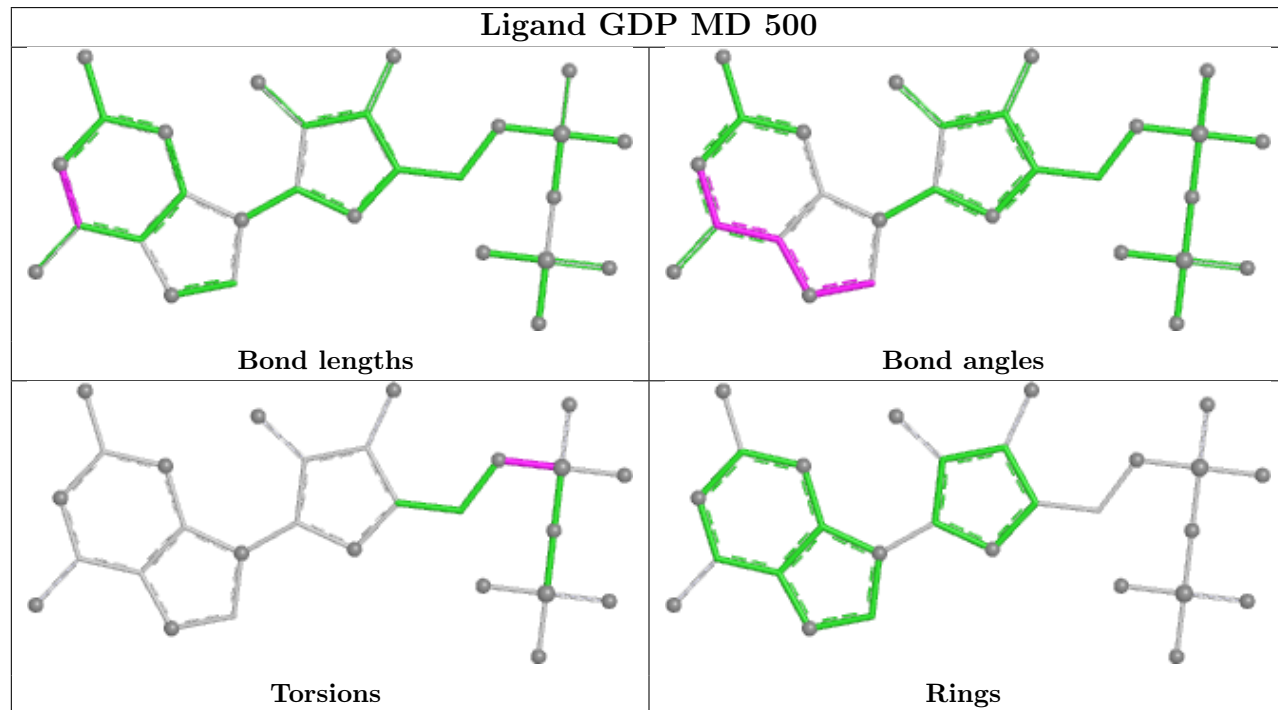
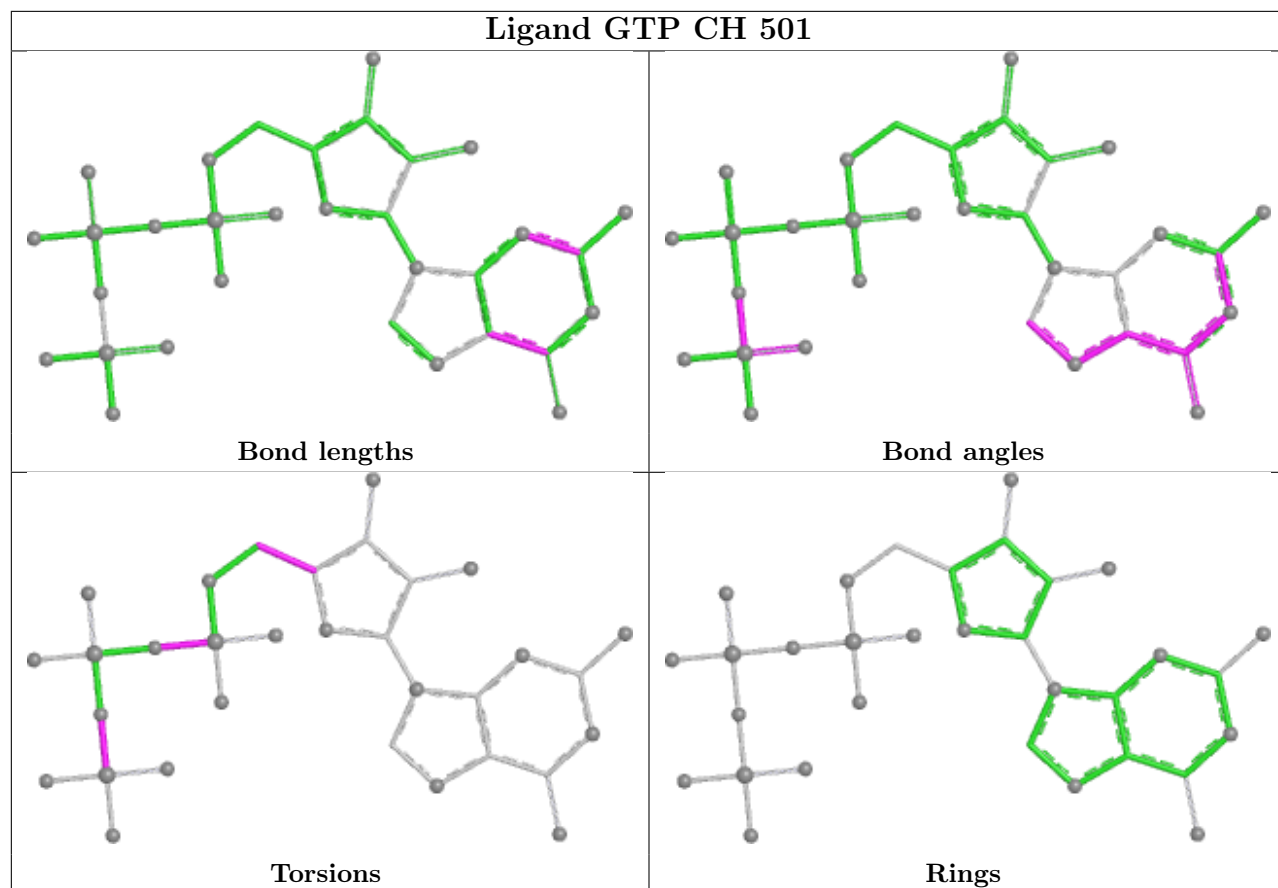




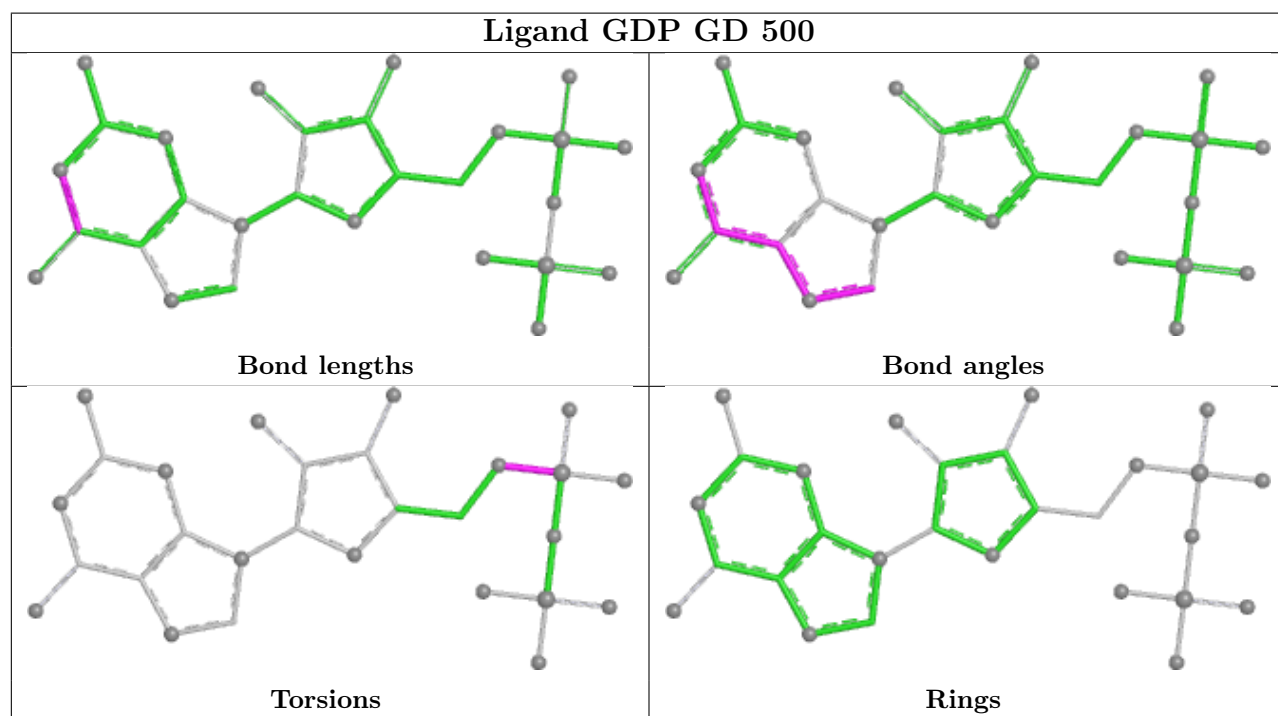
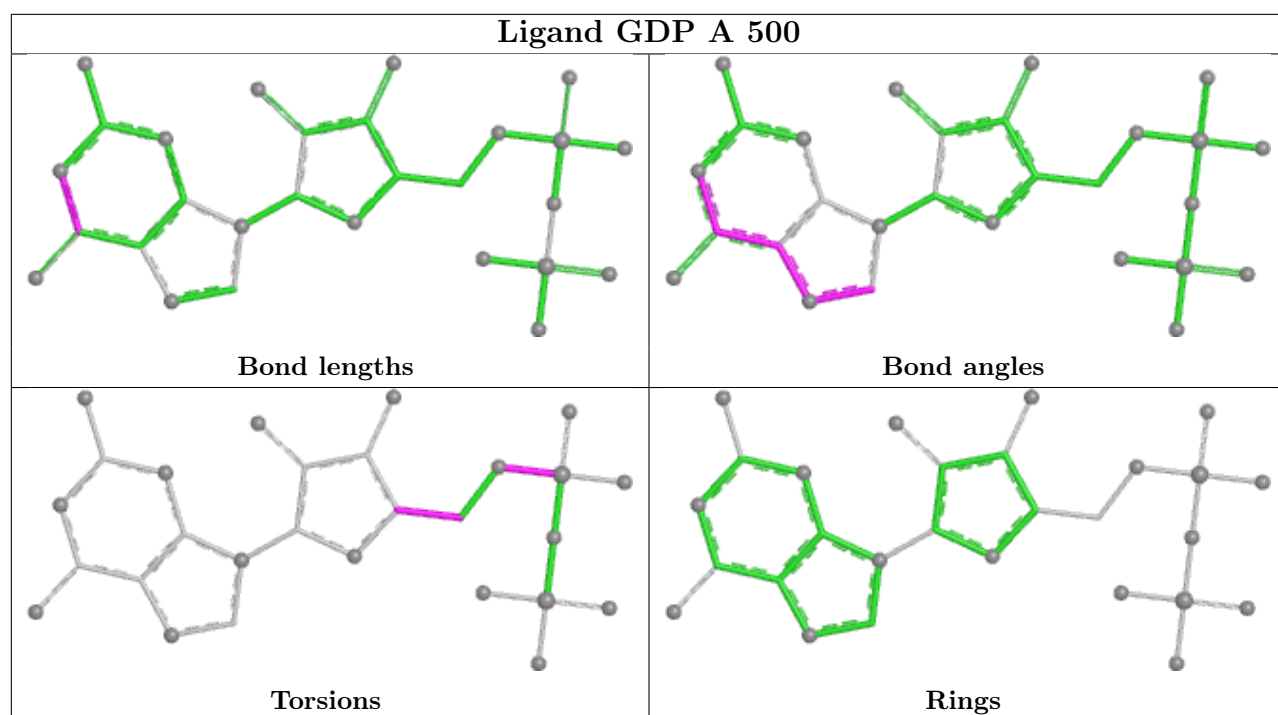






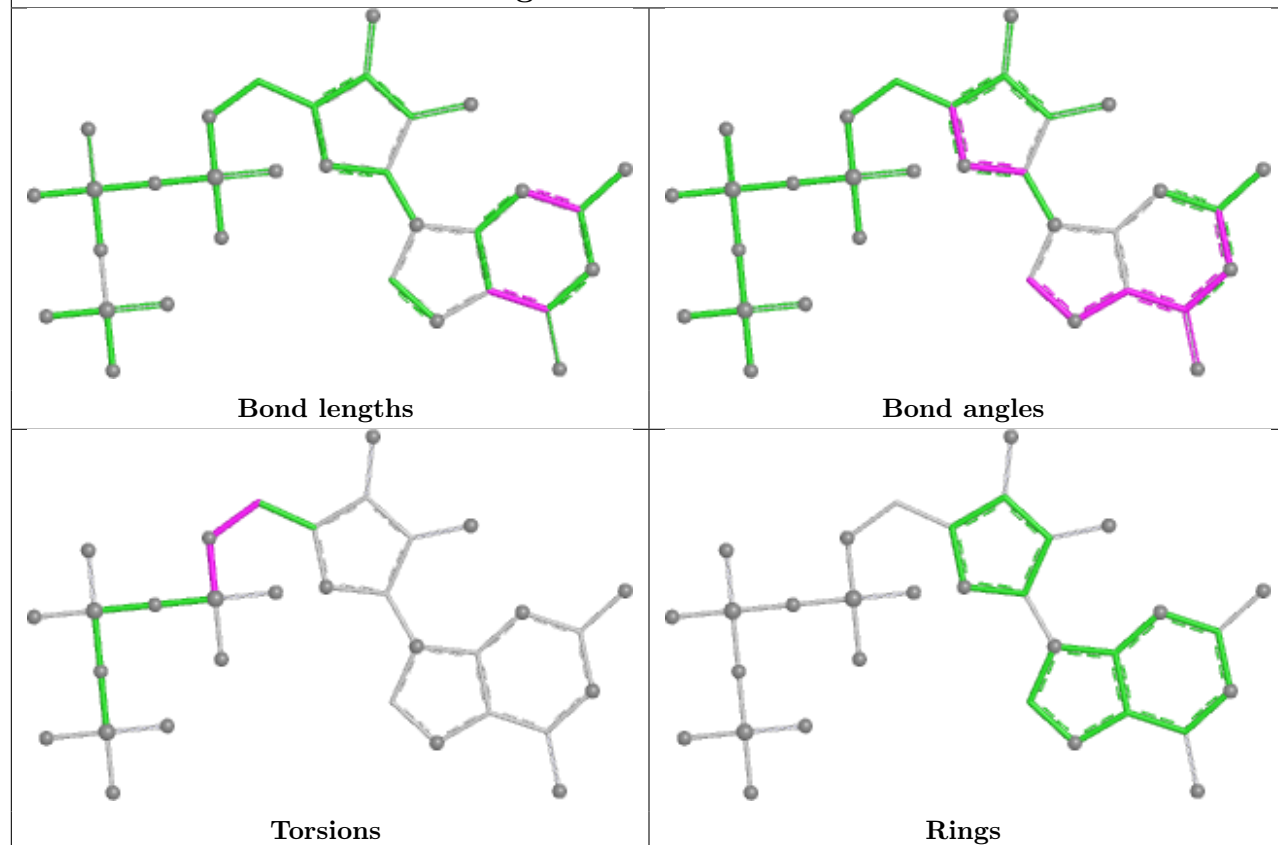




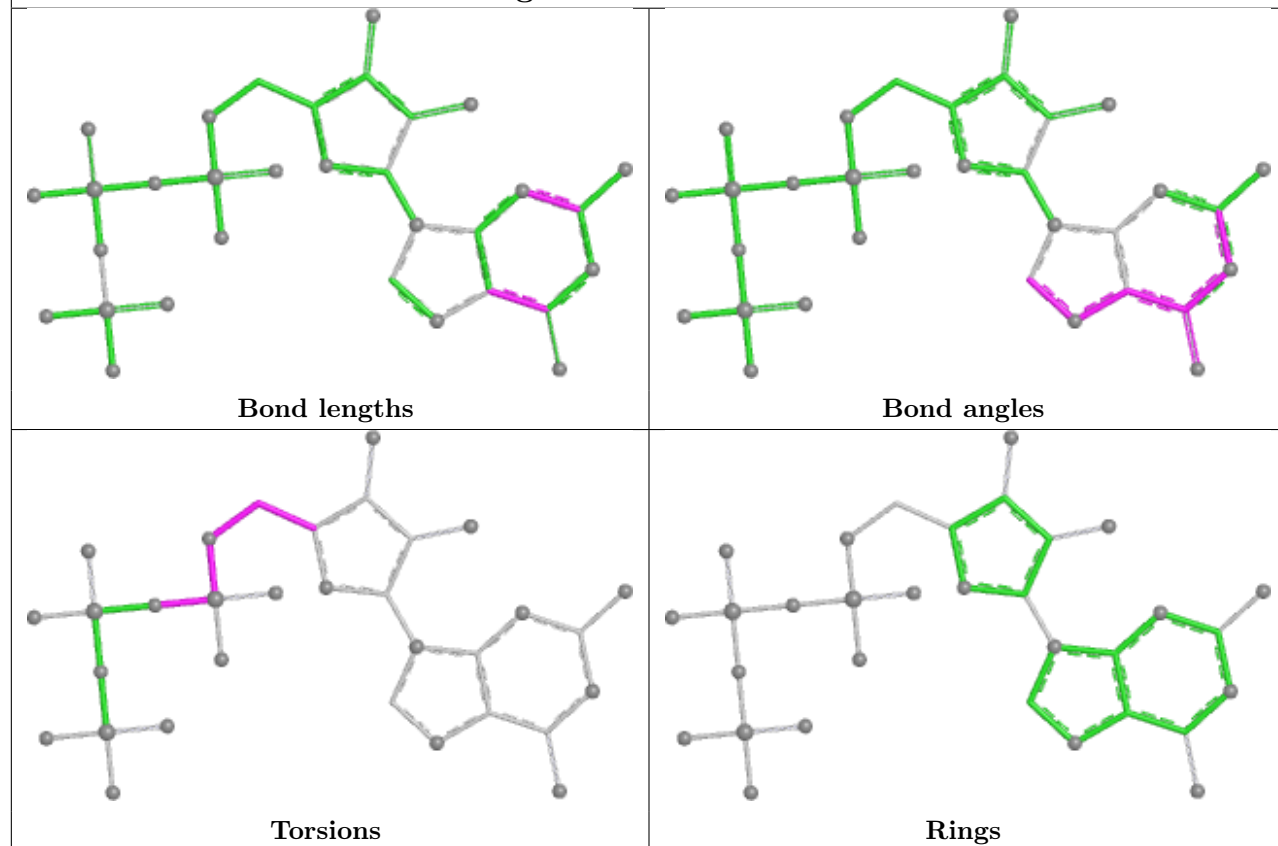




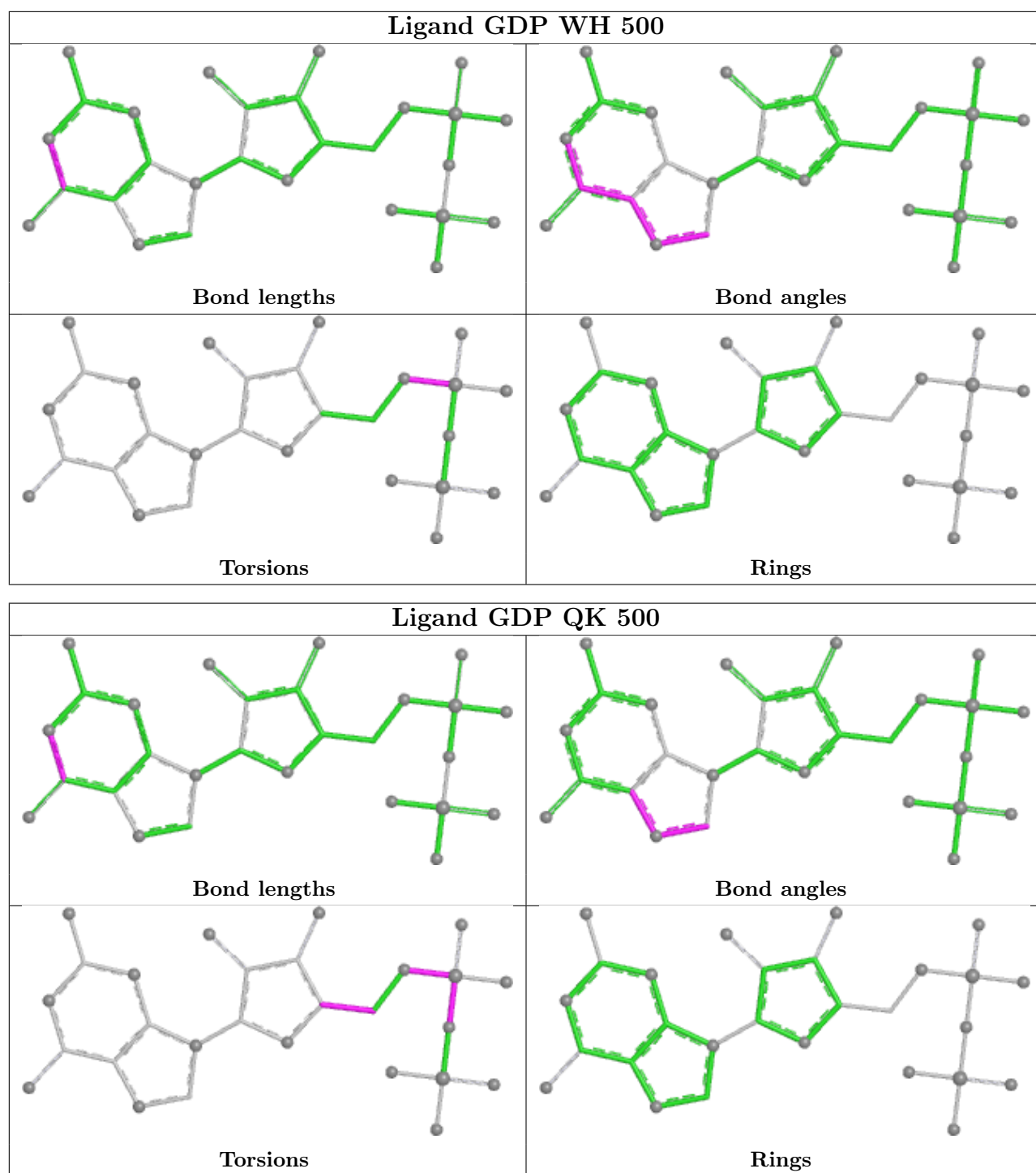
## Ligand GTP OG 501



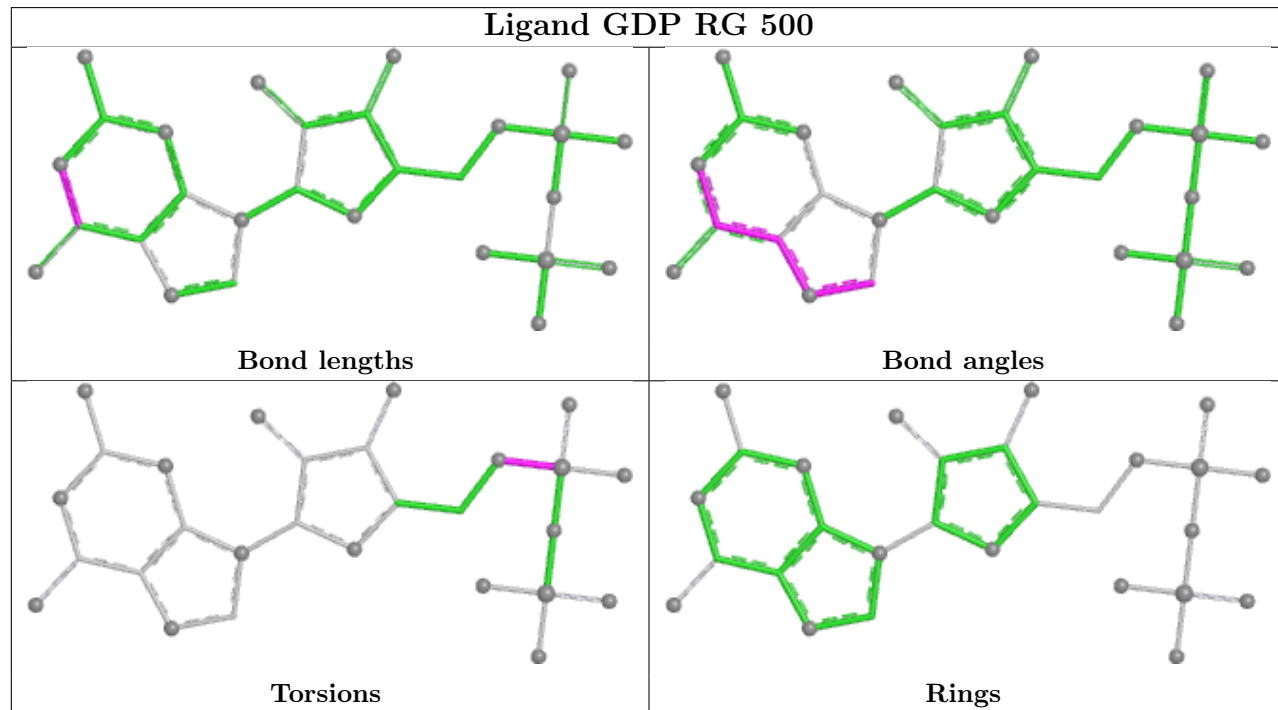
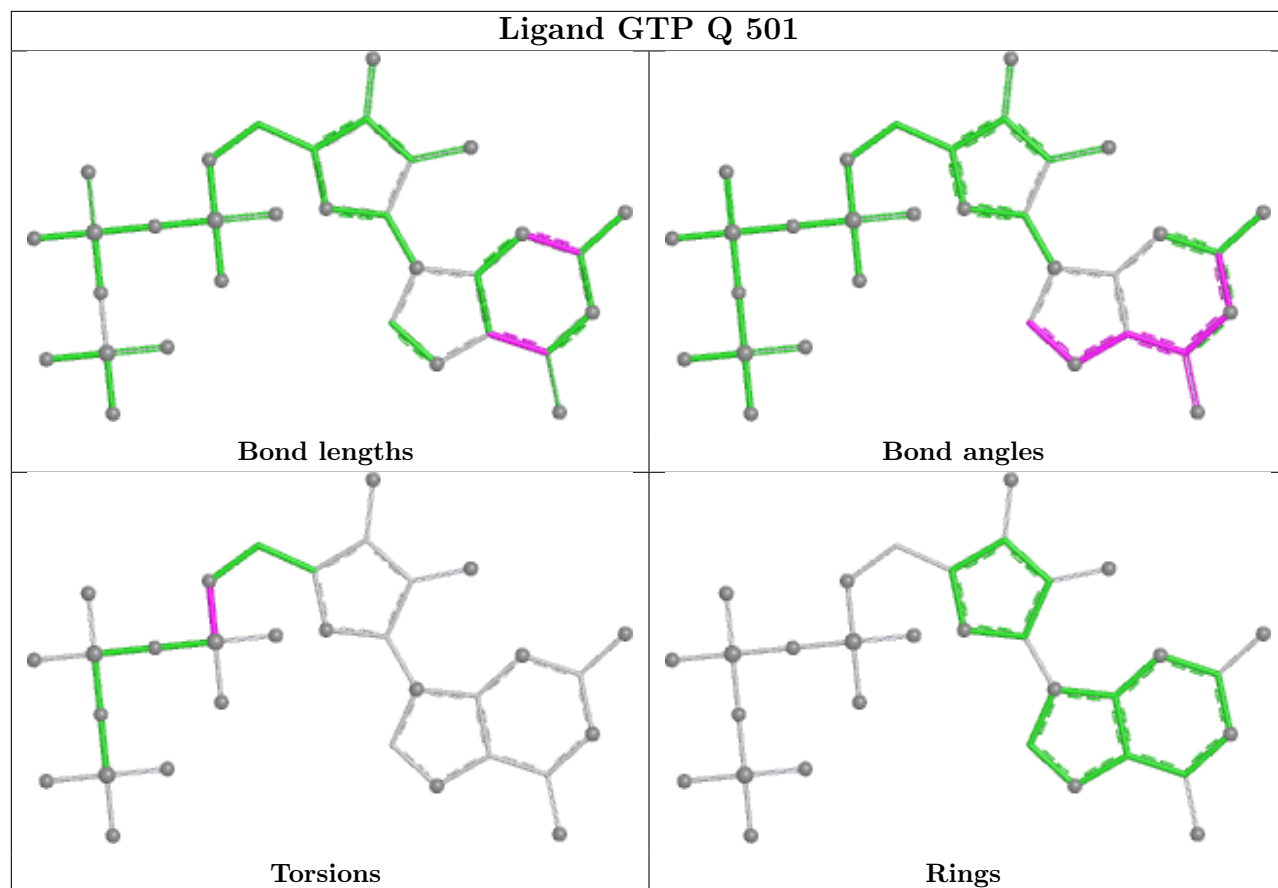
## Ligand GTP VK 501



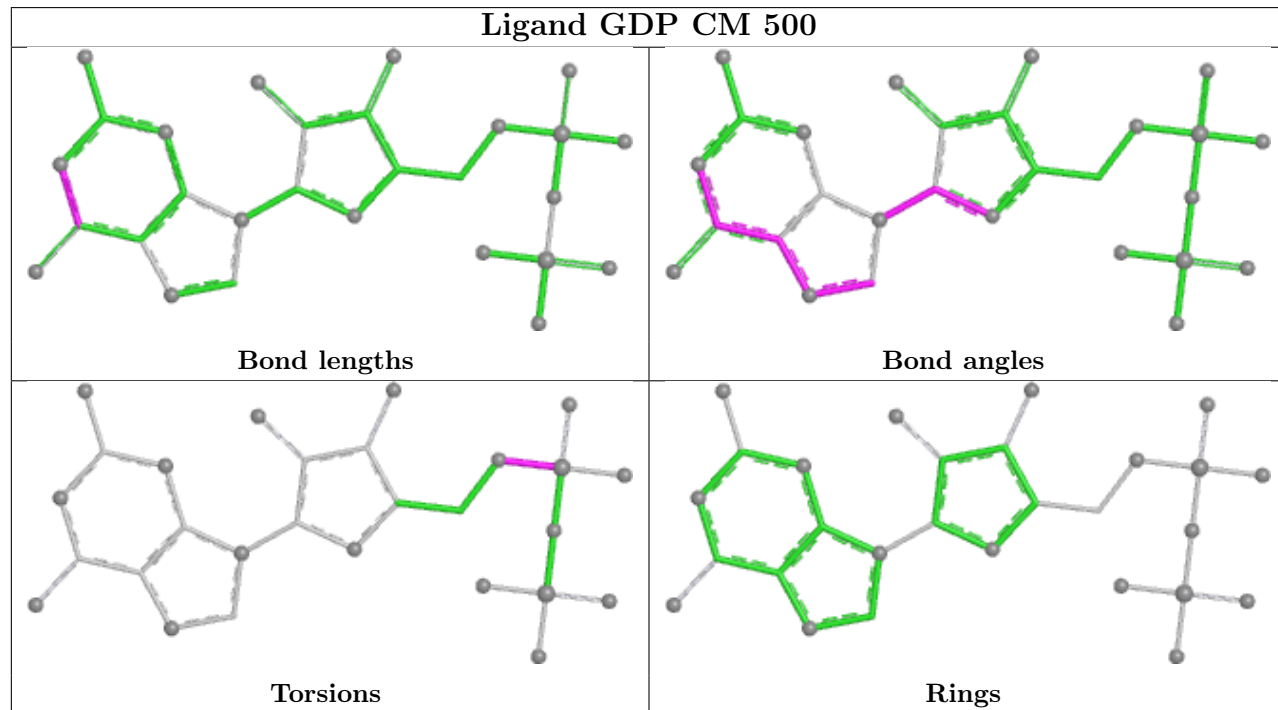
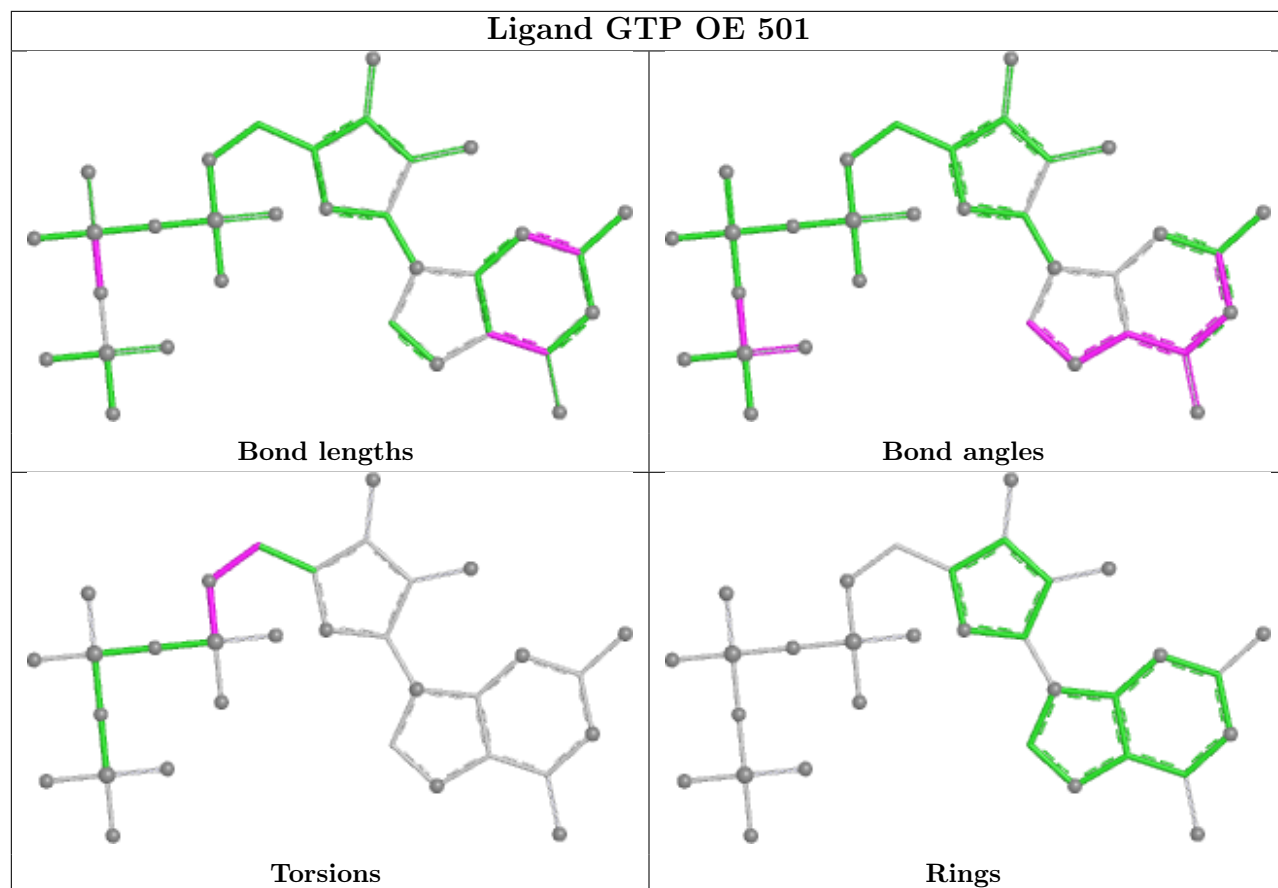




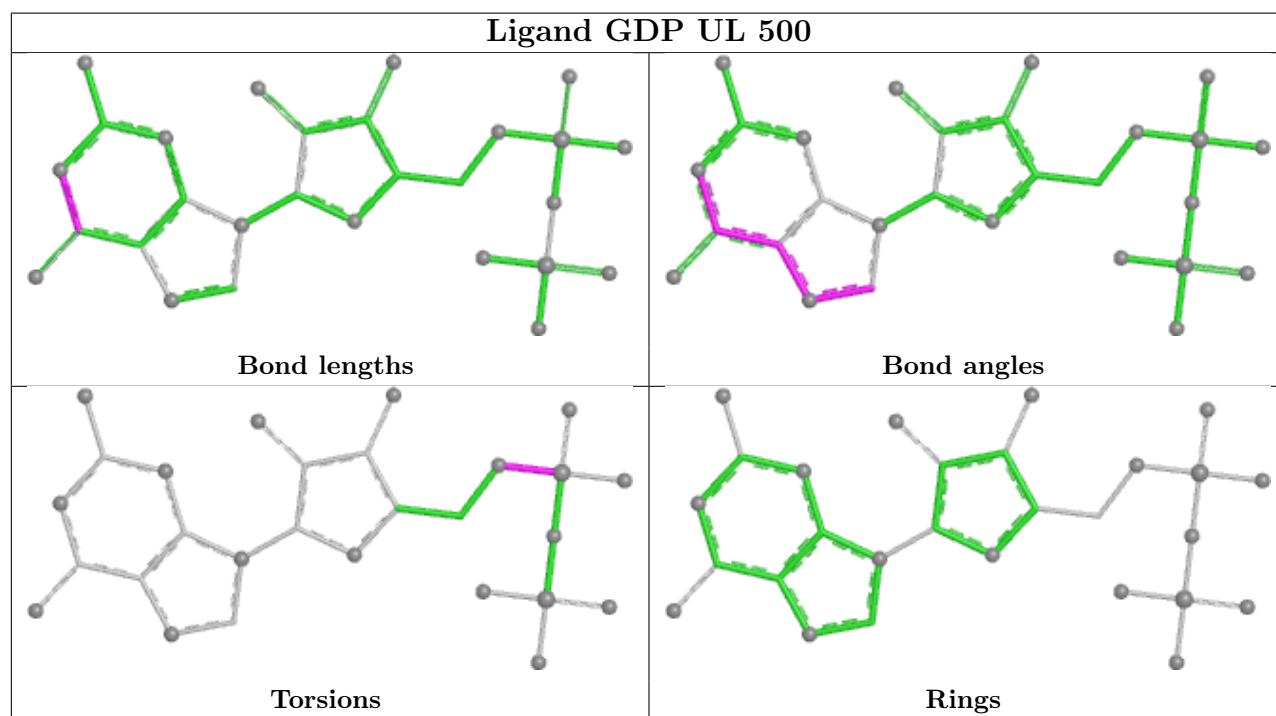
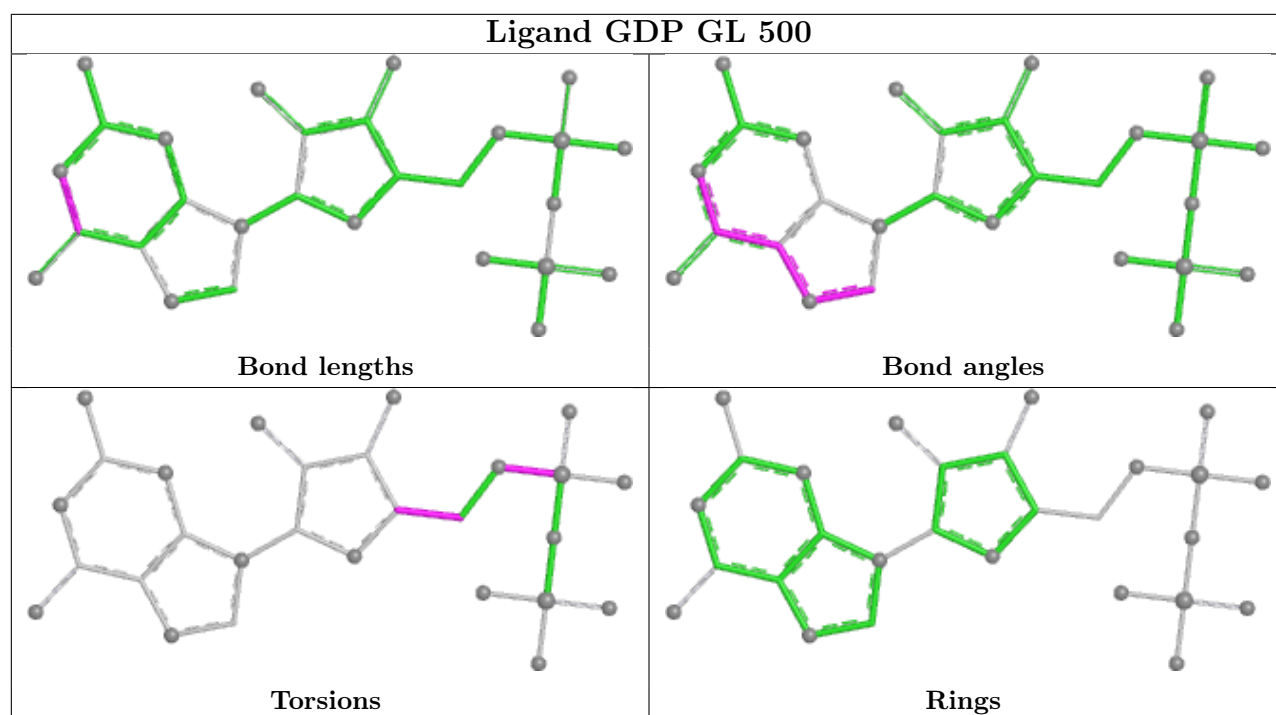






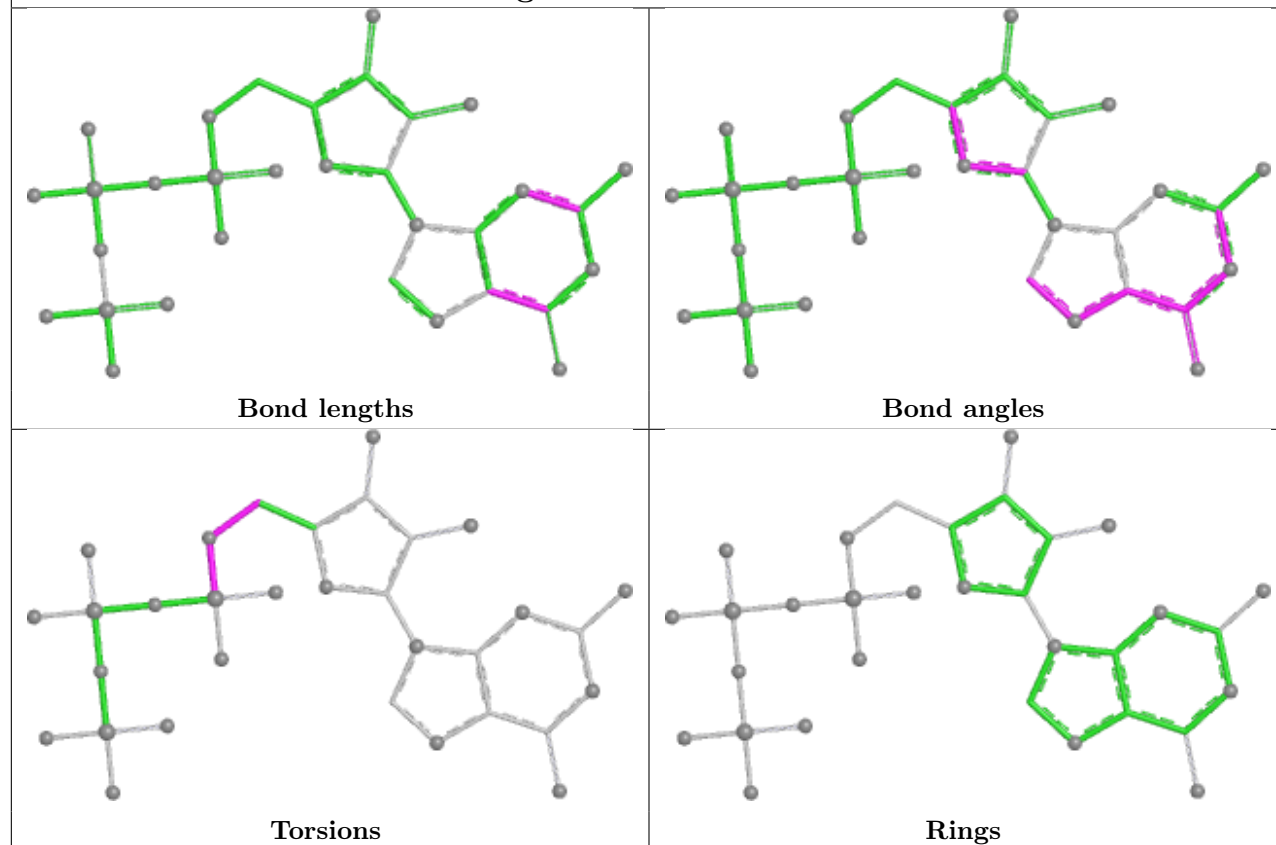




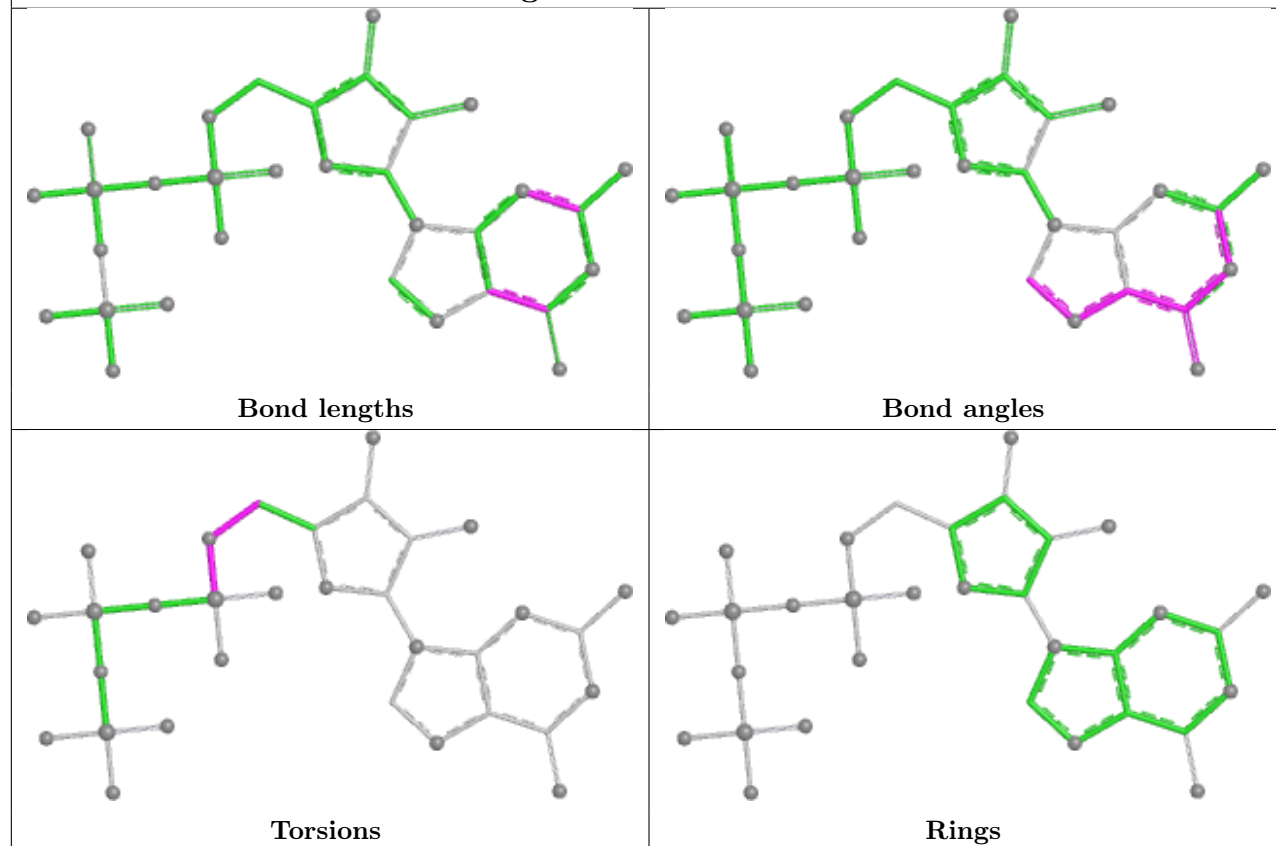




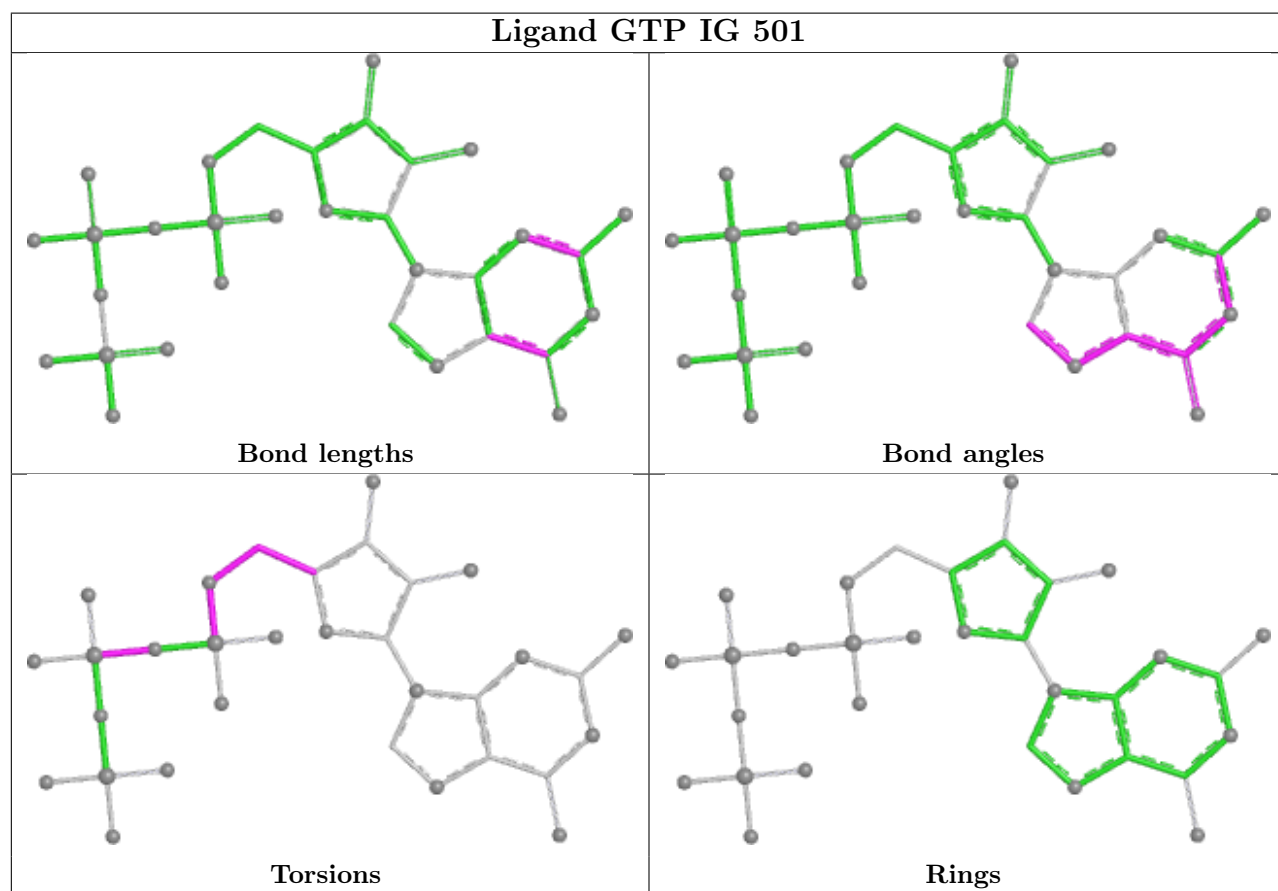
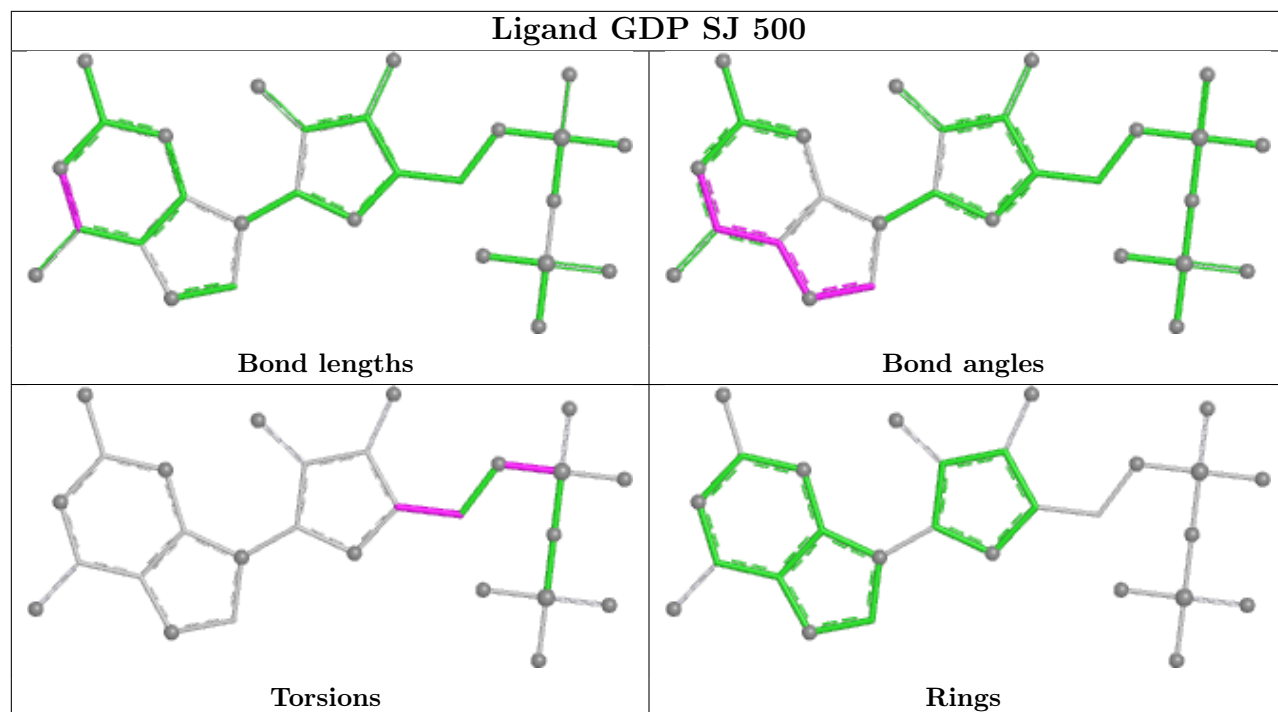
## Ligand GTP GC 501



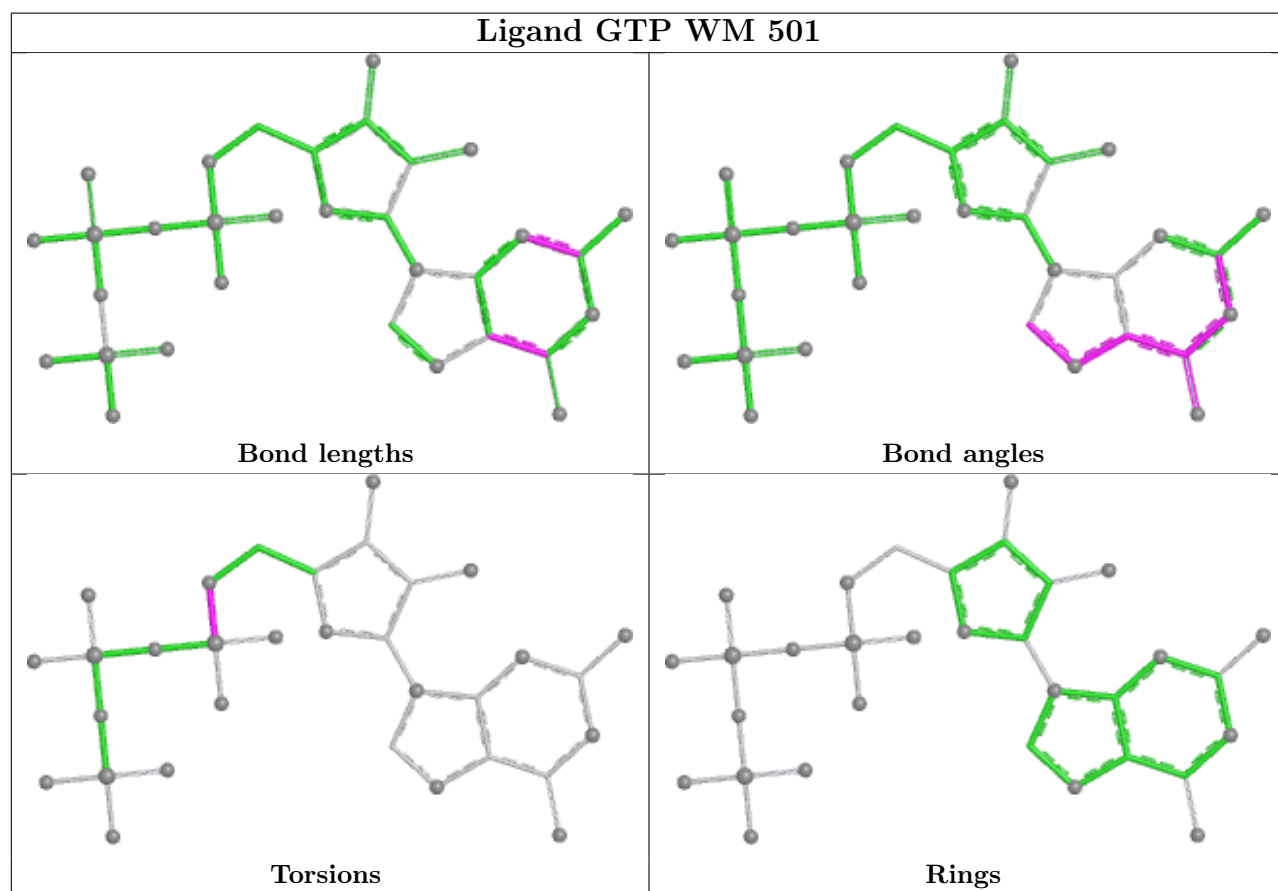
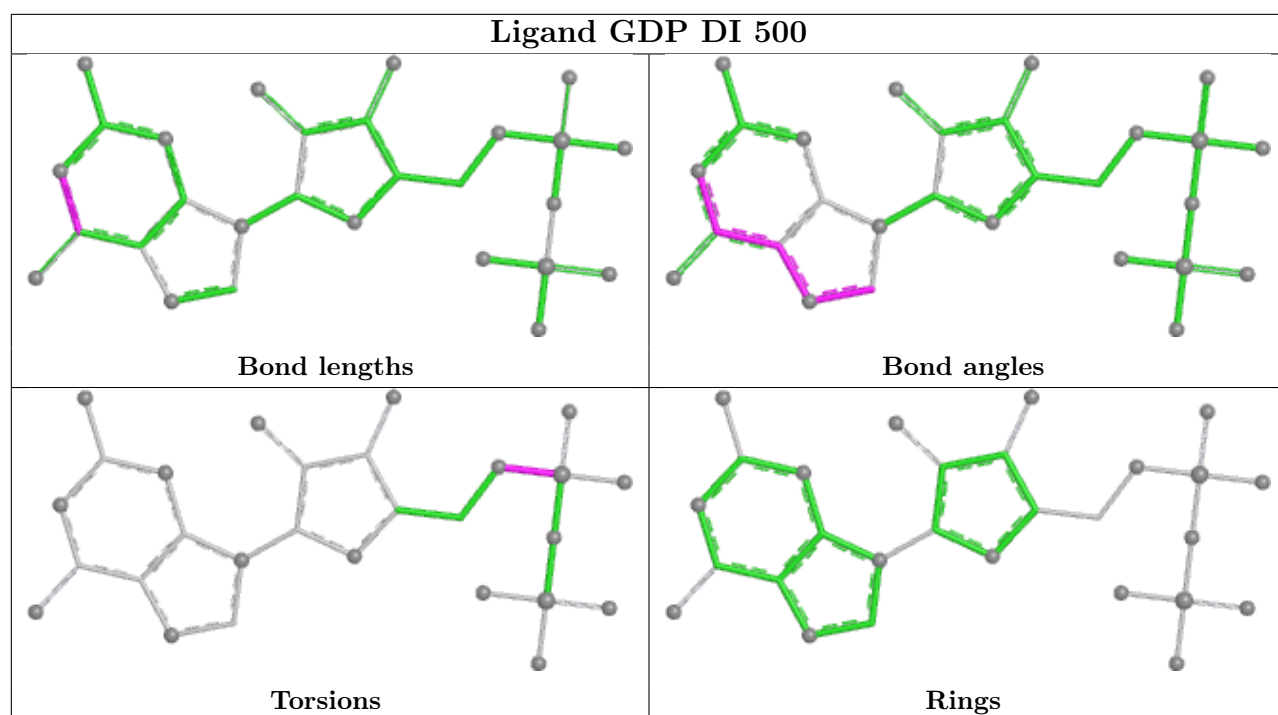
## Ligand GTP FA 501



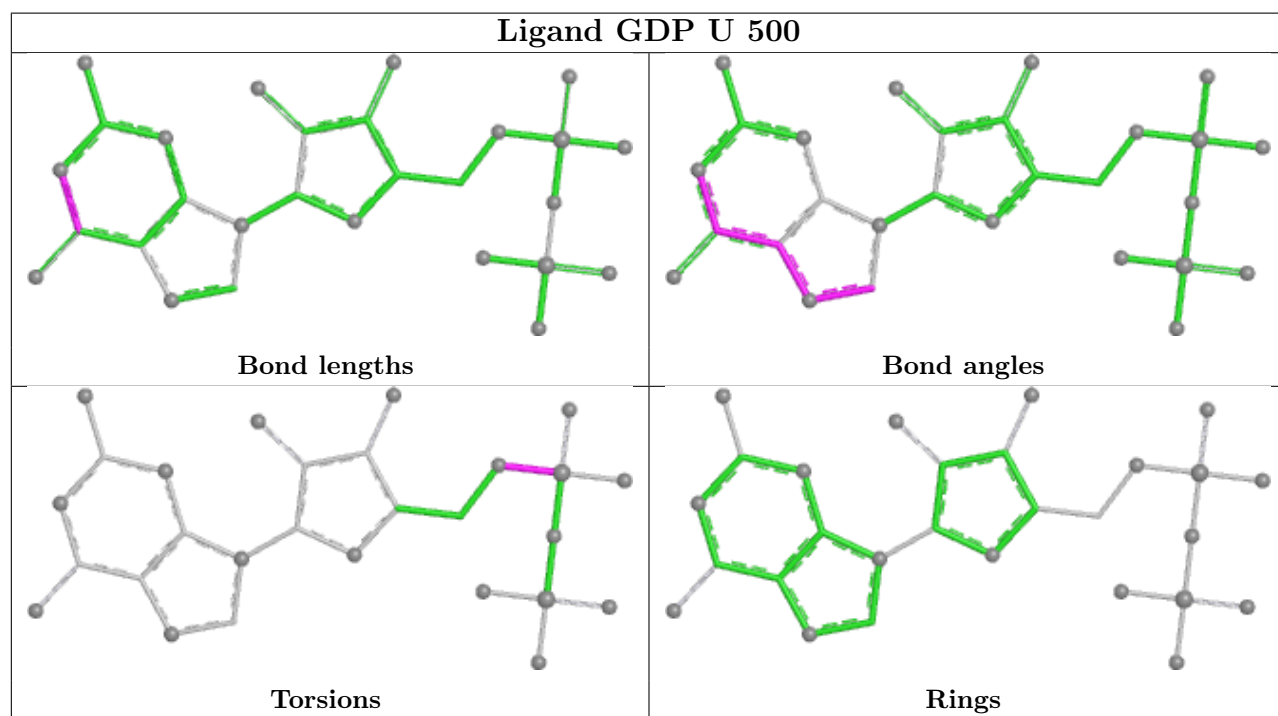
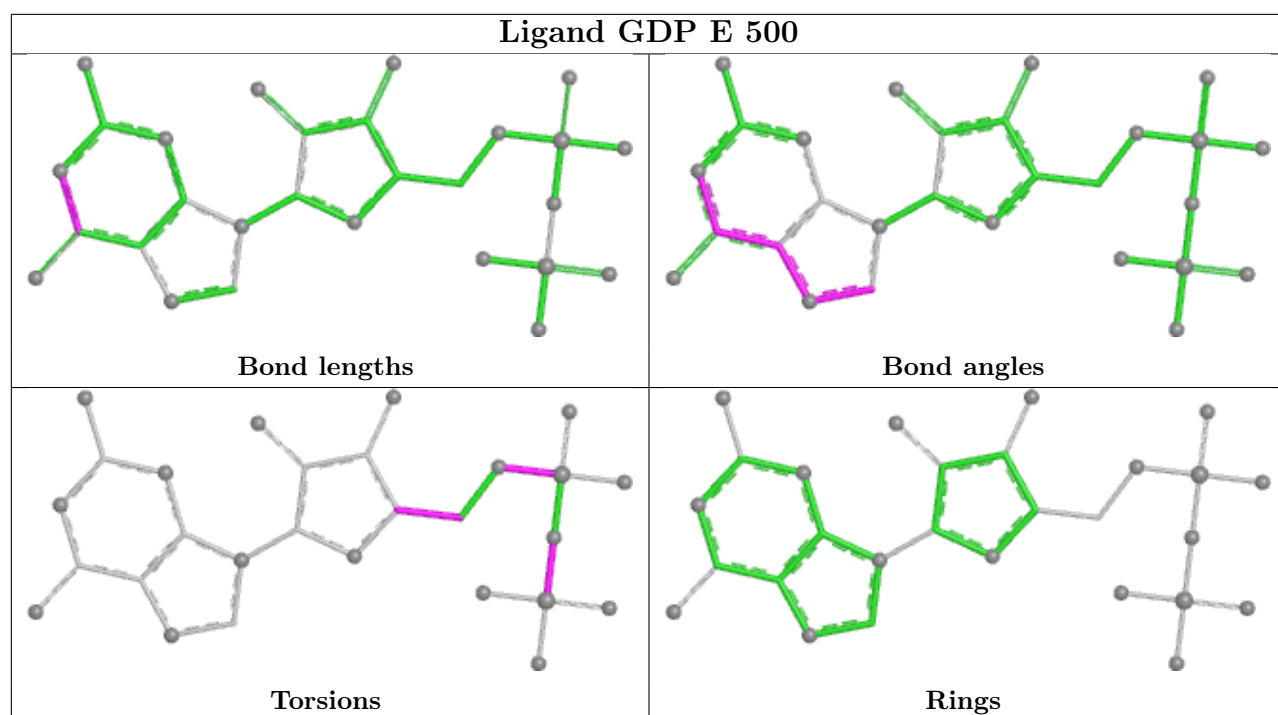




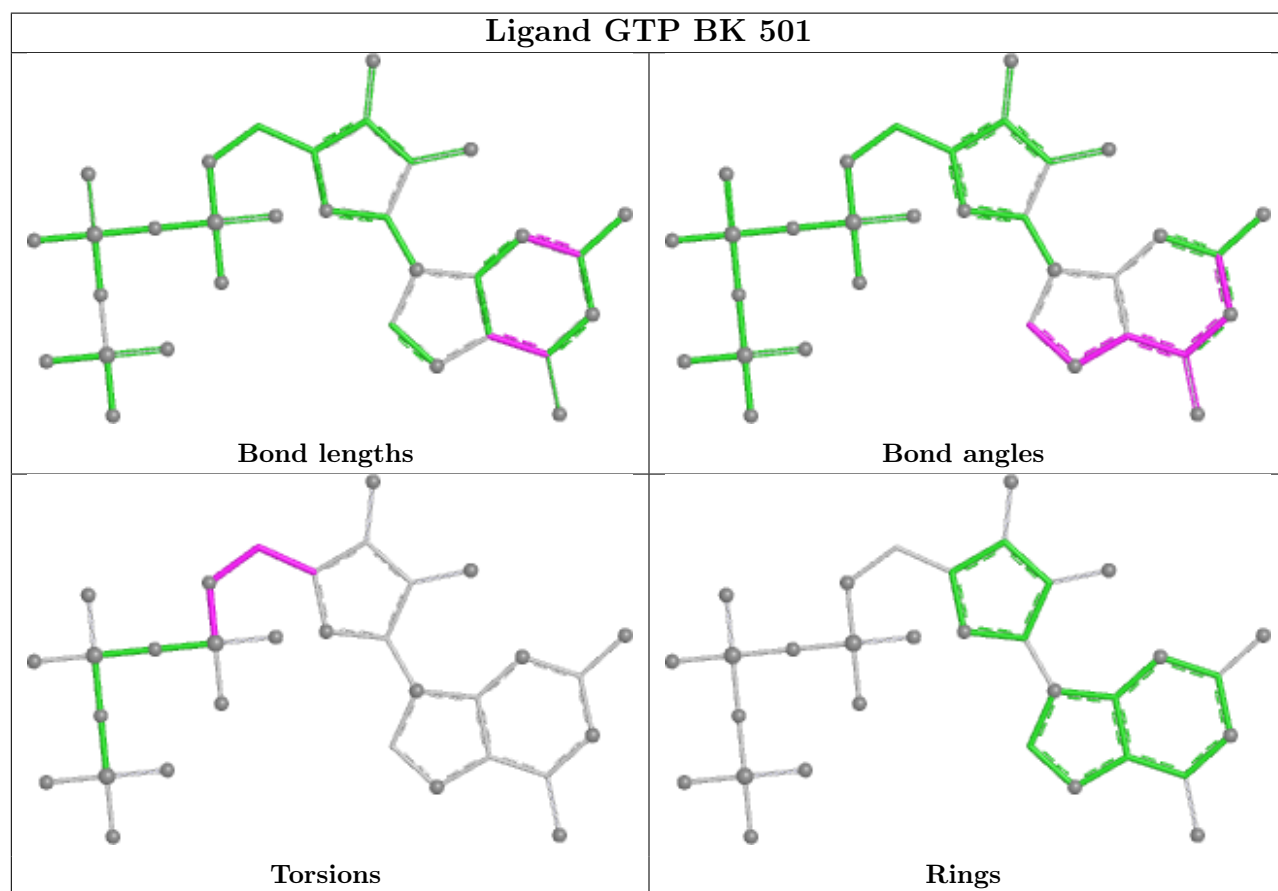
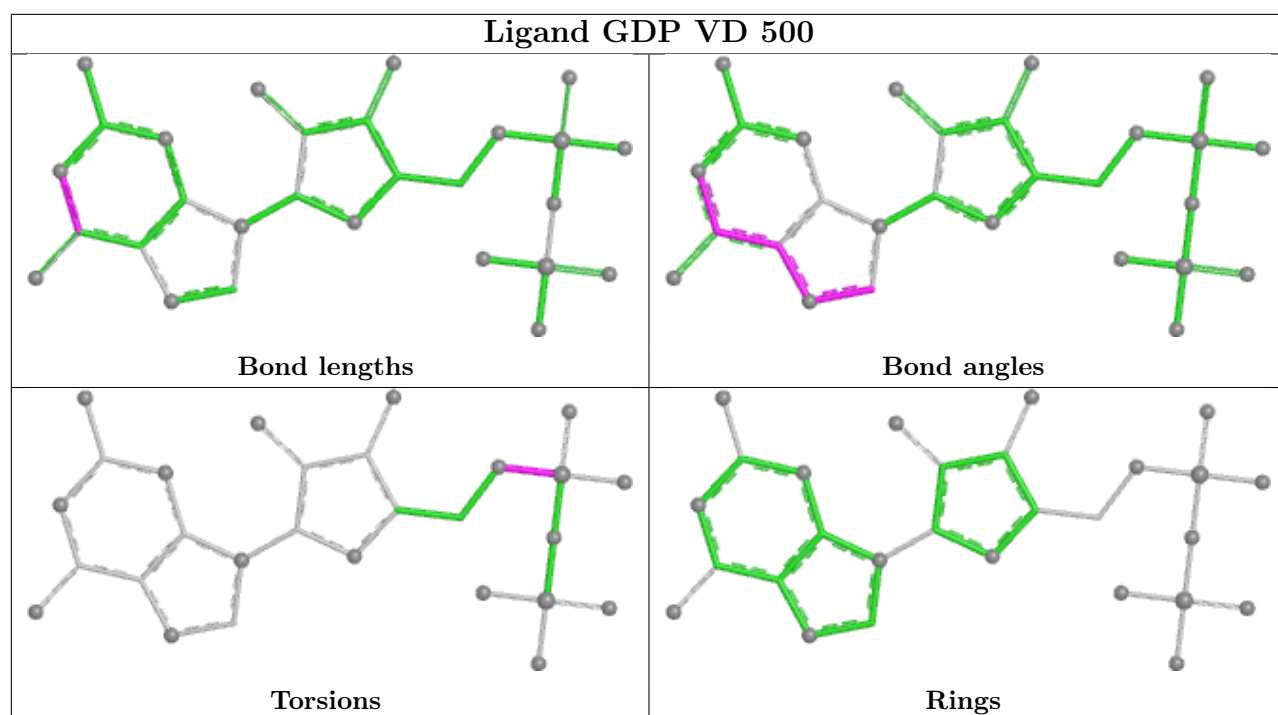






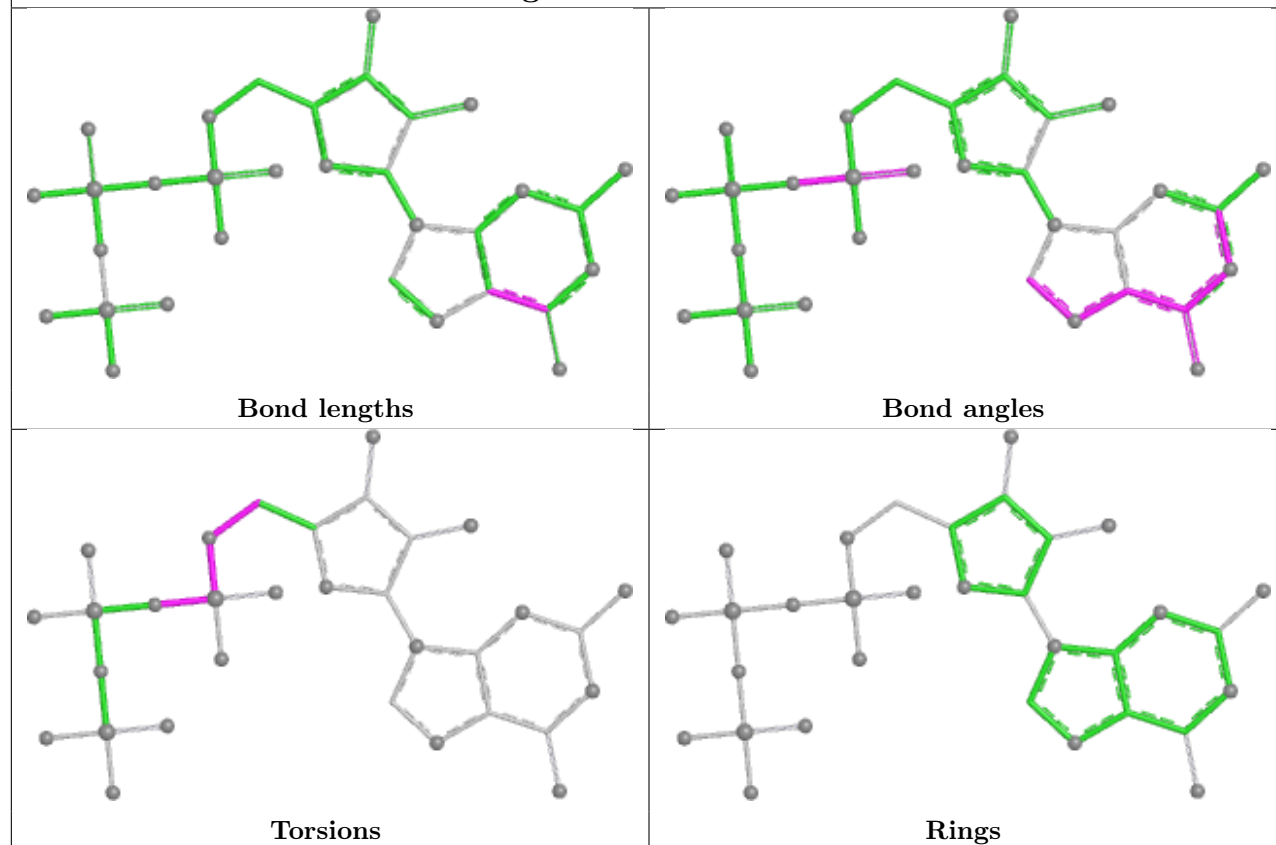




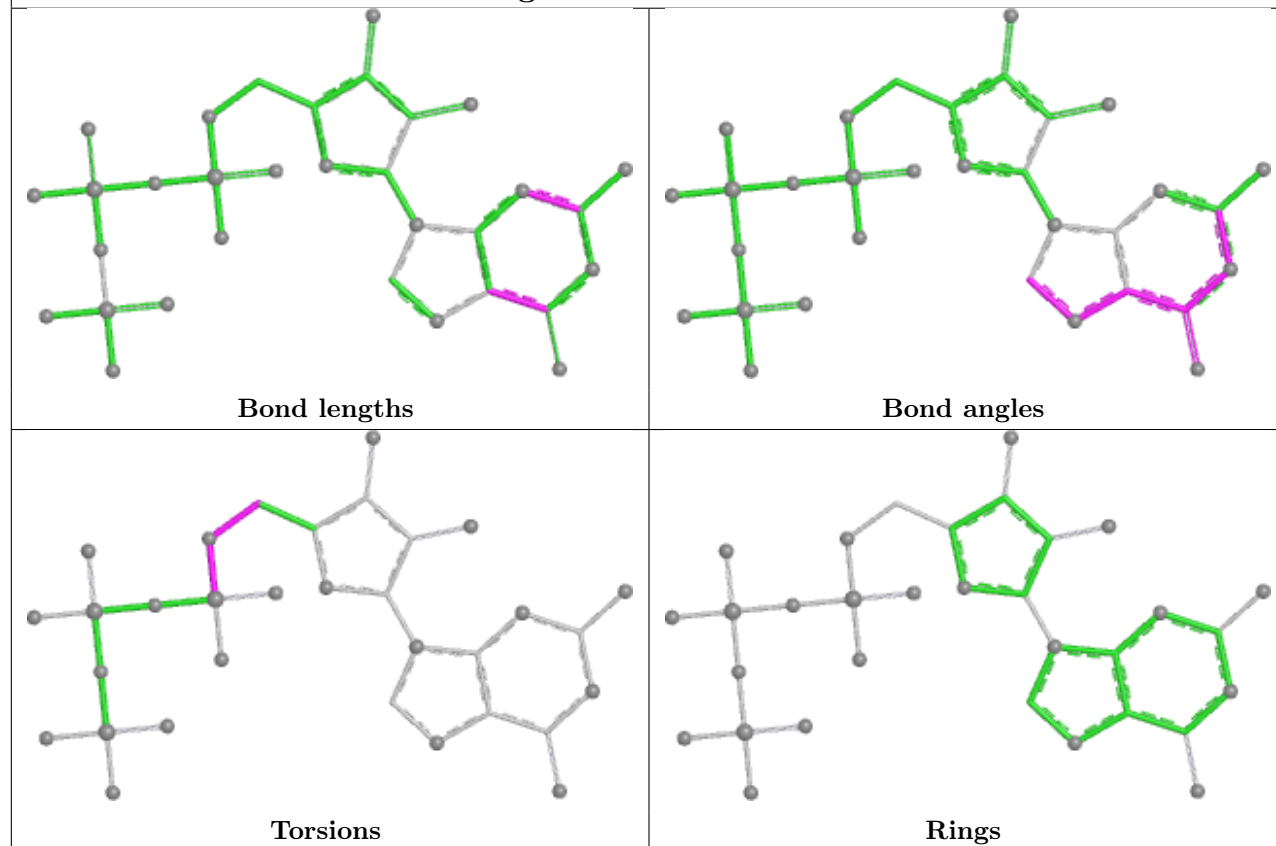




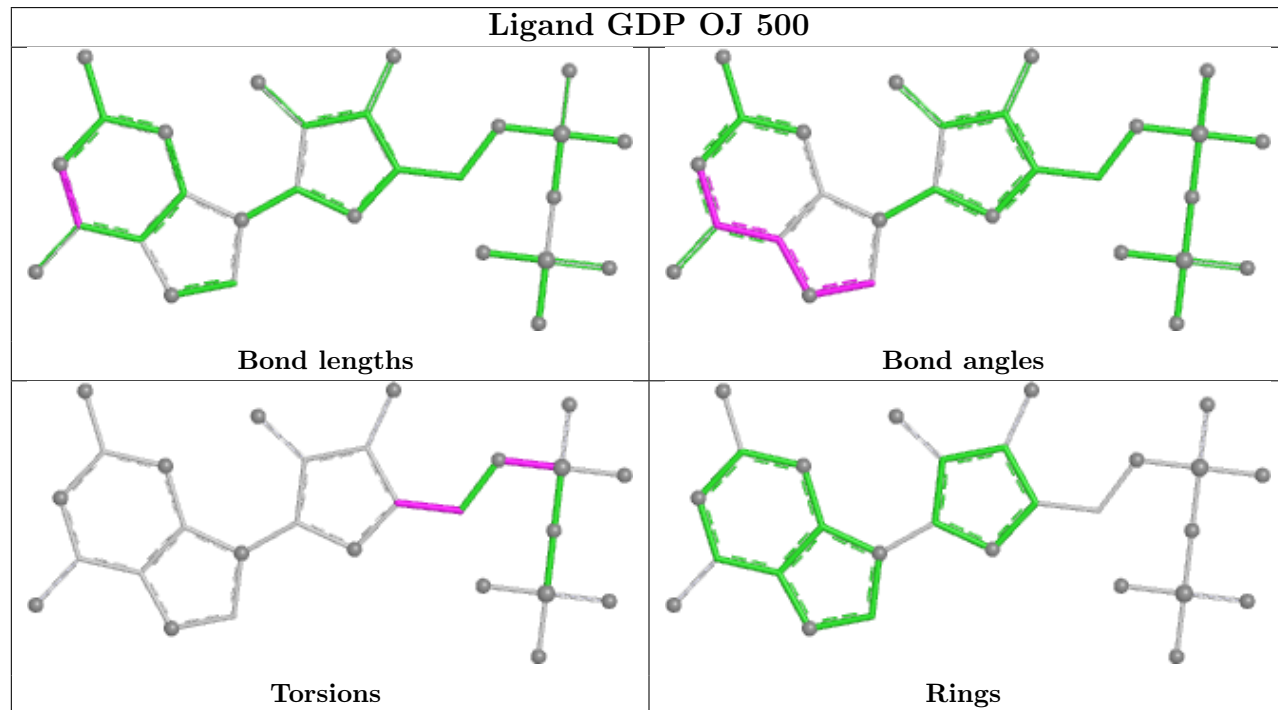
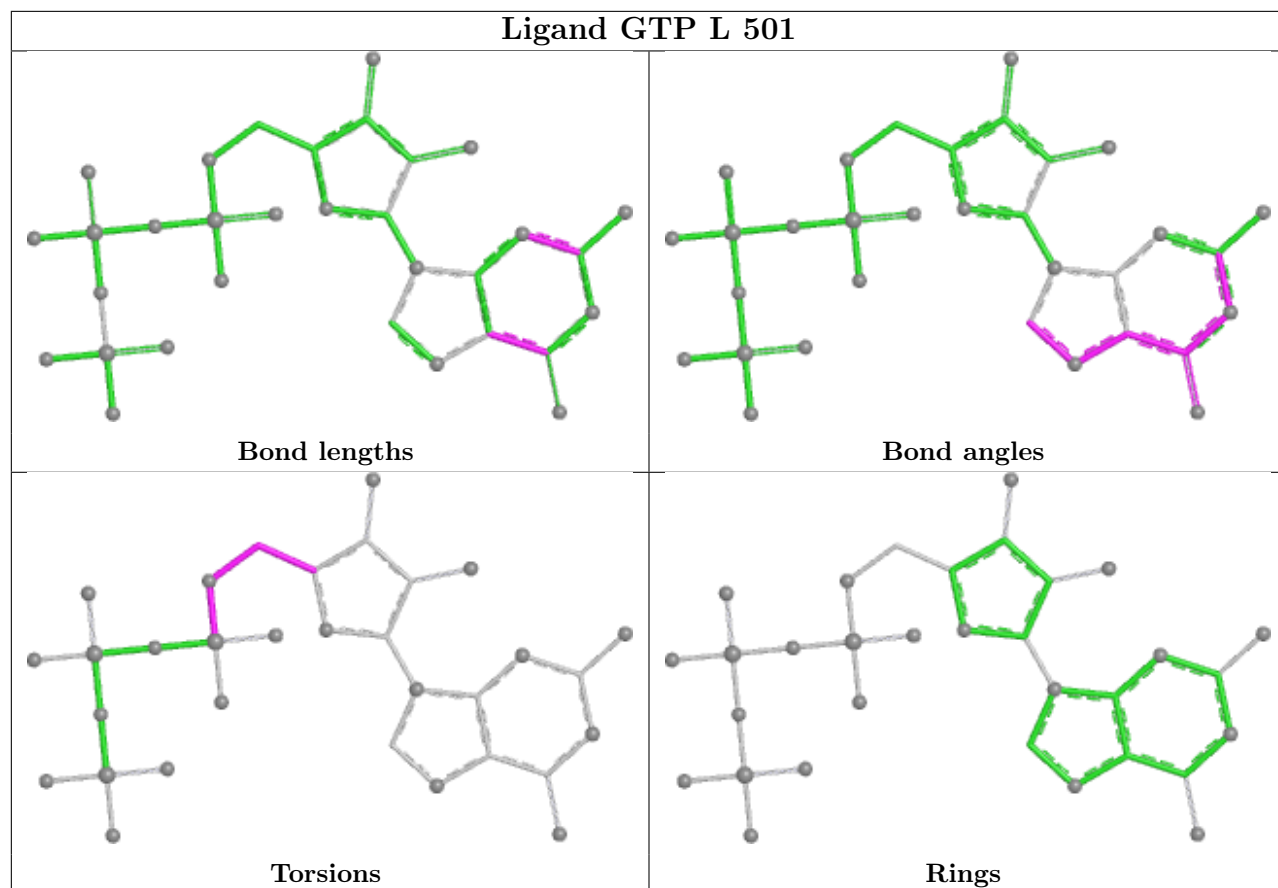
## Ligand GTP SE 501



## Ligand GTP HE 501

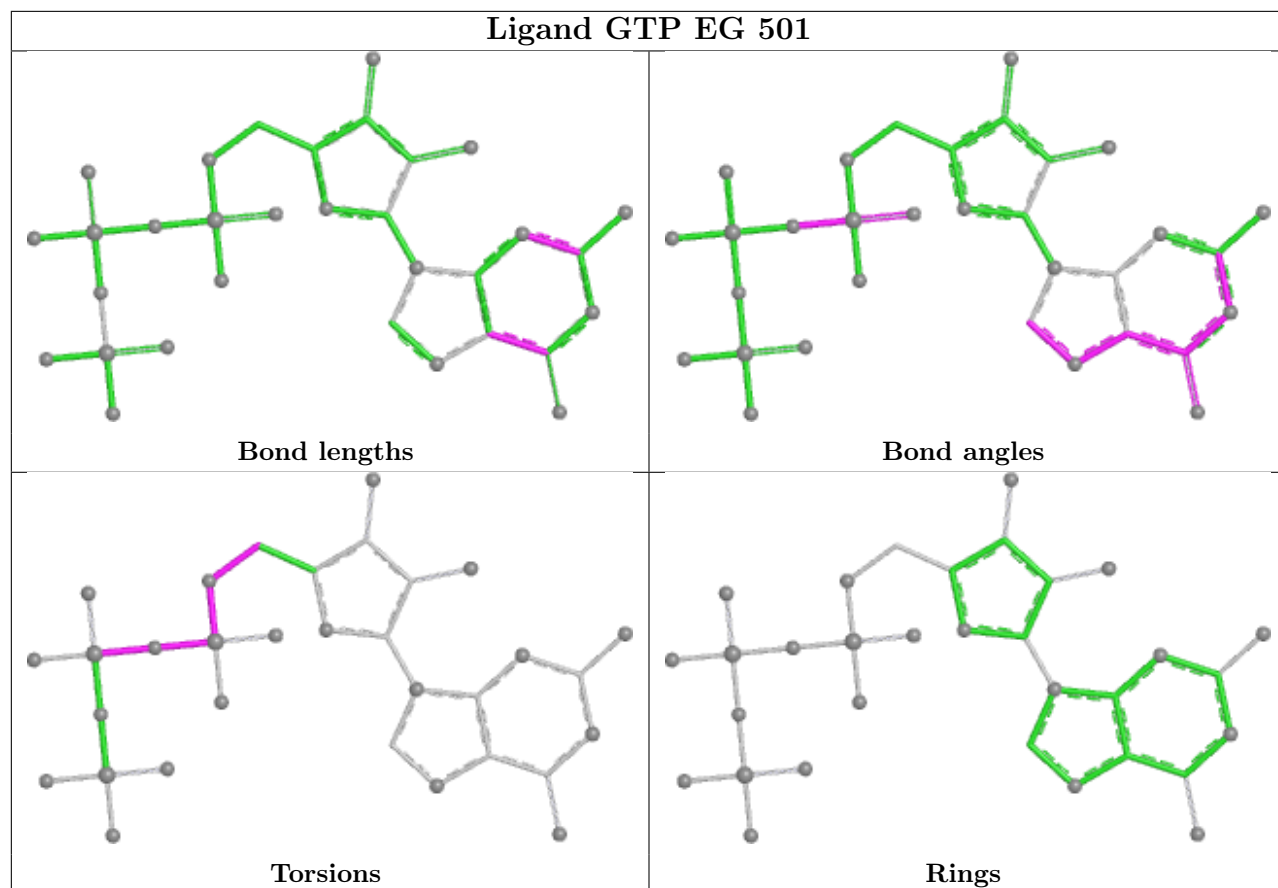




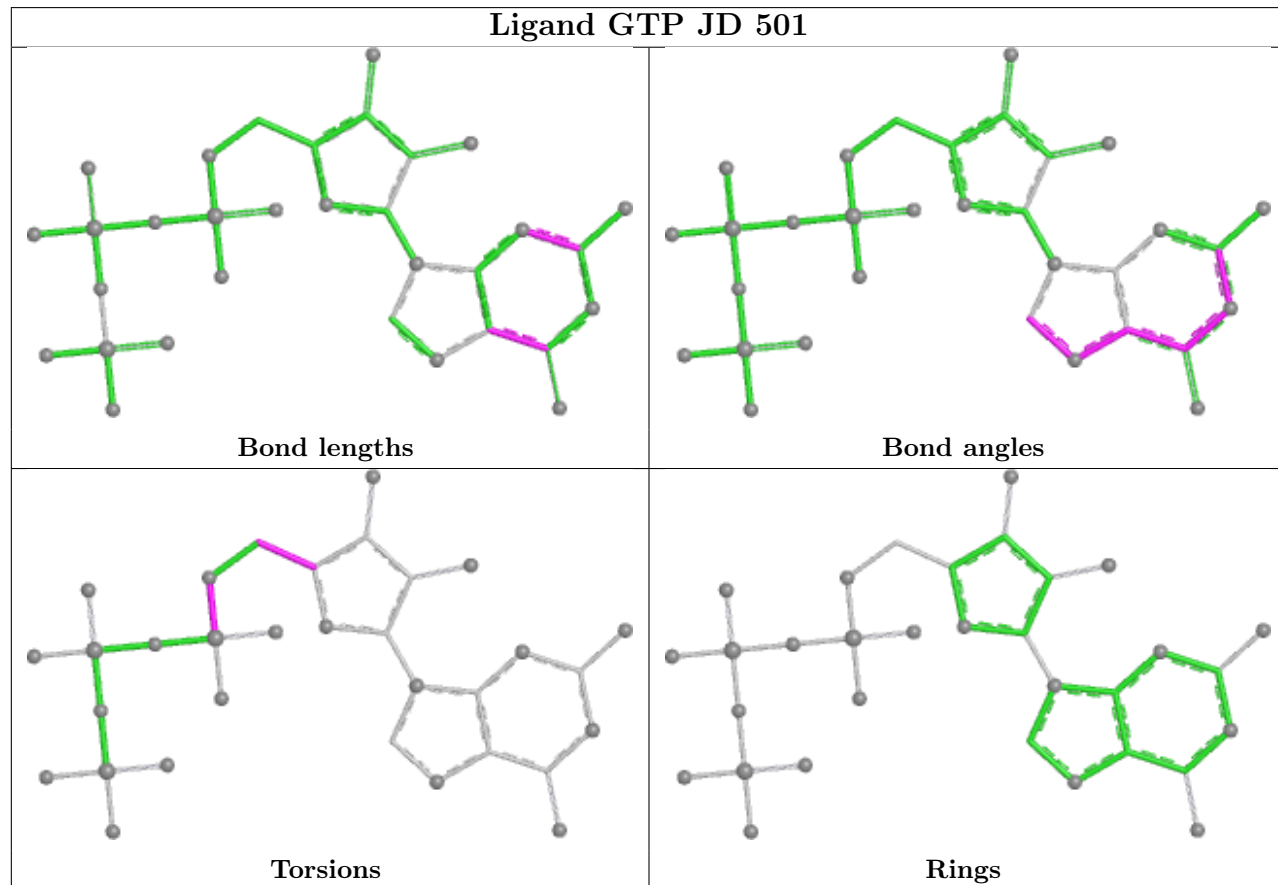




## Ligand GTP EG 501

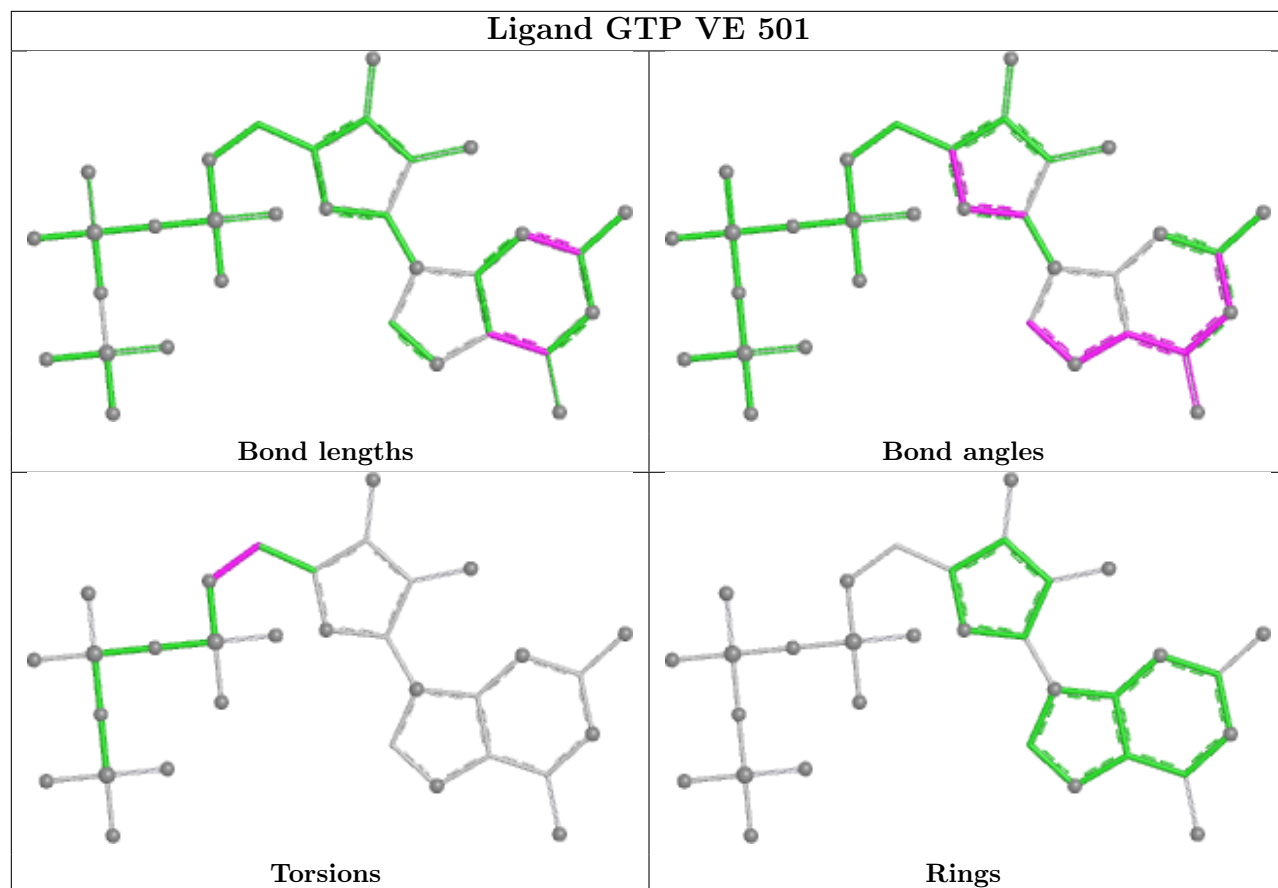


## Ligand GTP JD 501

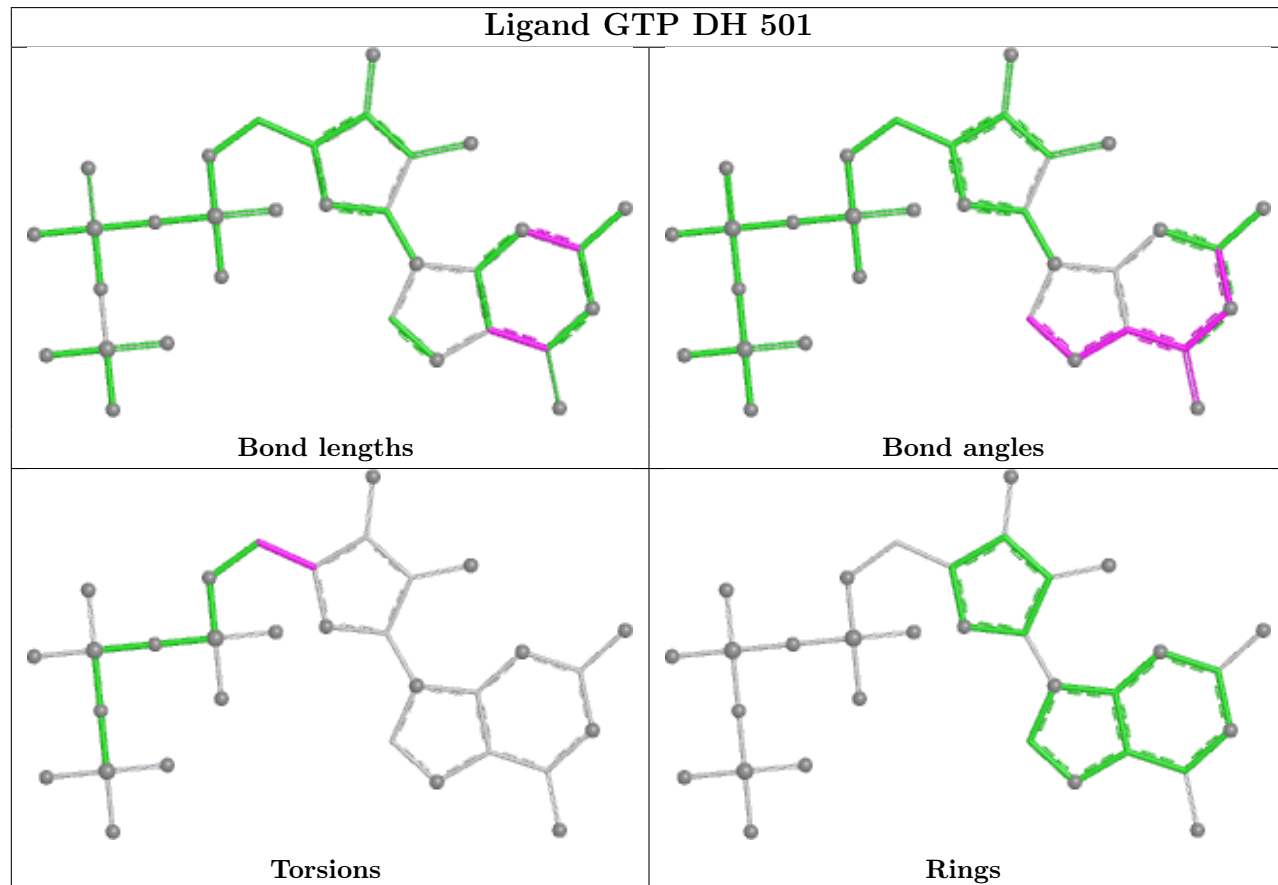




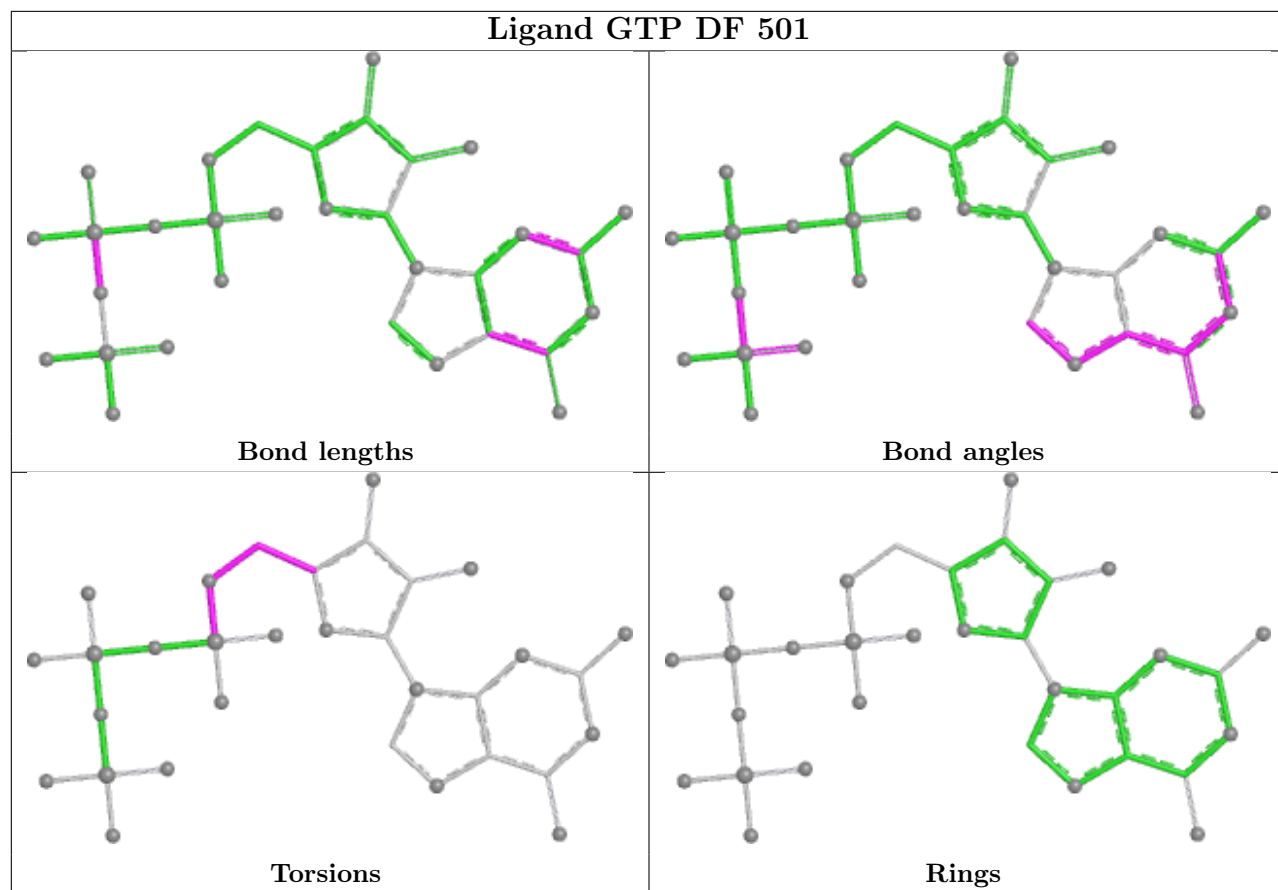
## Ligand GTP VE 501



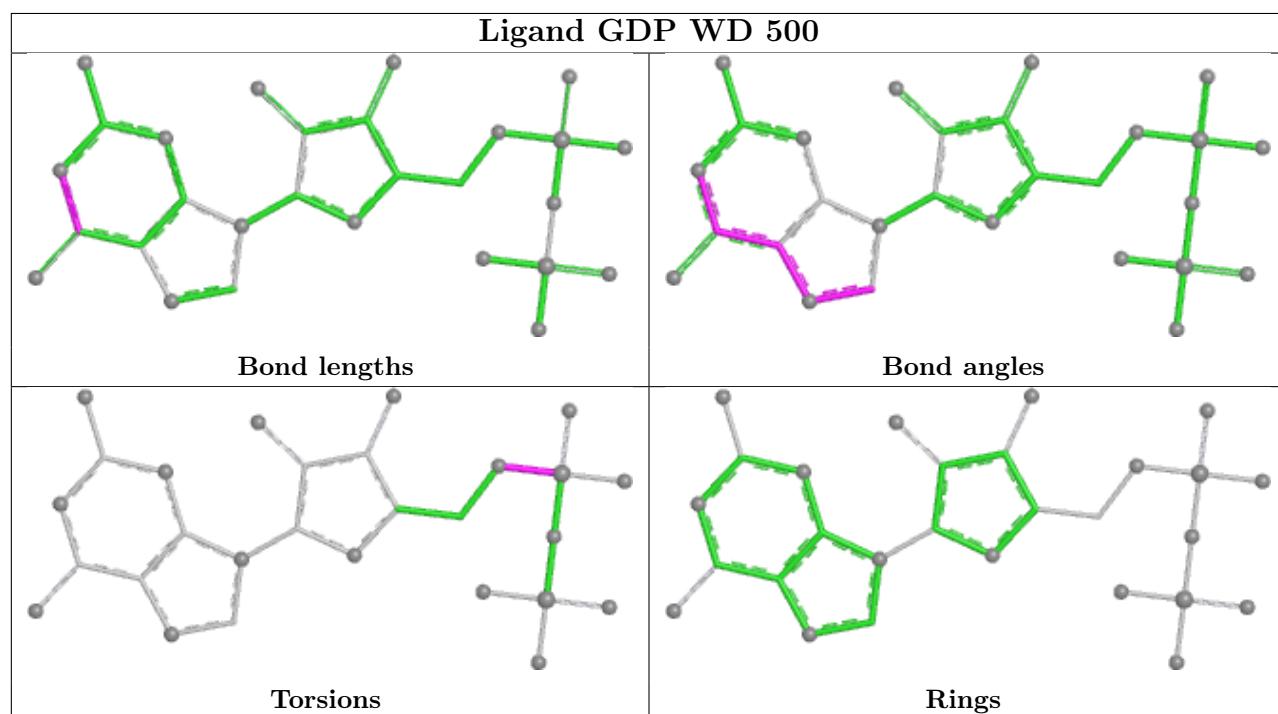
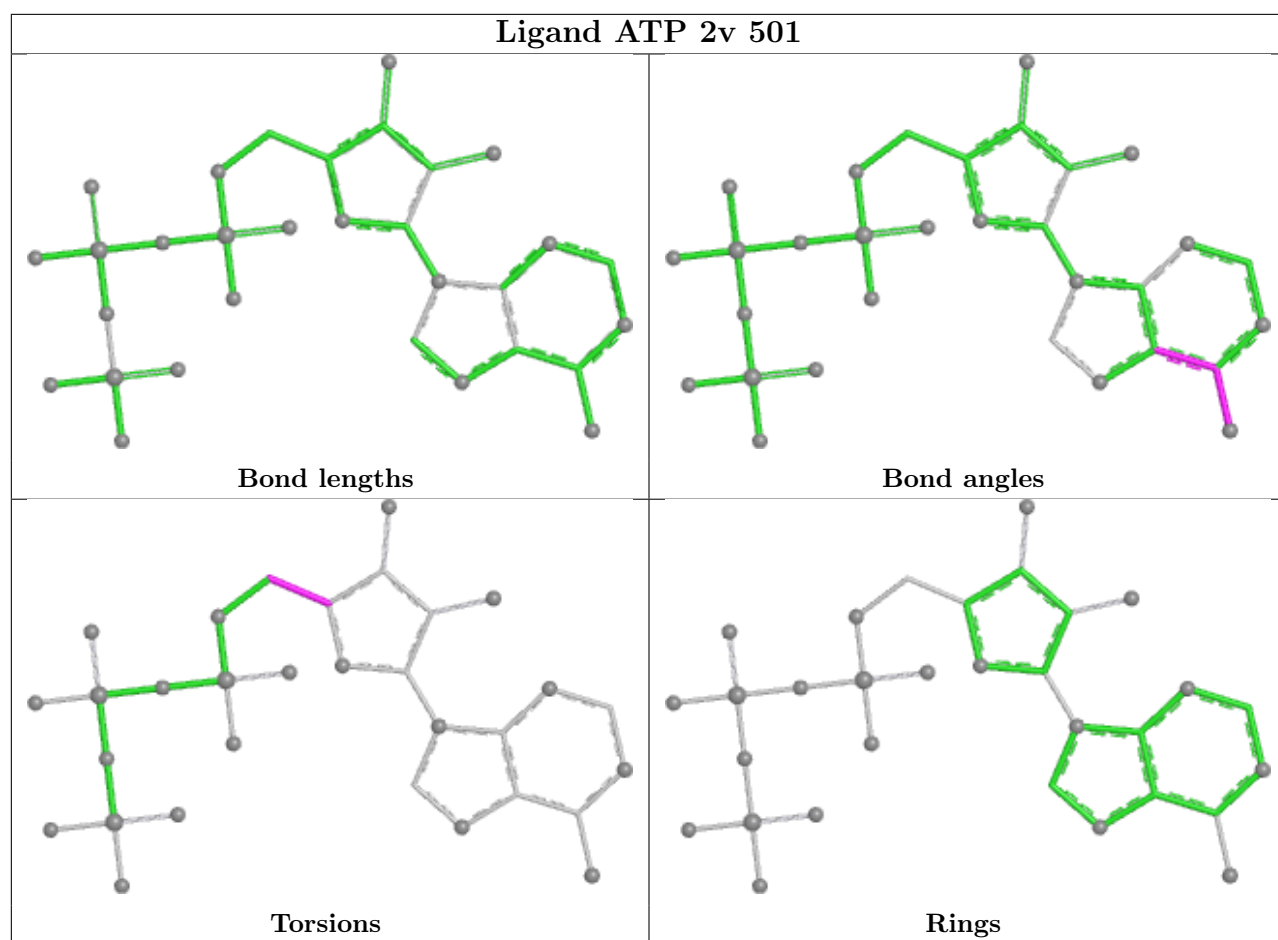
## Ligand GTP DH 501





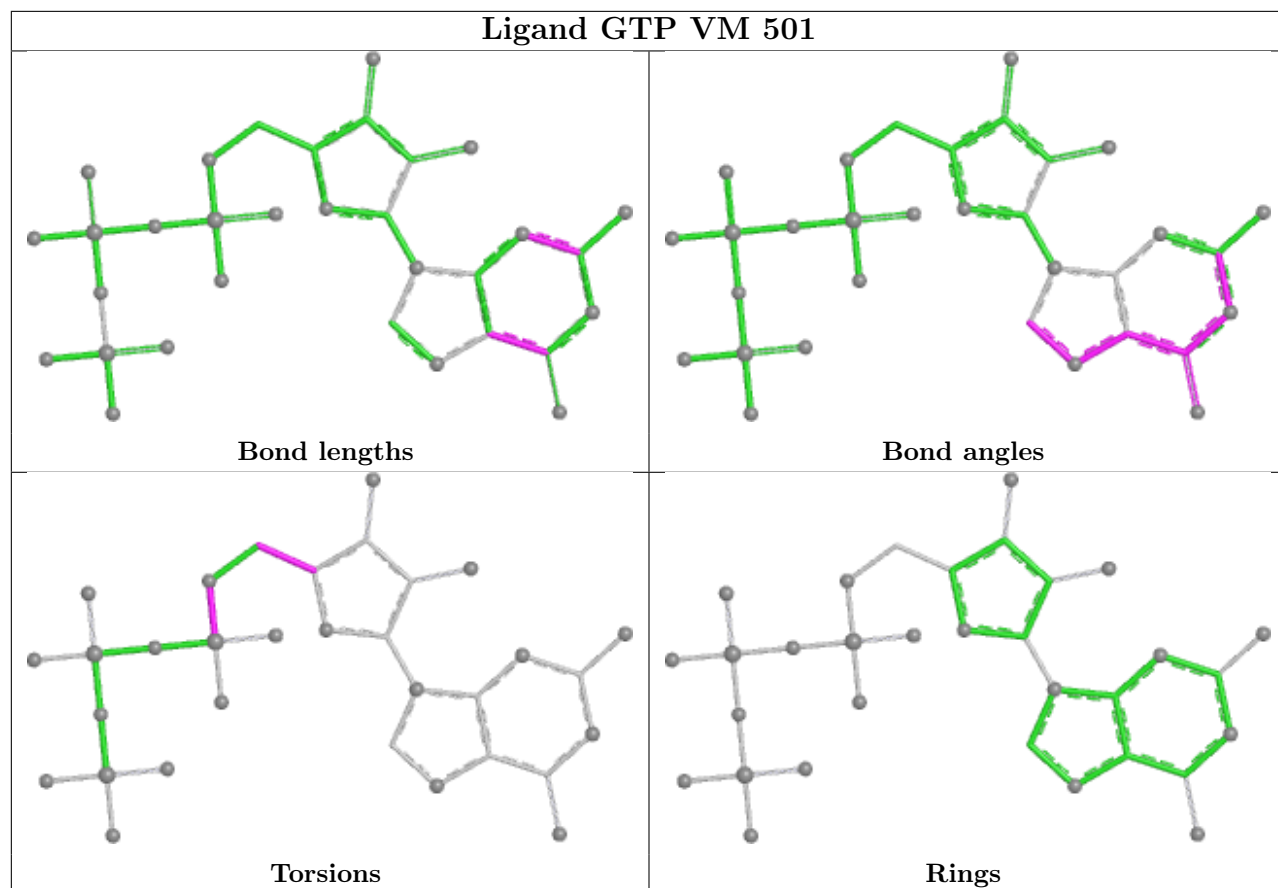




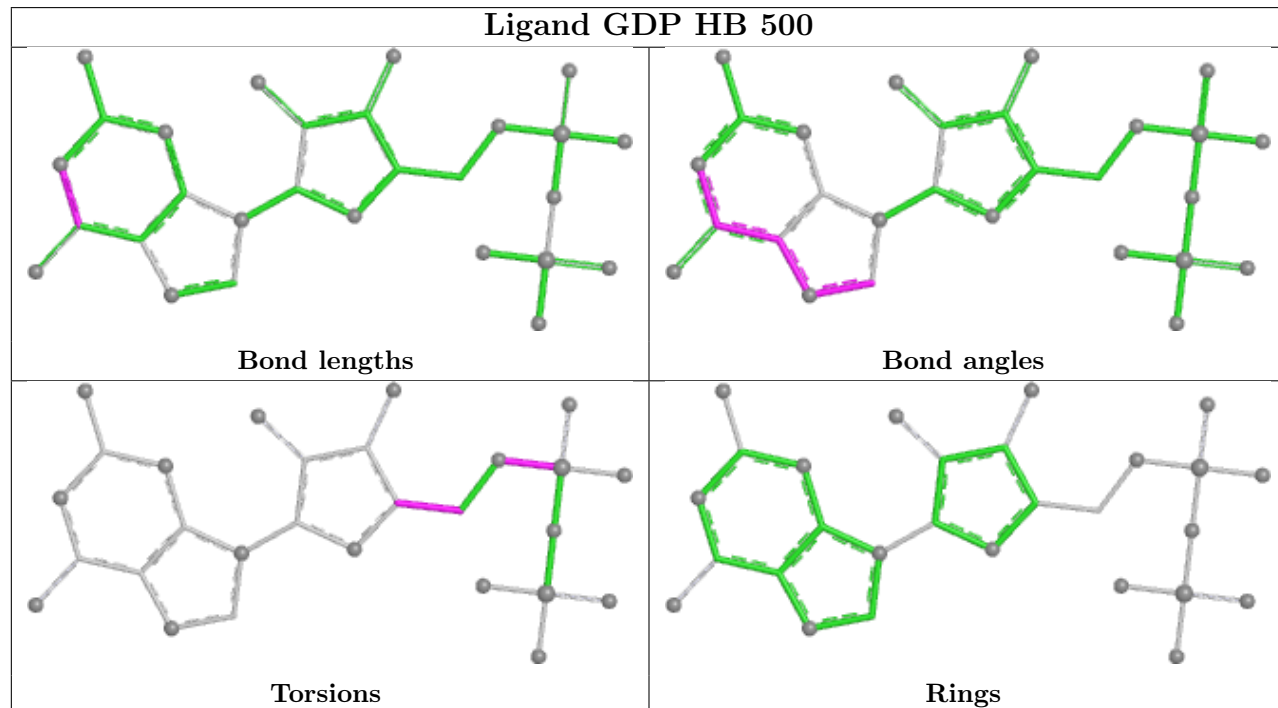




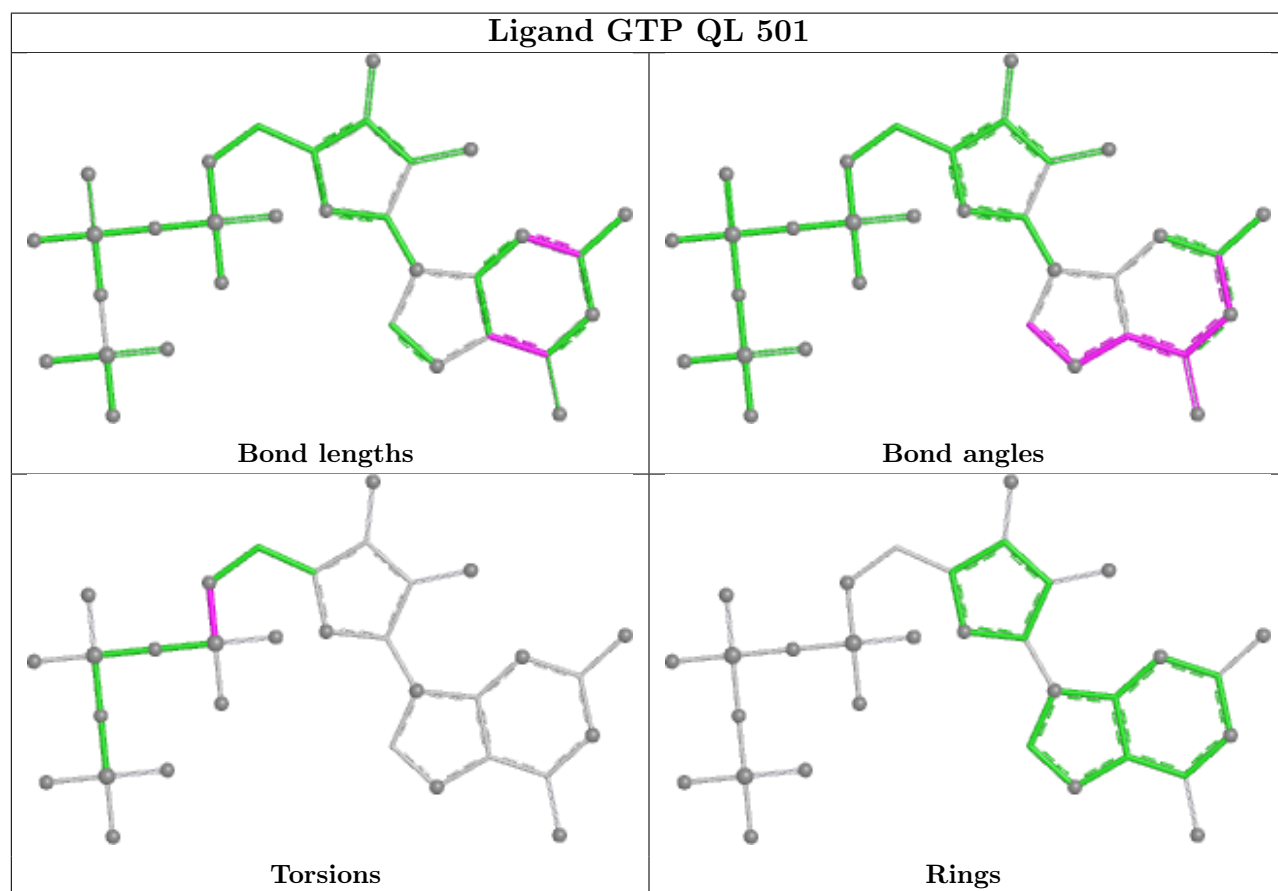
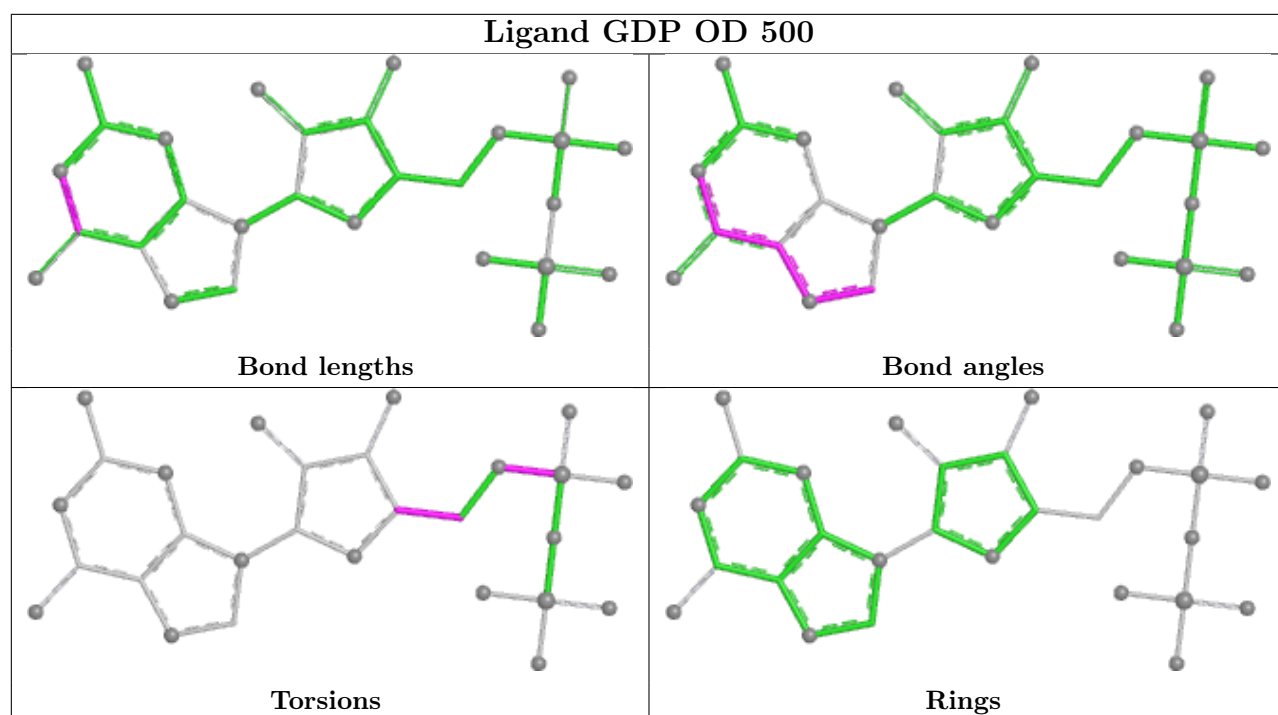
## Ligand GTP VM 501



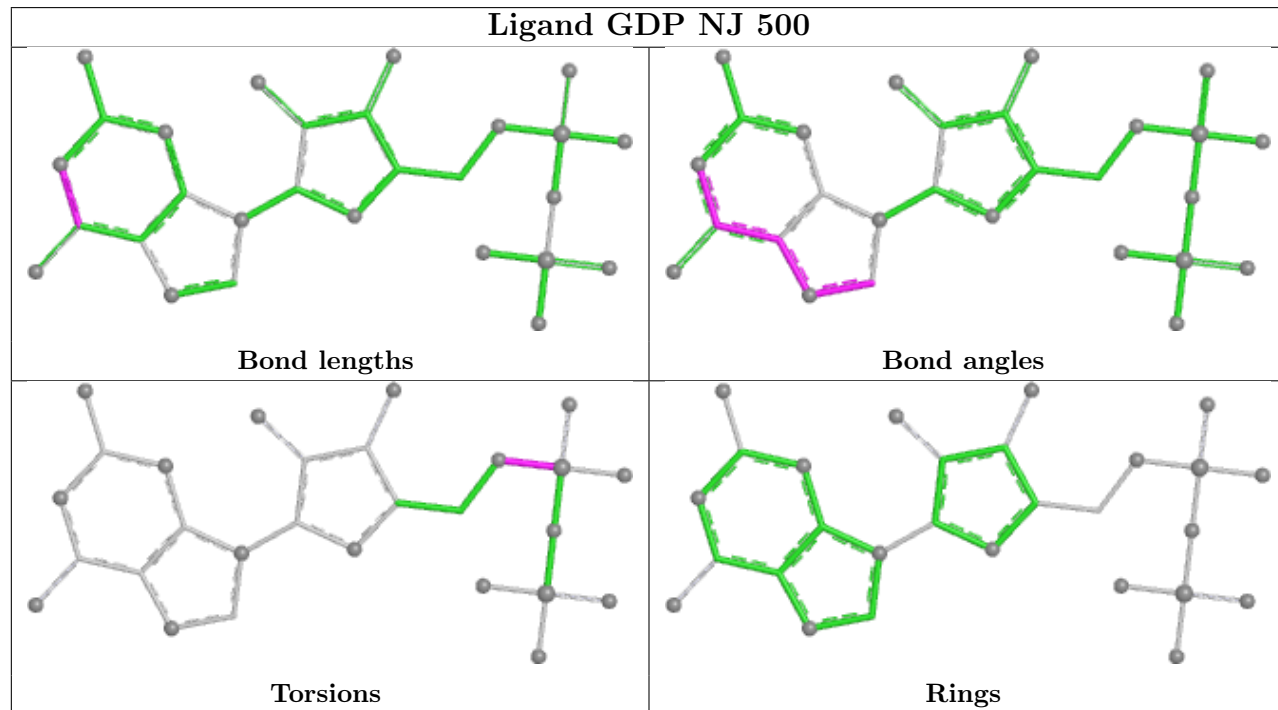
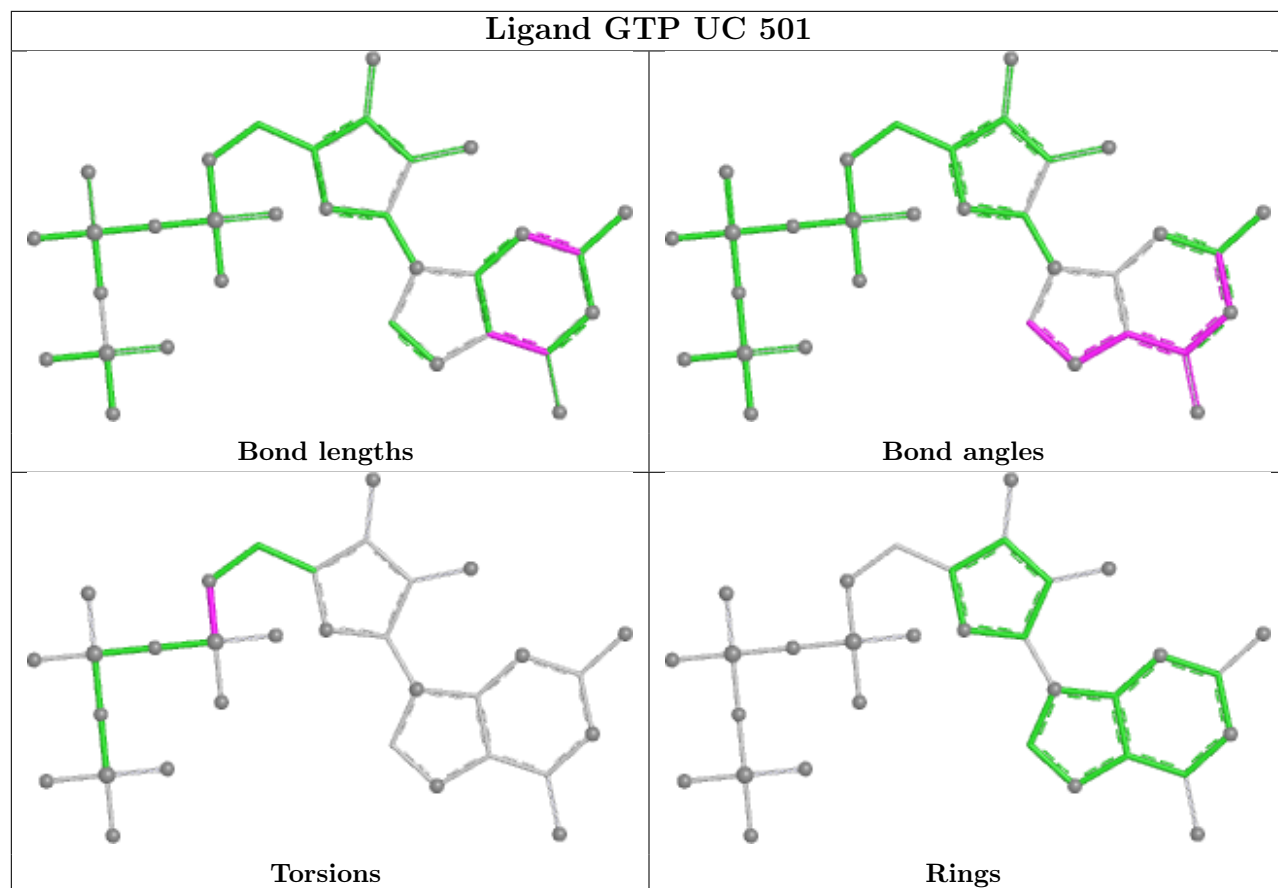
## Ligand GDP HB 500





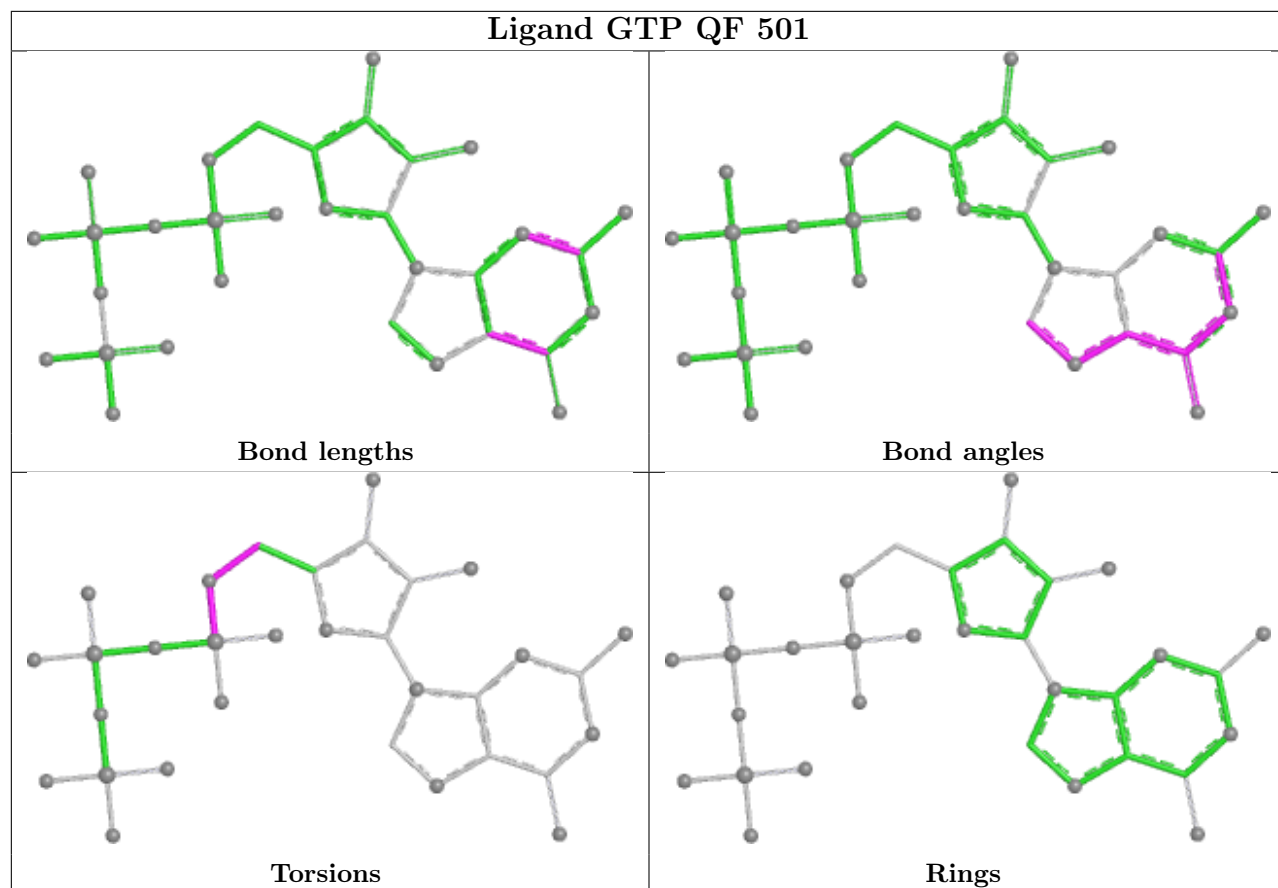




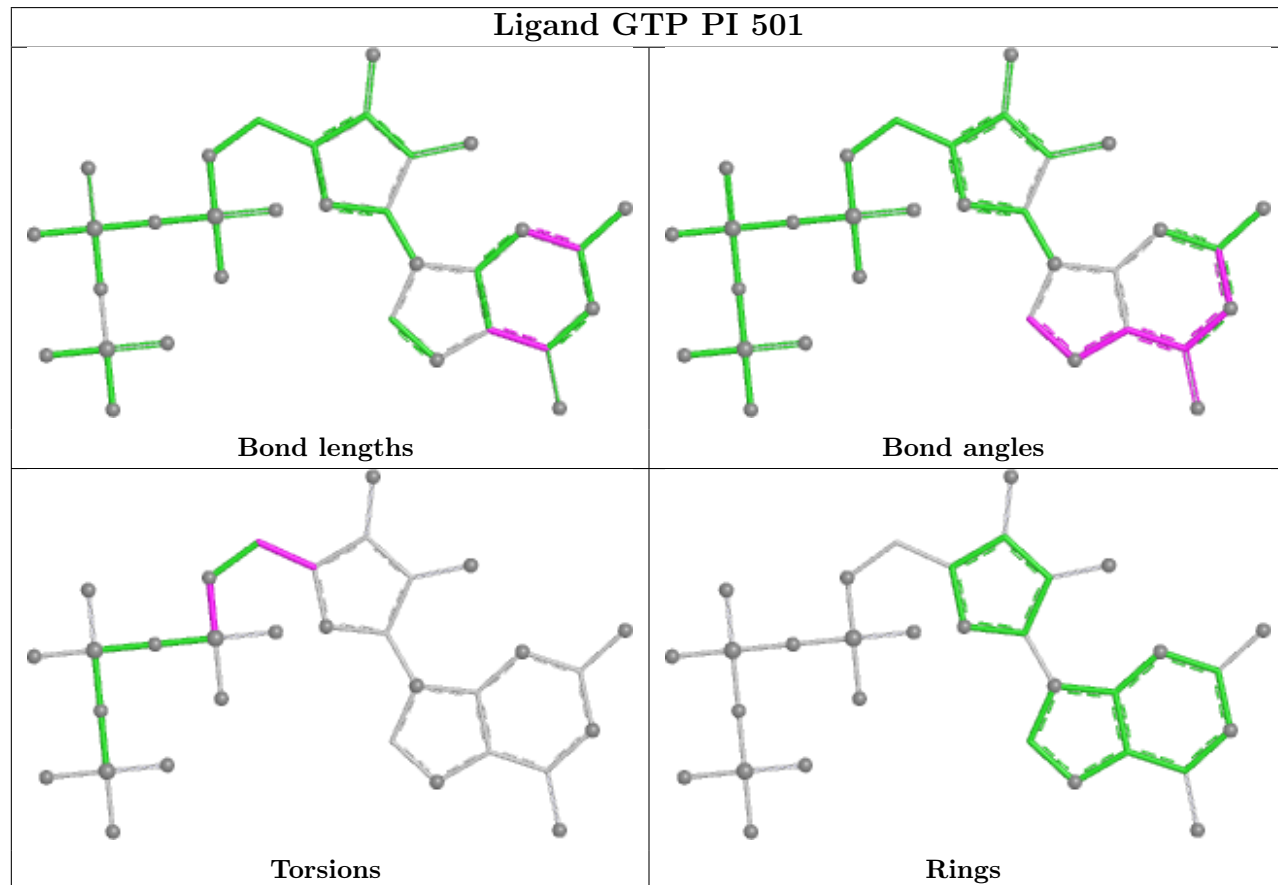




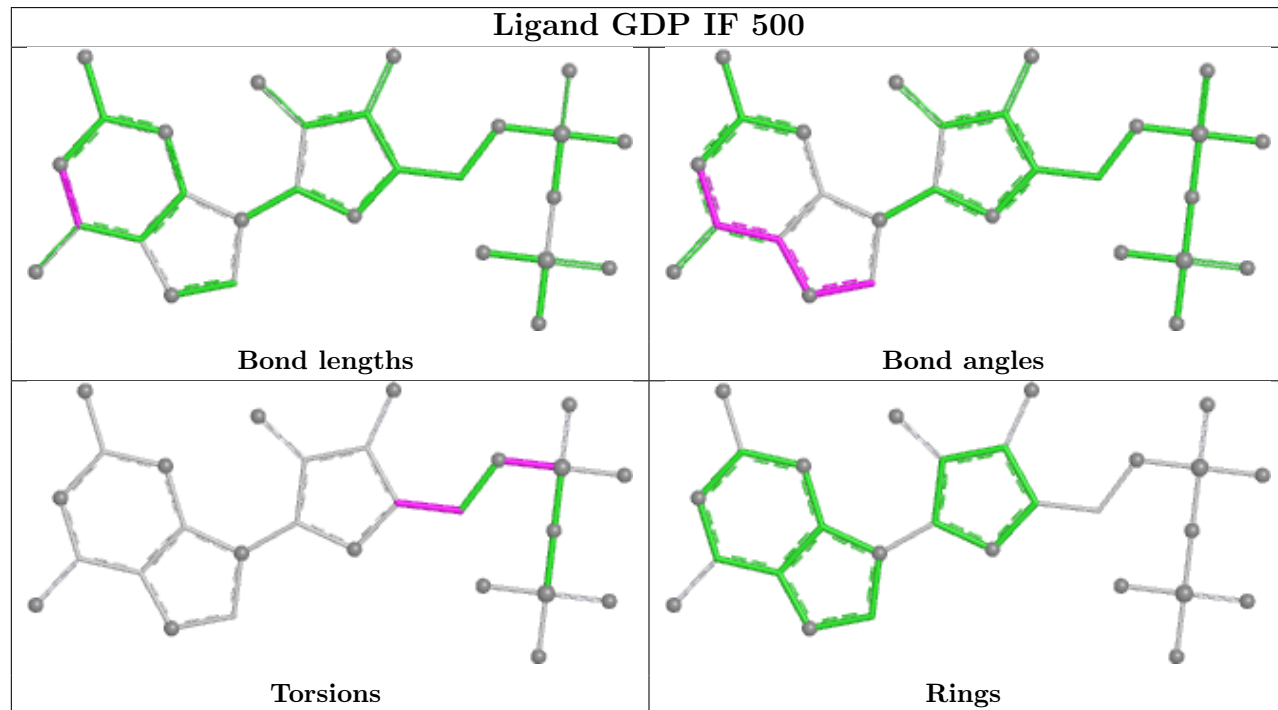
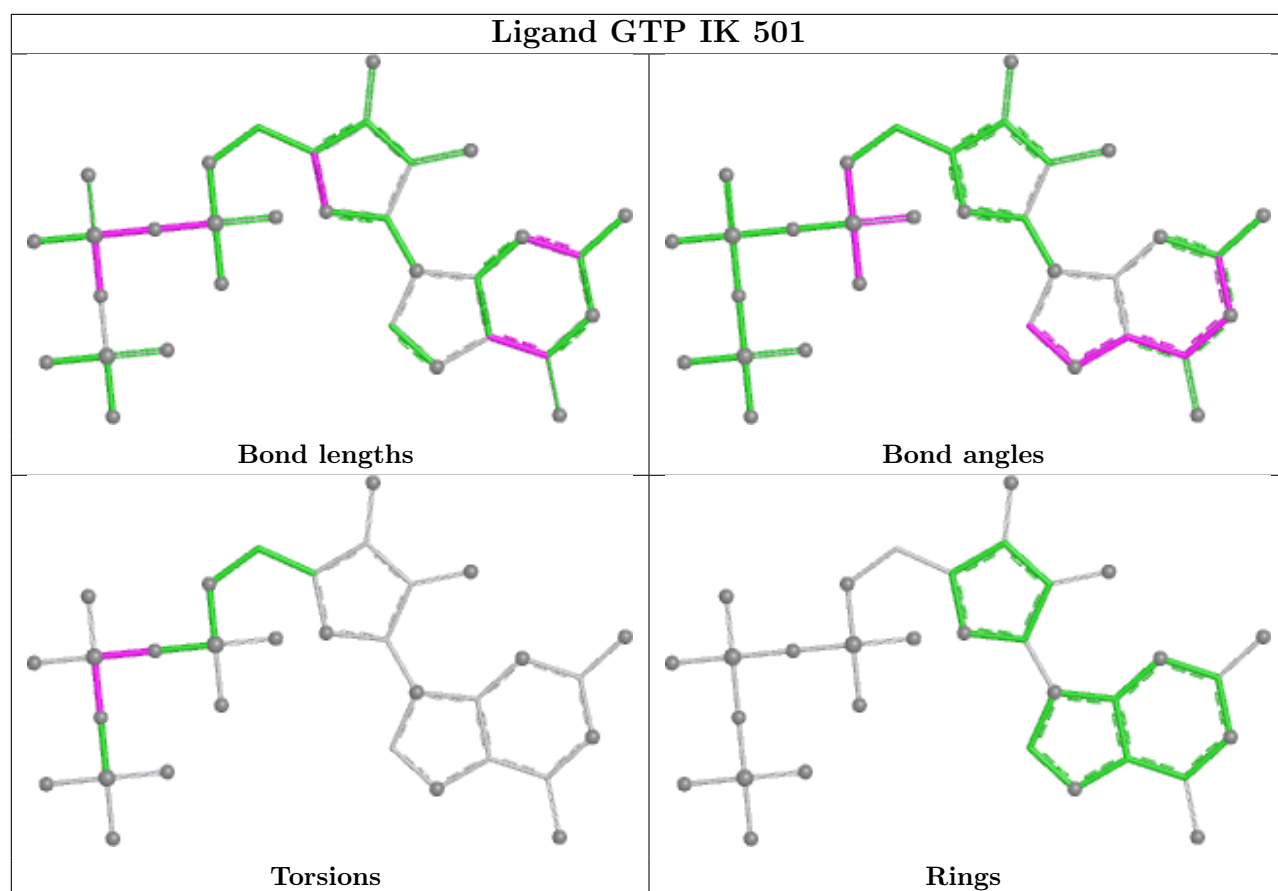
## Ligand GTP QF 501



## Ligand GTP PI 501

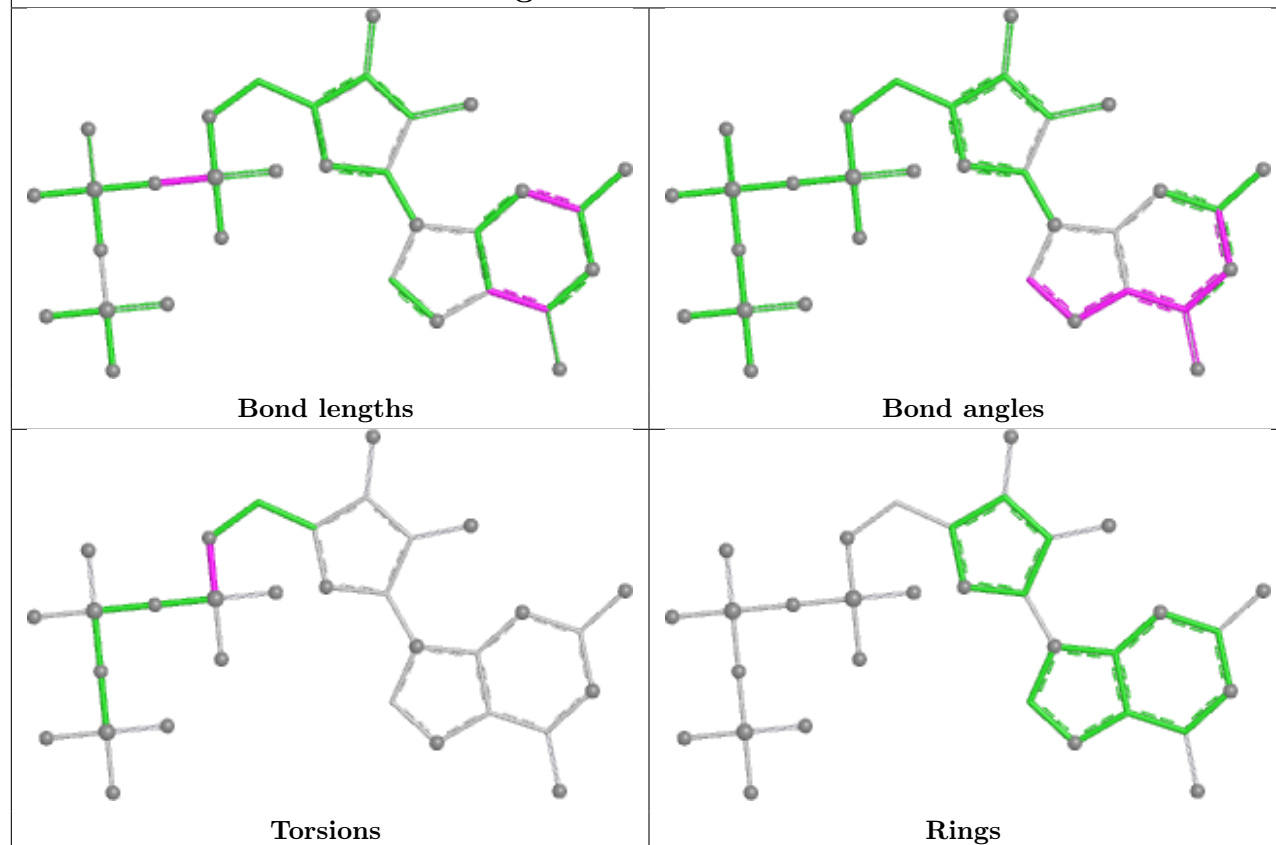




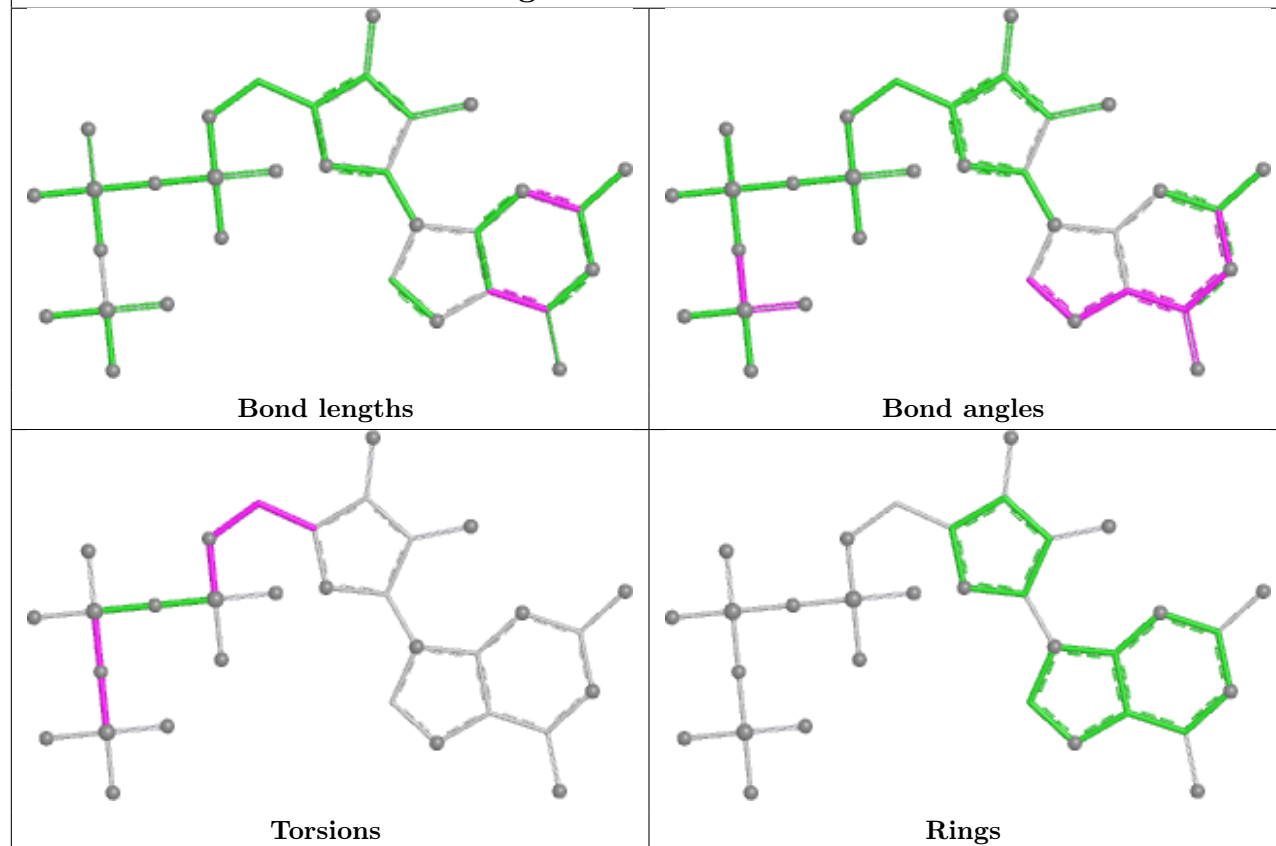




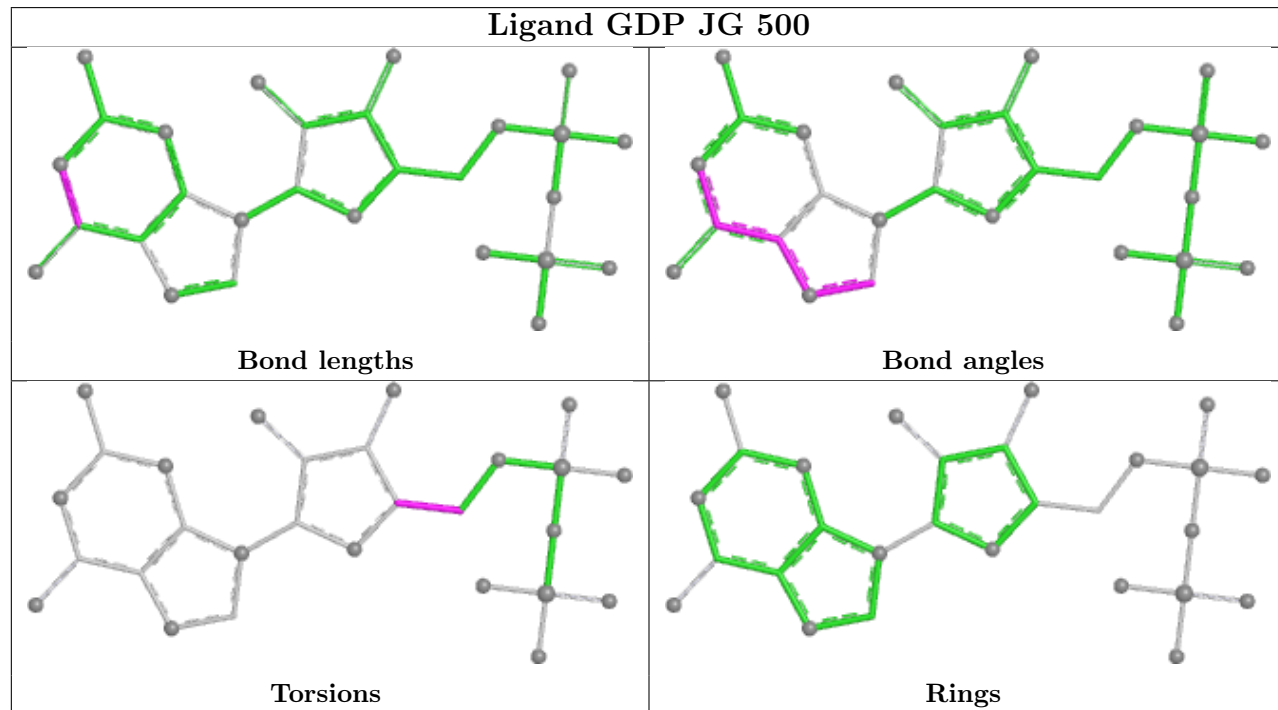
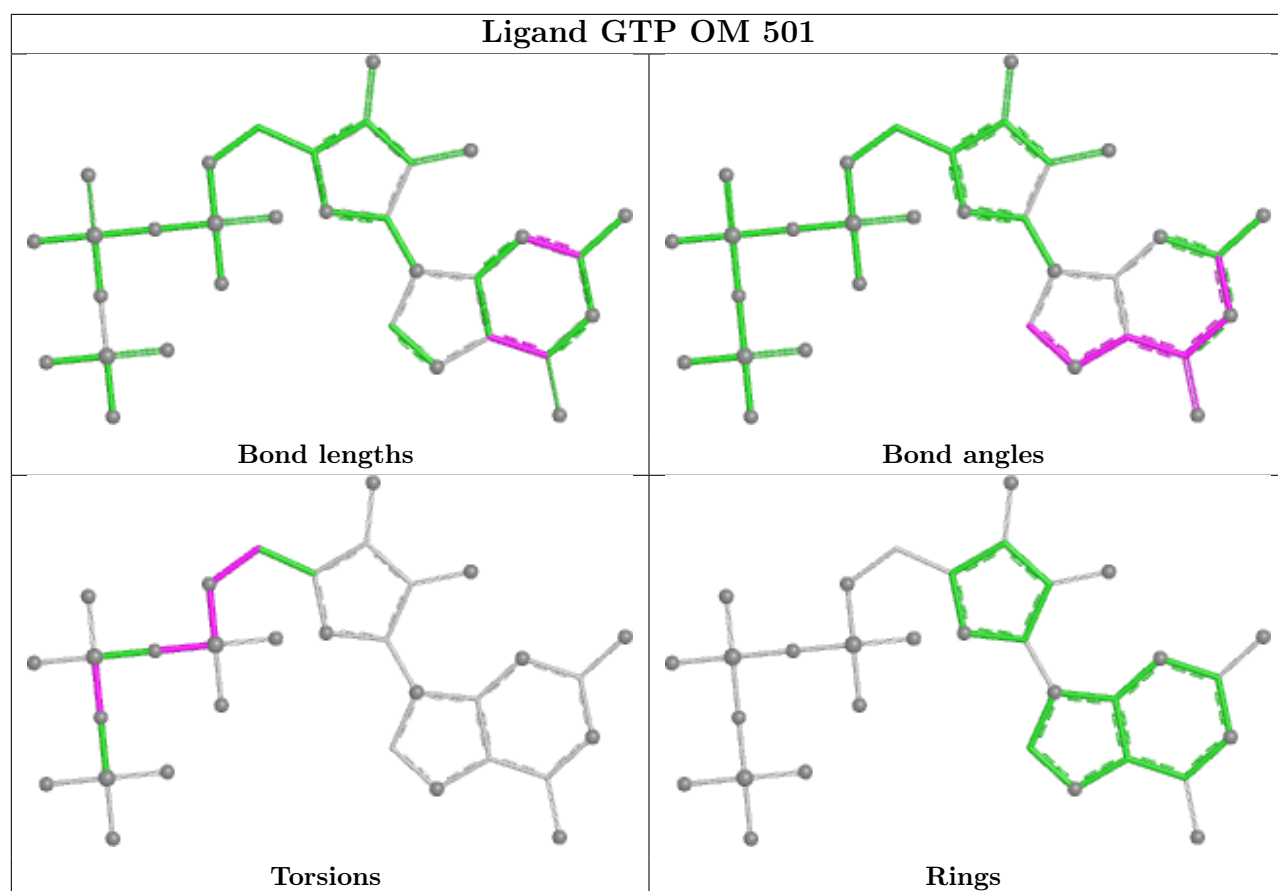
## Ligand GTP GK 501



## Ligand GTP EA 501

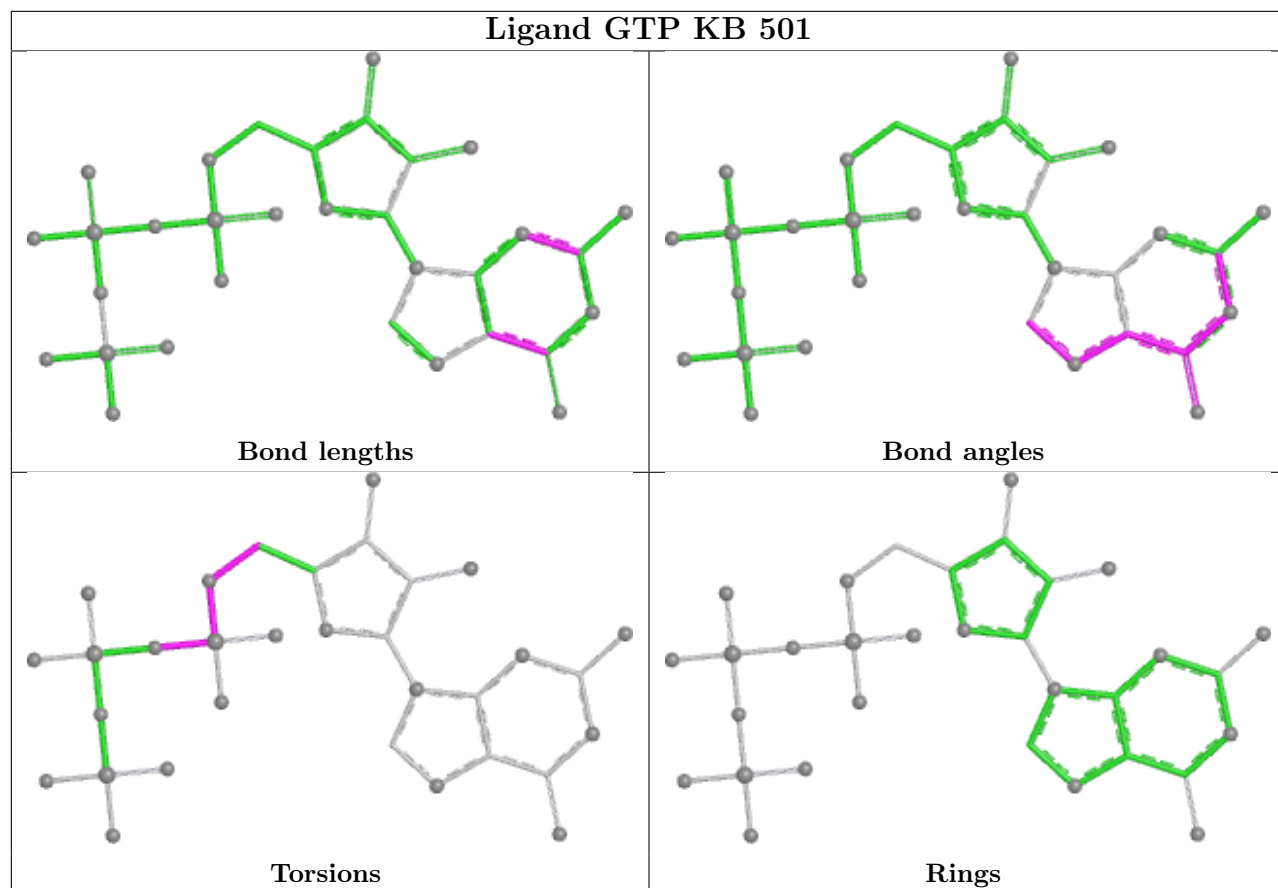




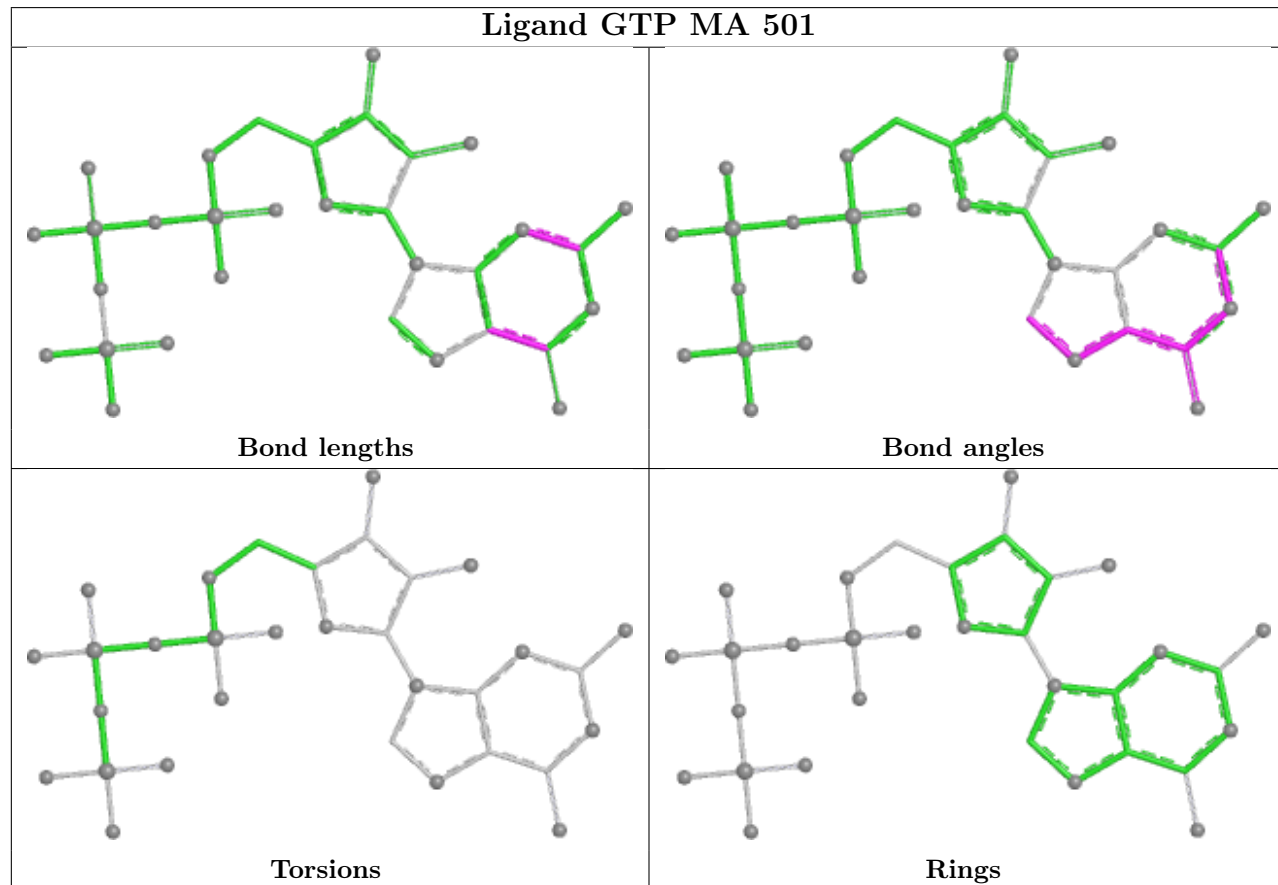




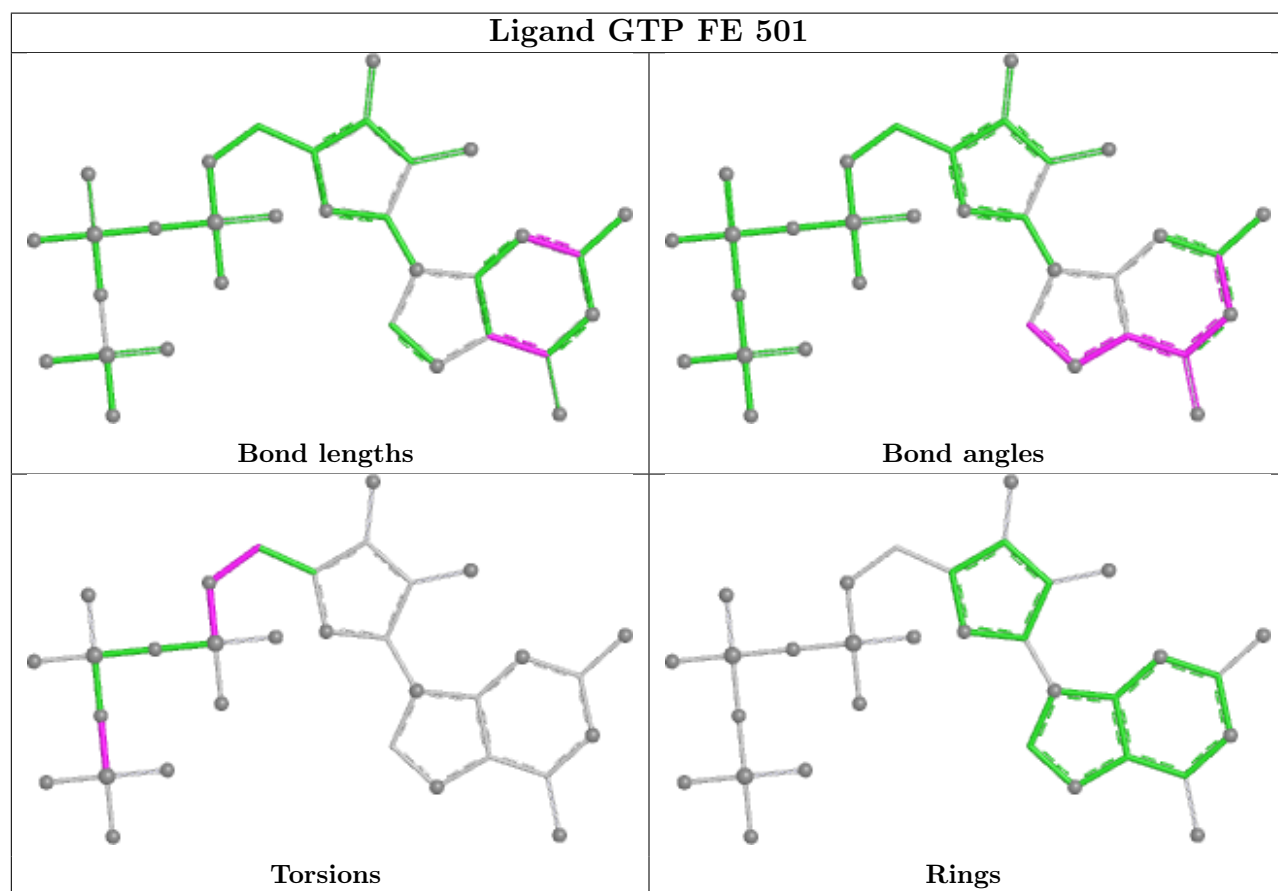
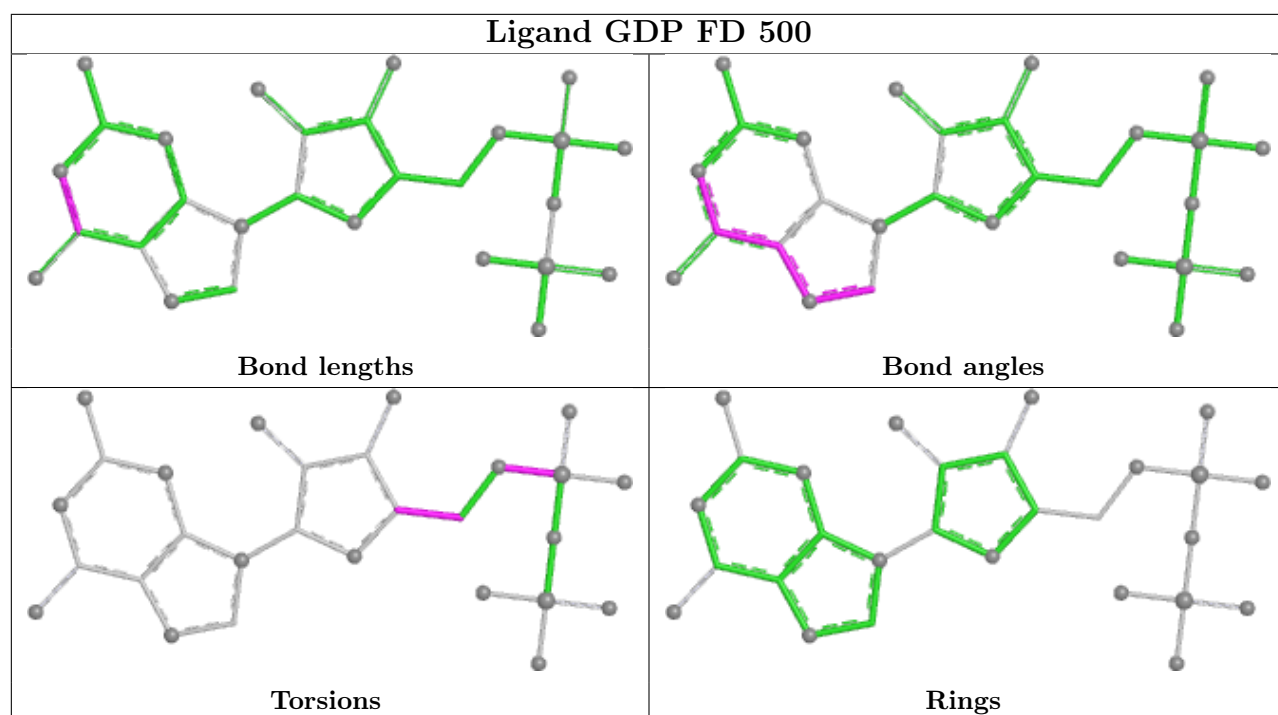
## Ligand GTP KB 501



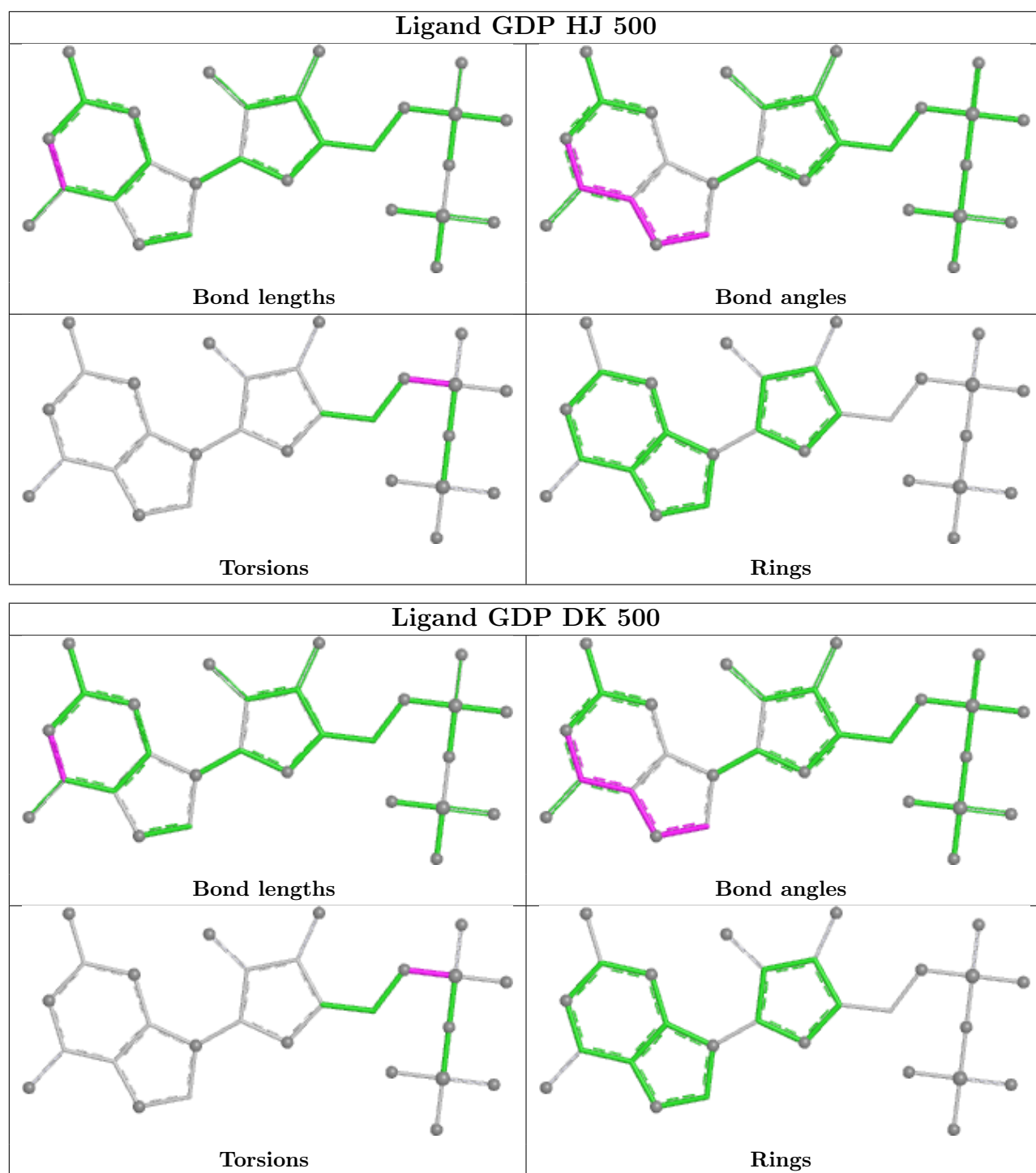
## Ligand GTP MA 501



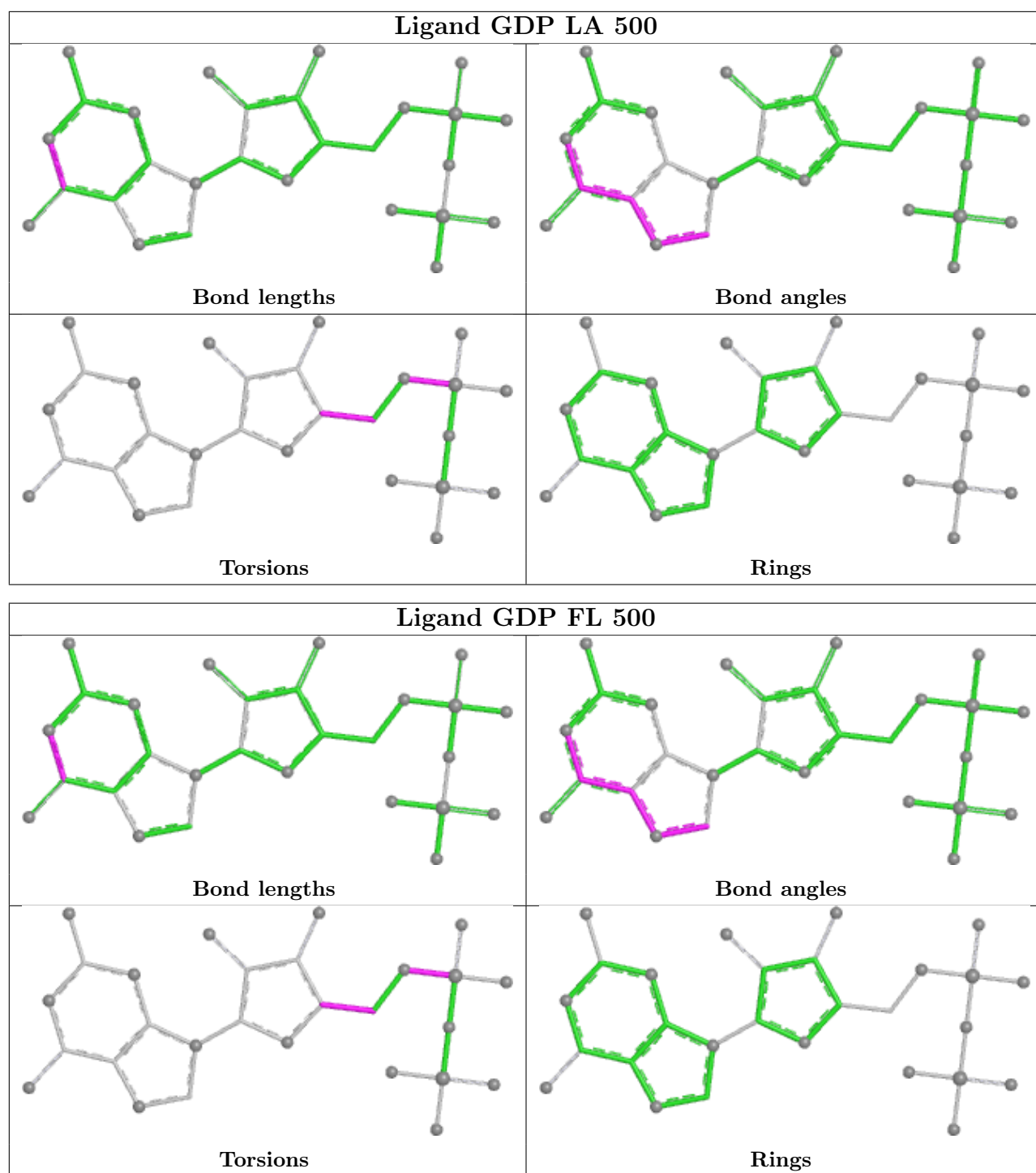




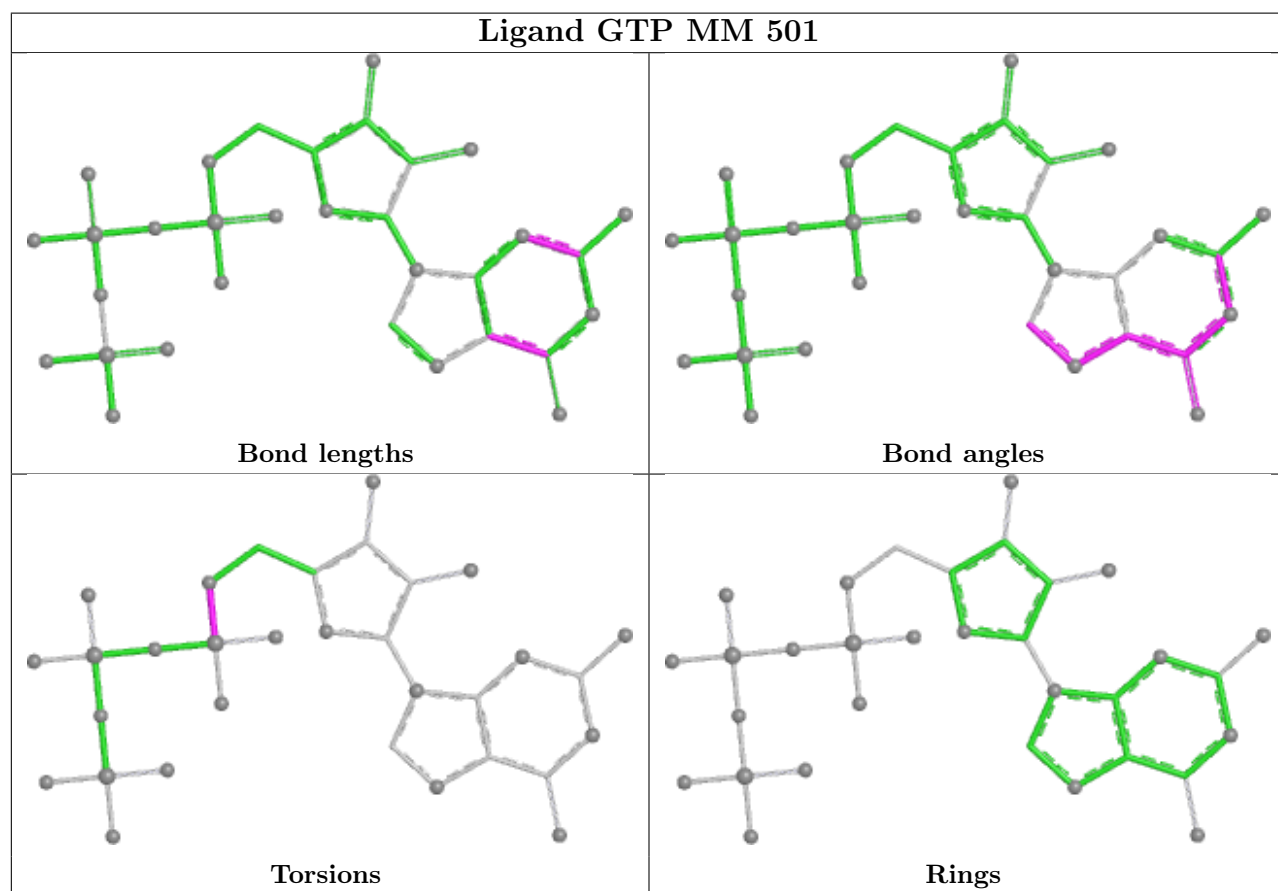
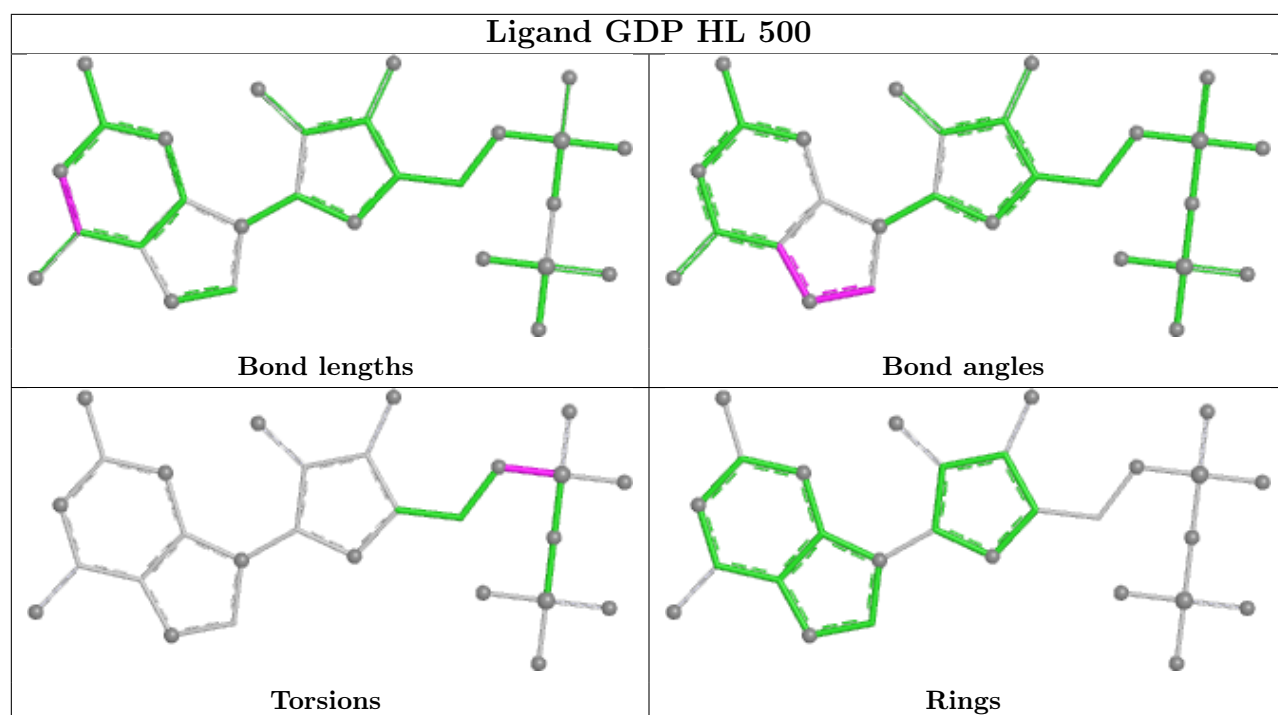






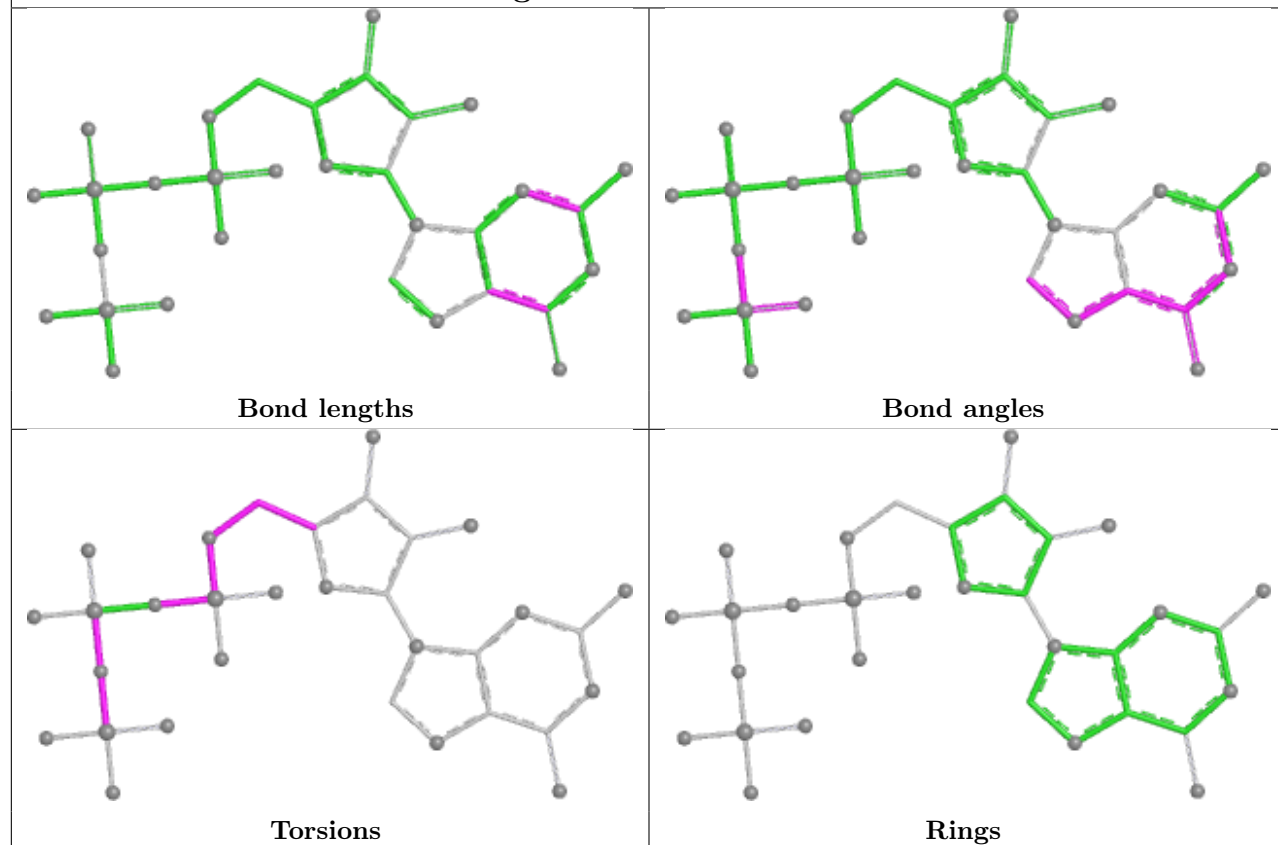




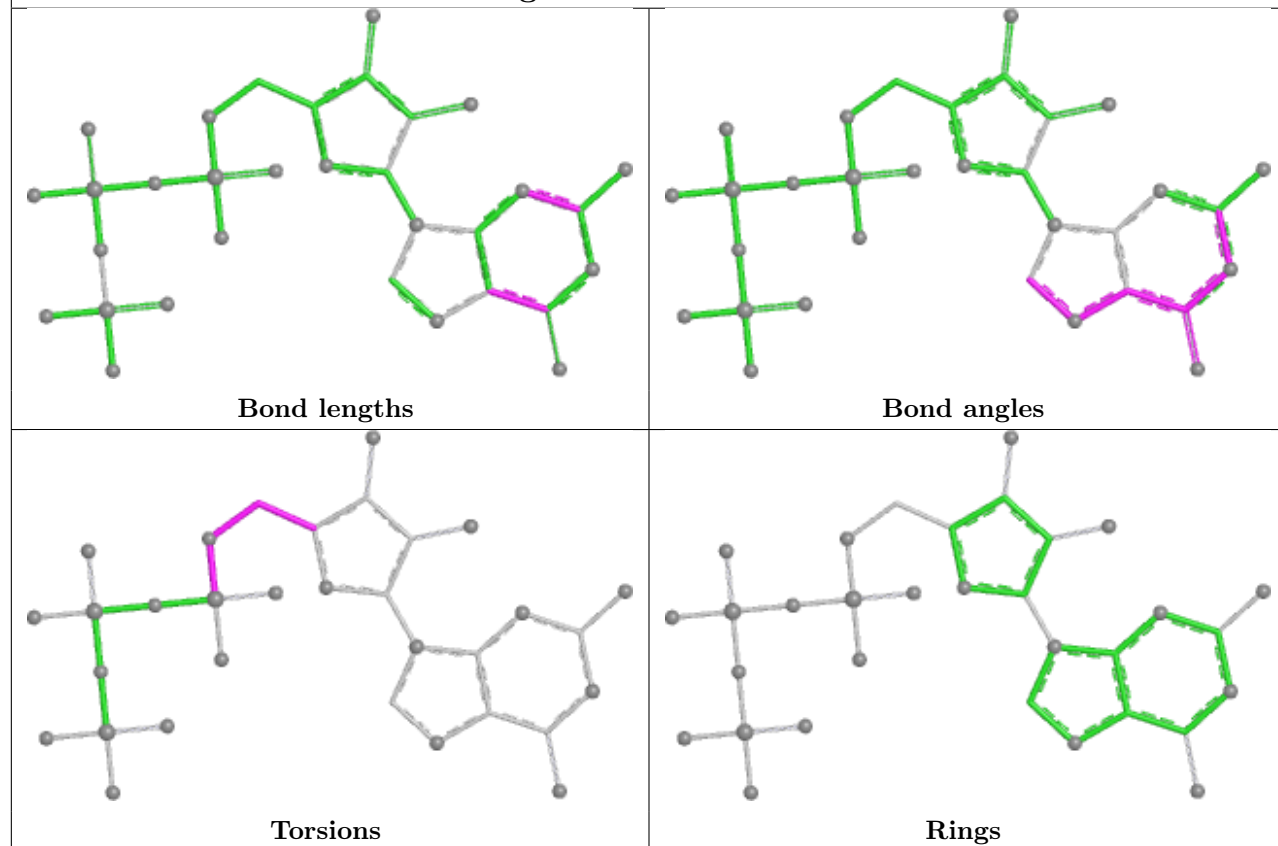




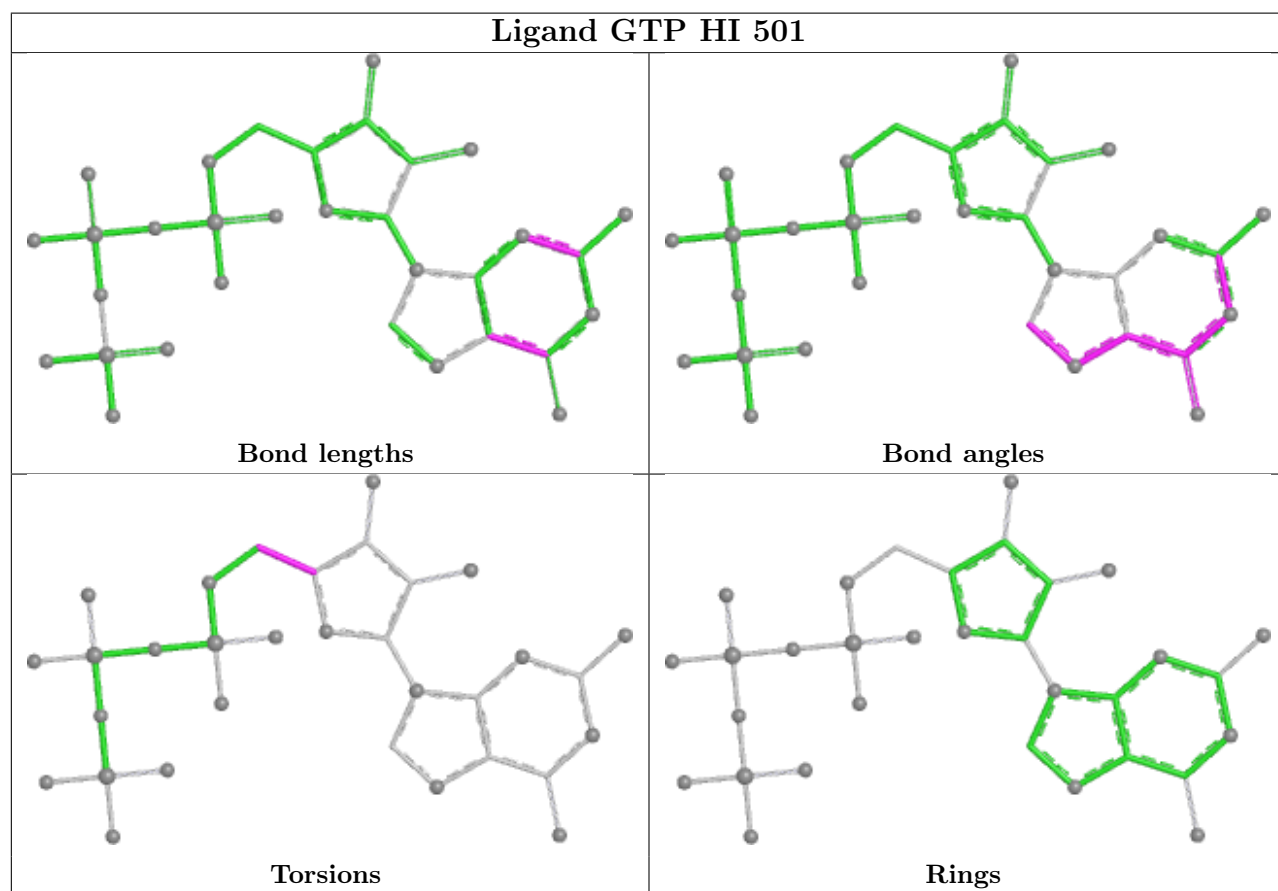
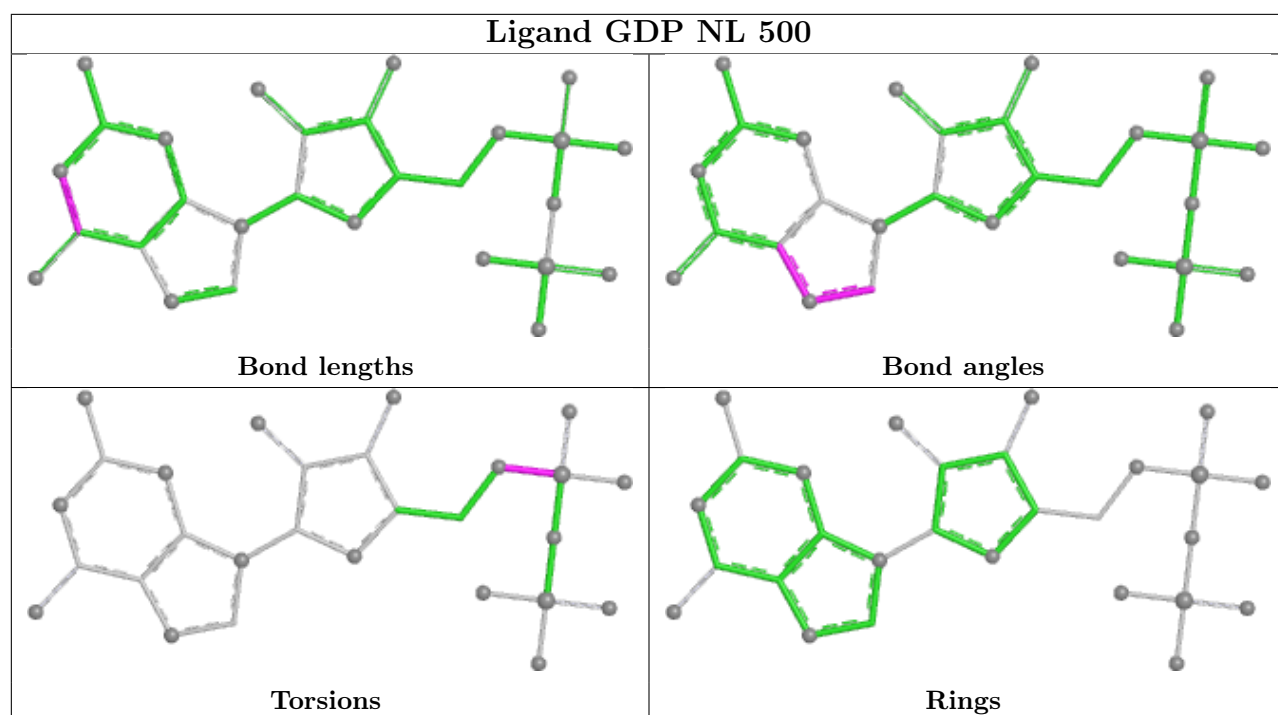
## Ligand GTP WE 501



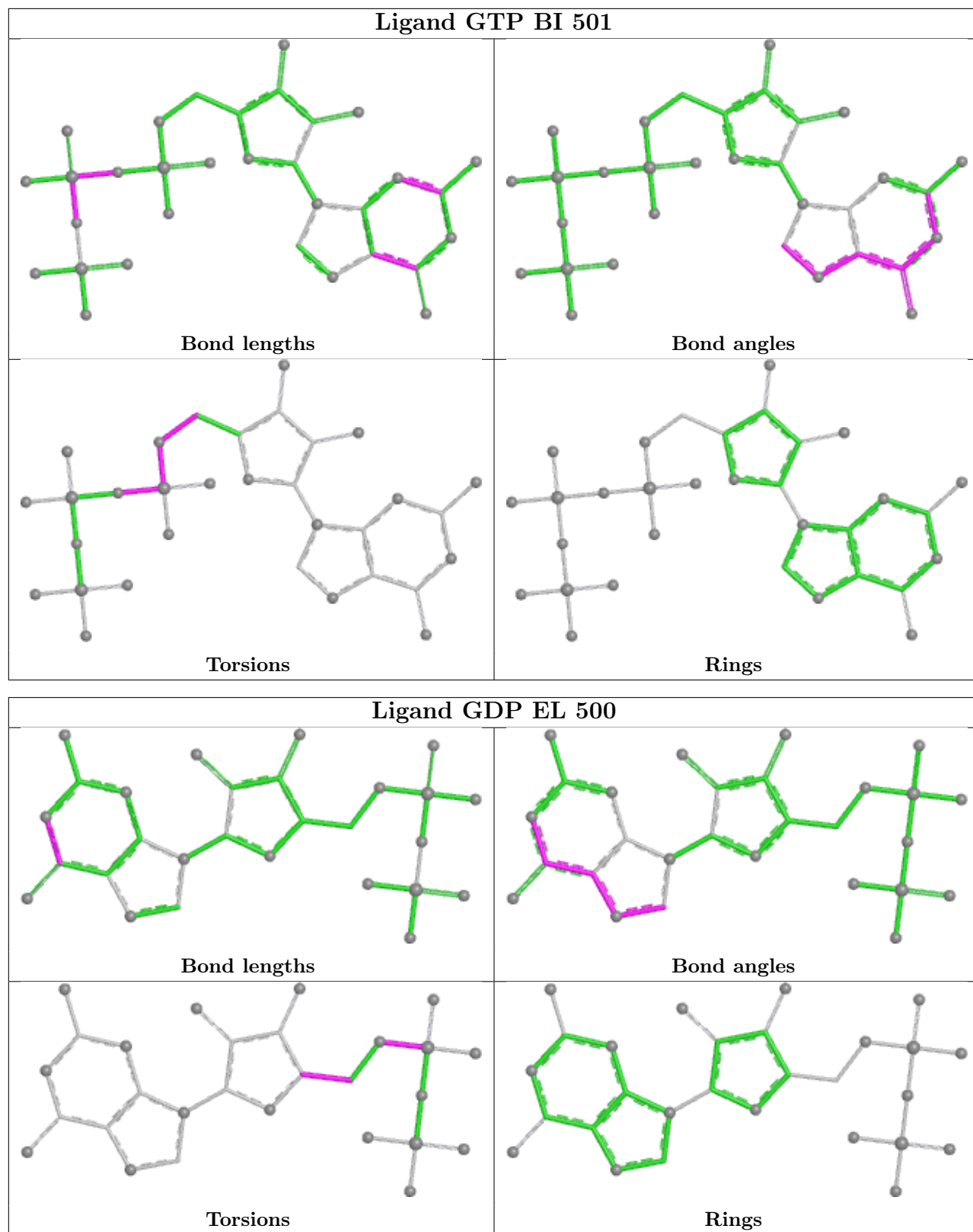
## Ligand GTP TE 501



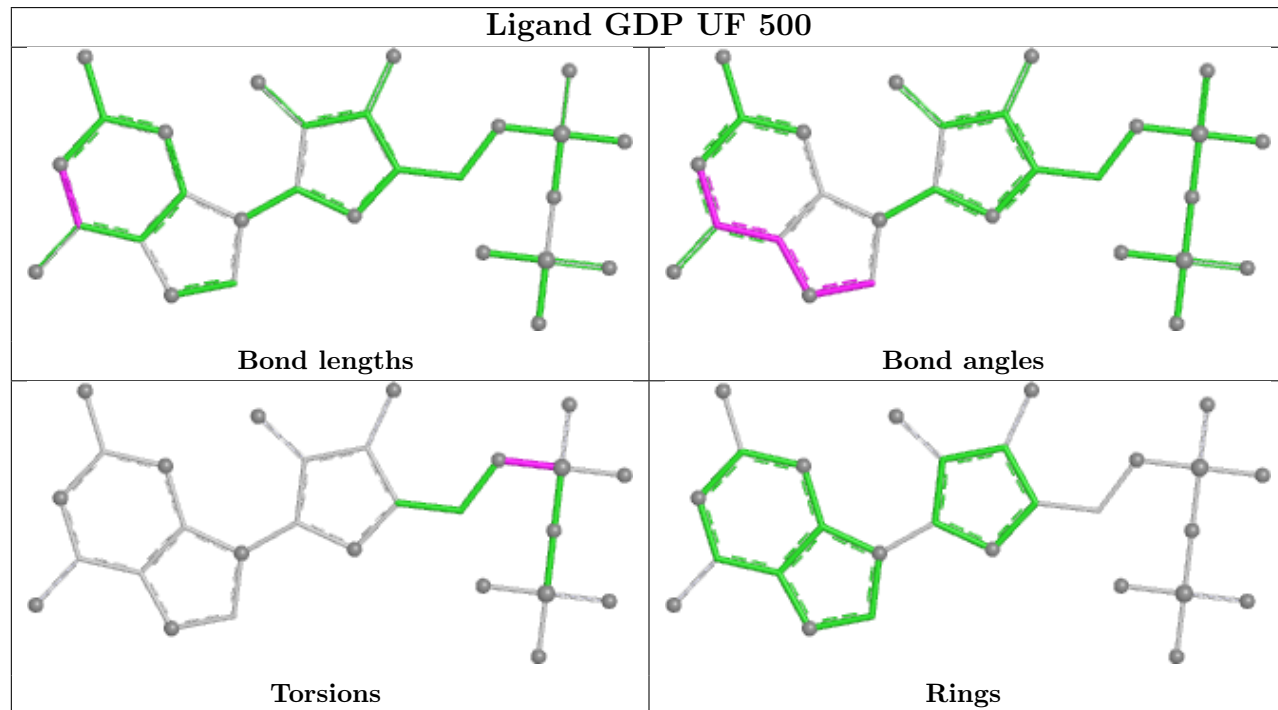
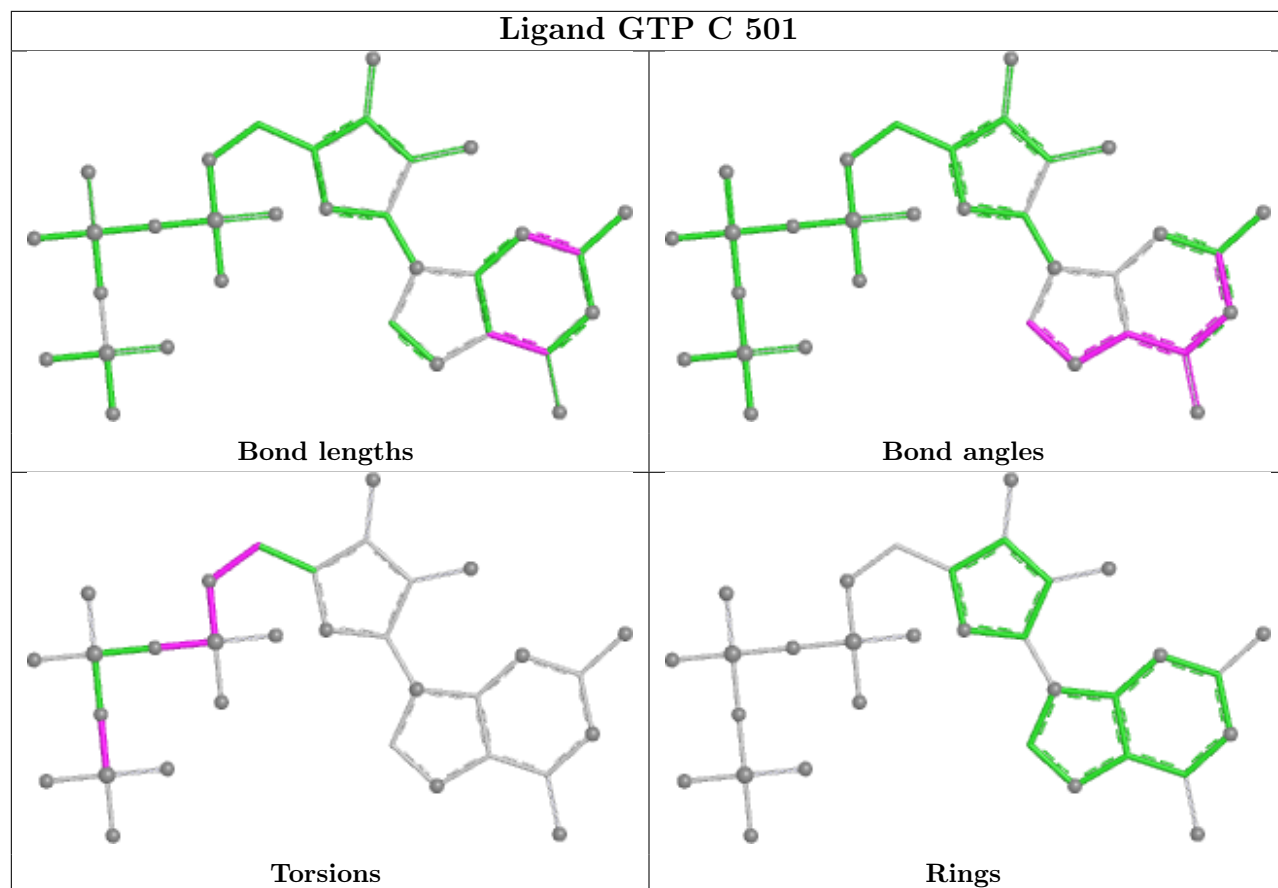






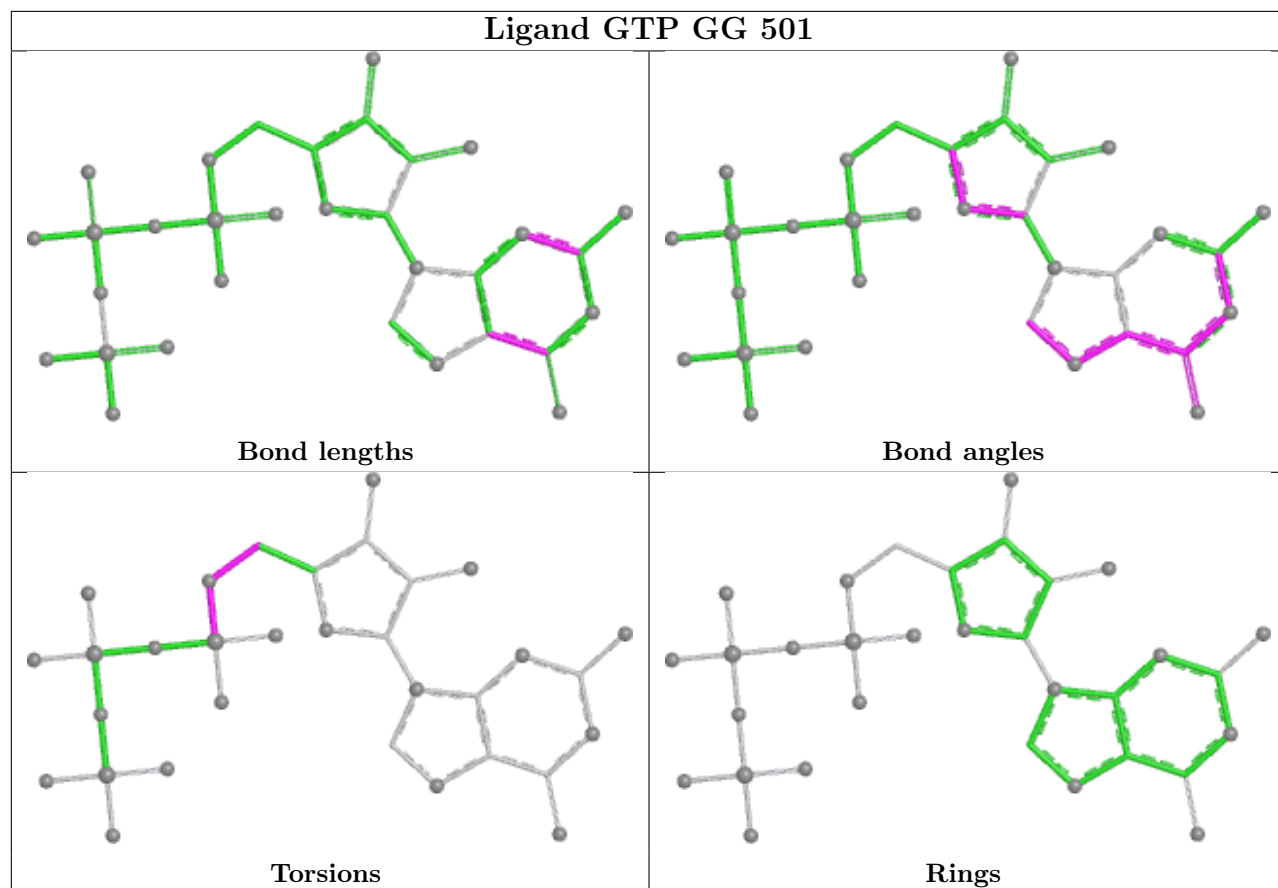




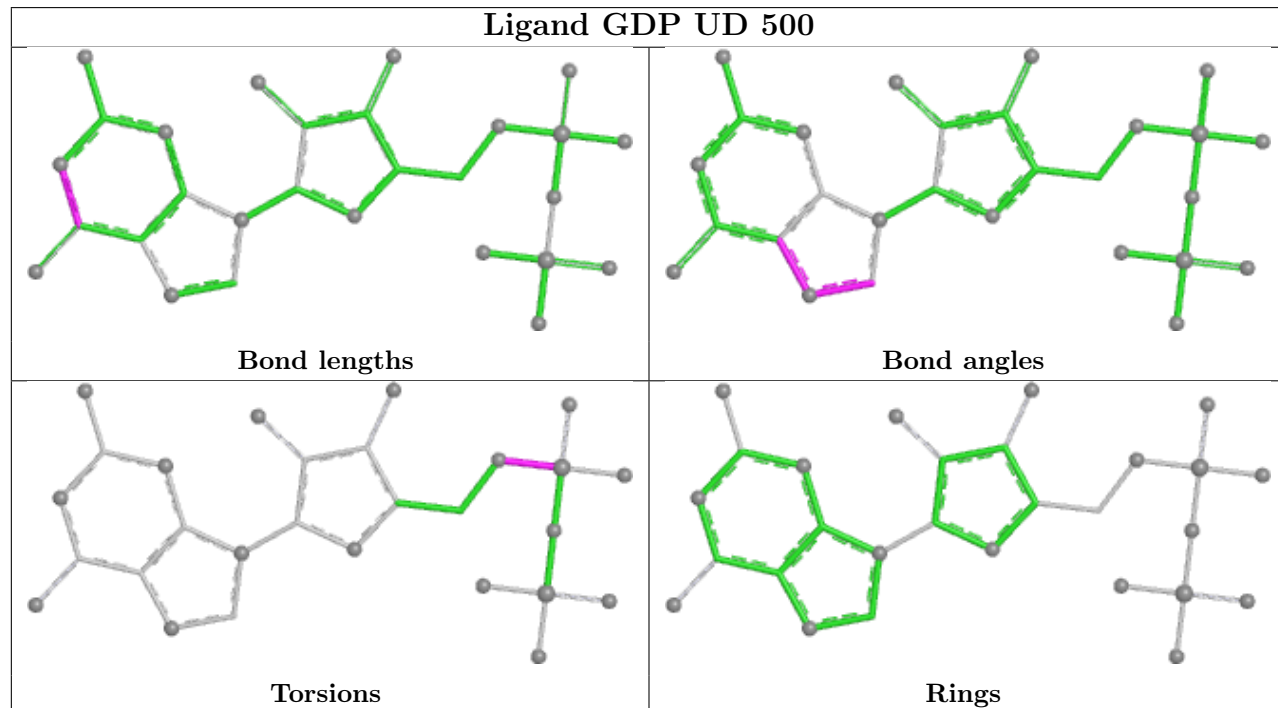




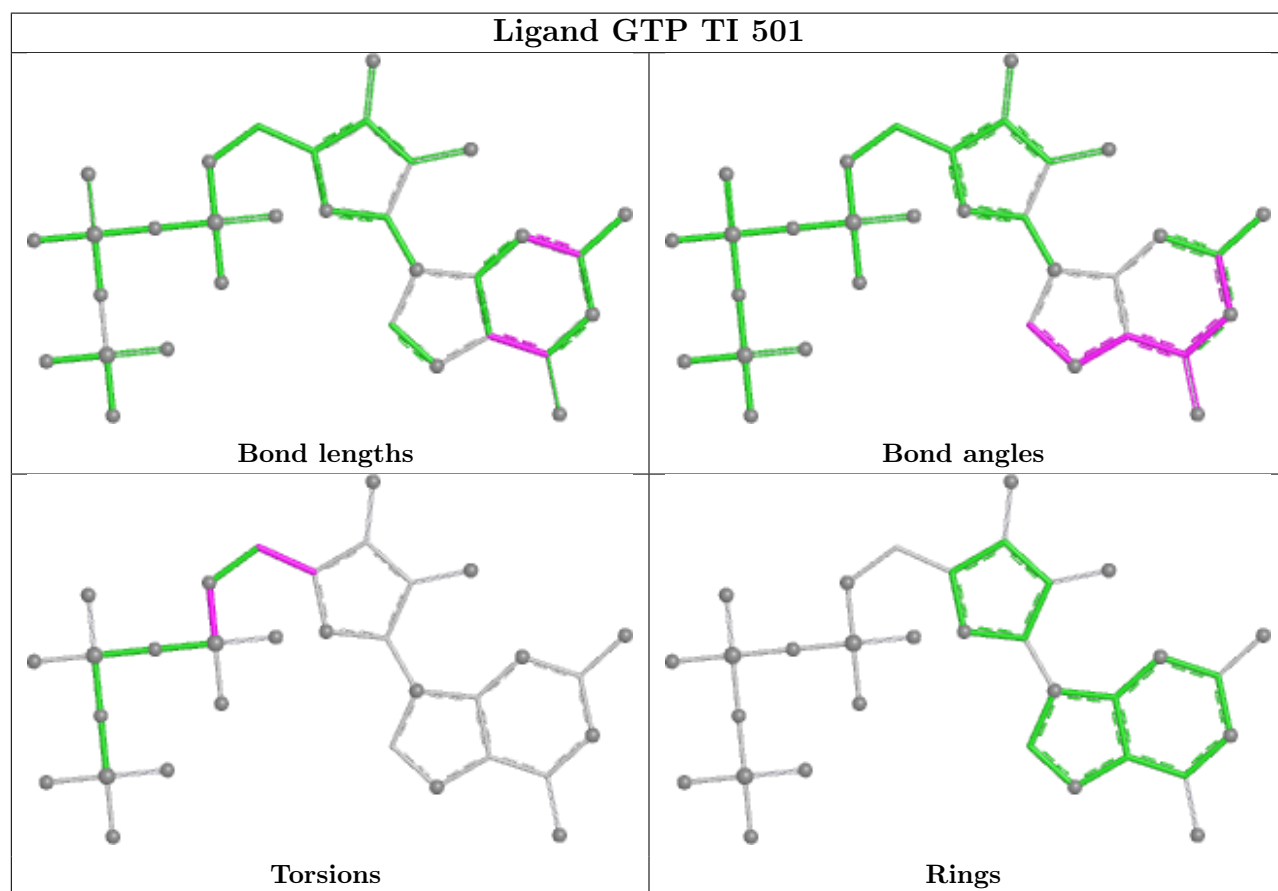
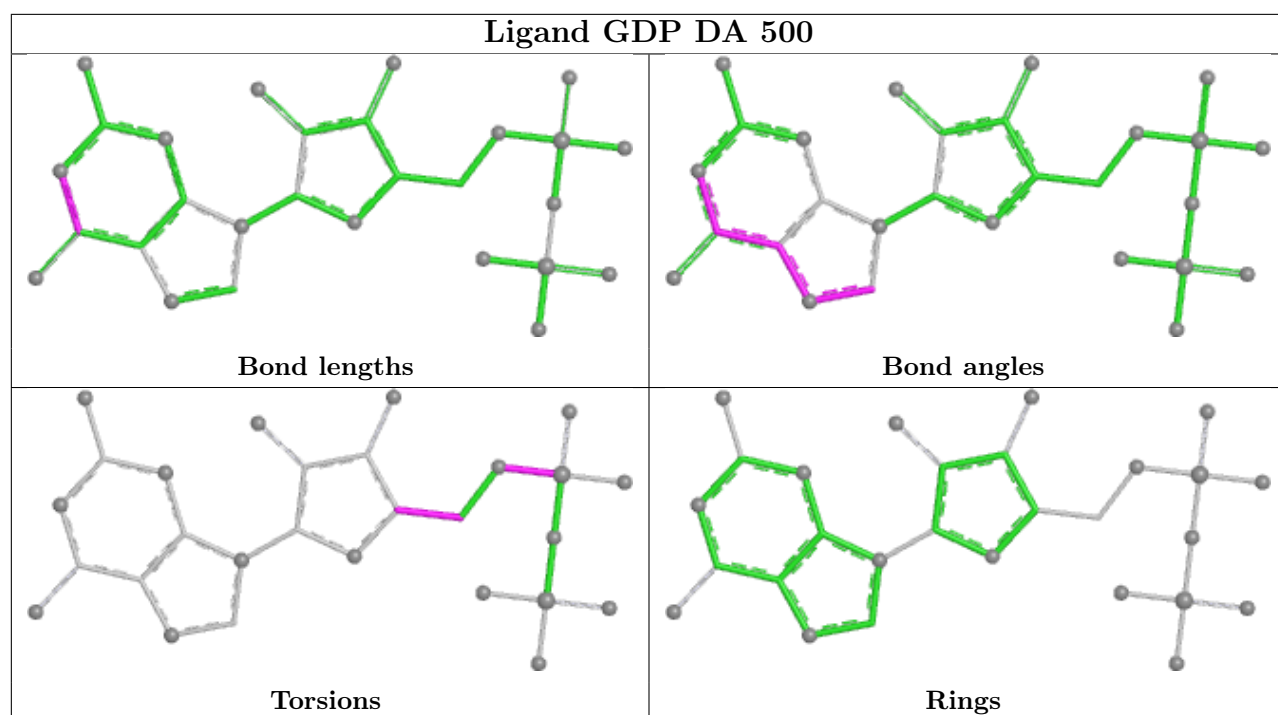
## Ligand GTP GG 501



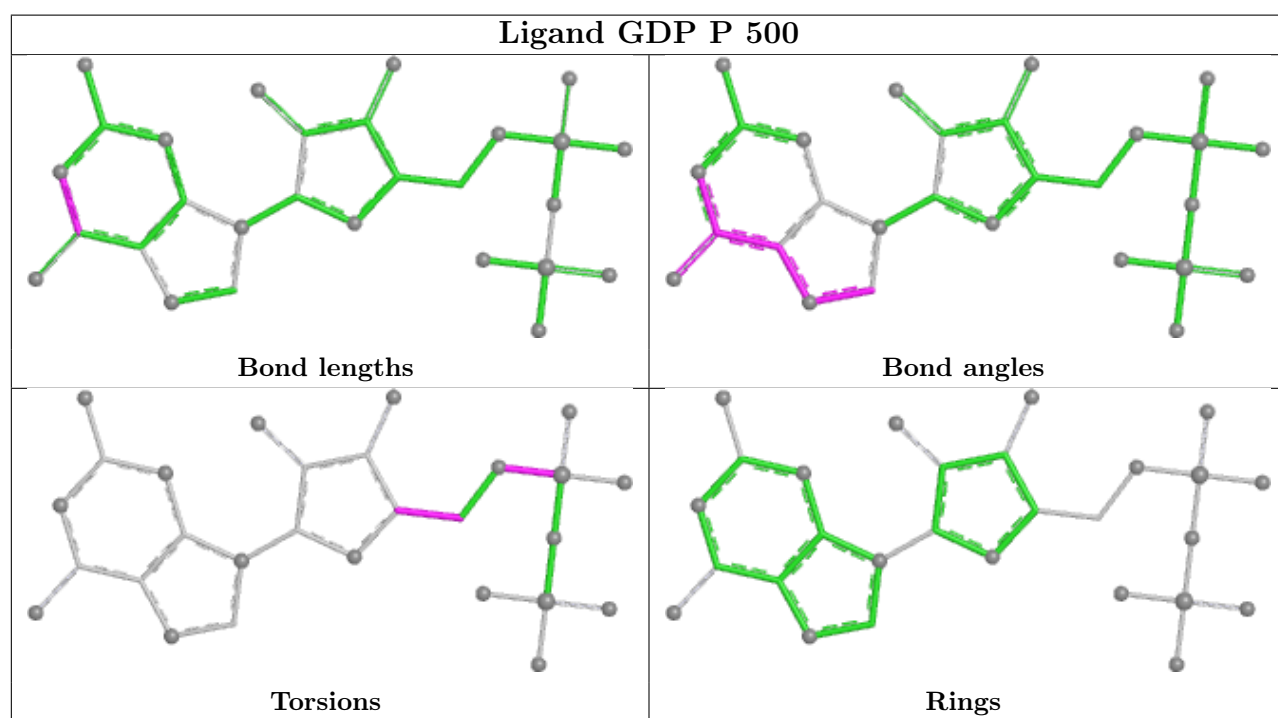
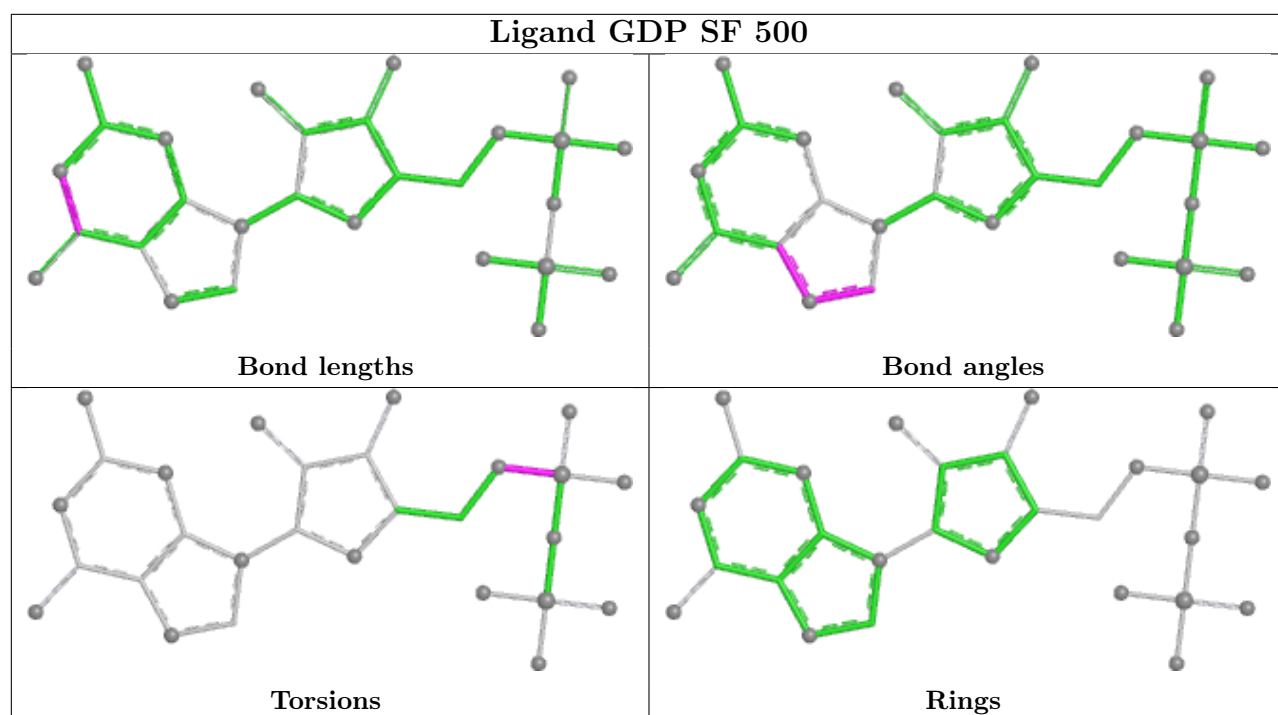
## Ligand GDP UD 500





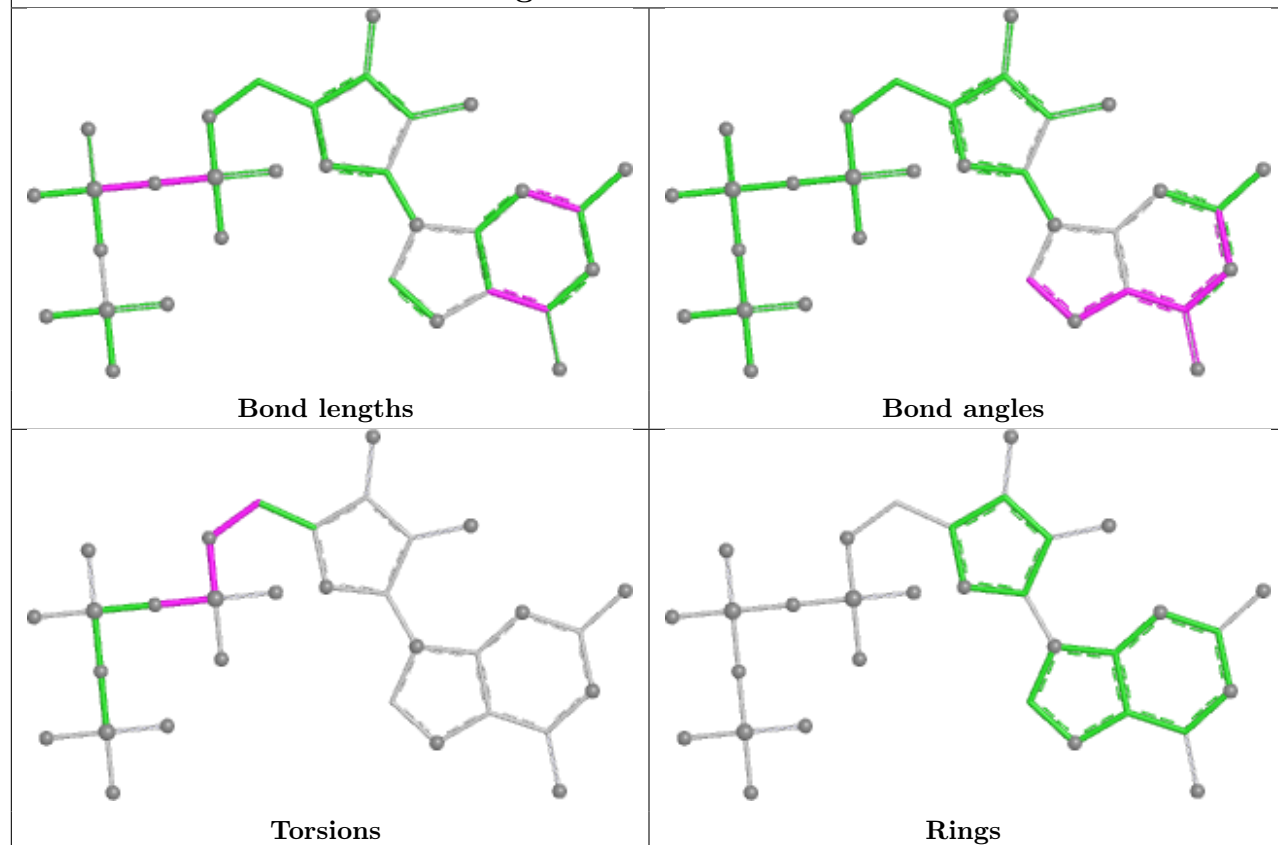




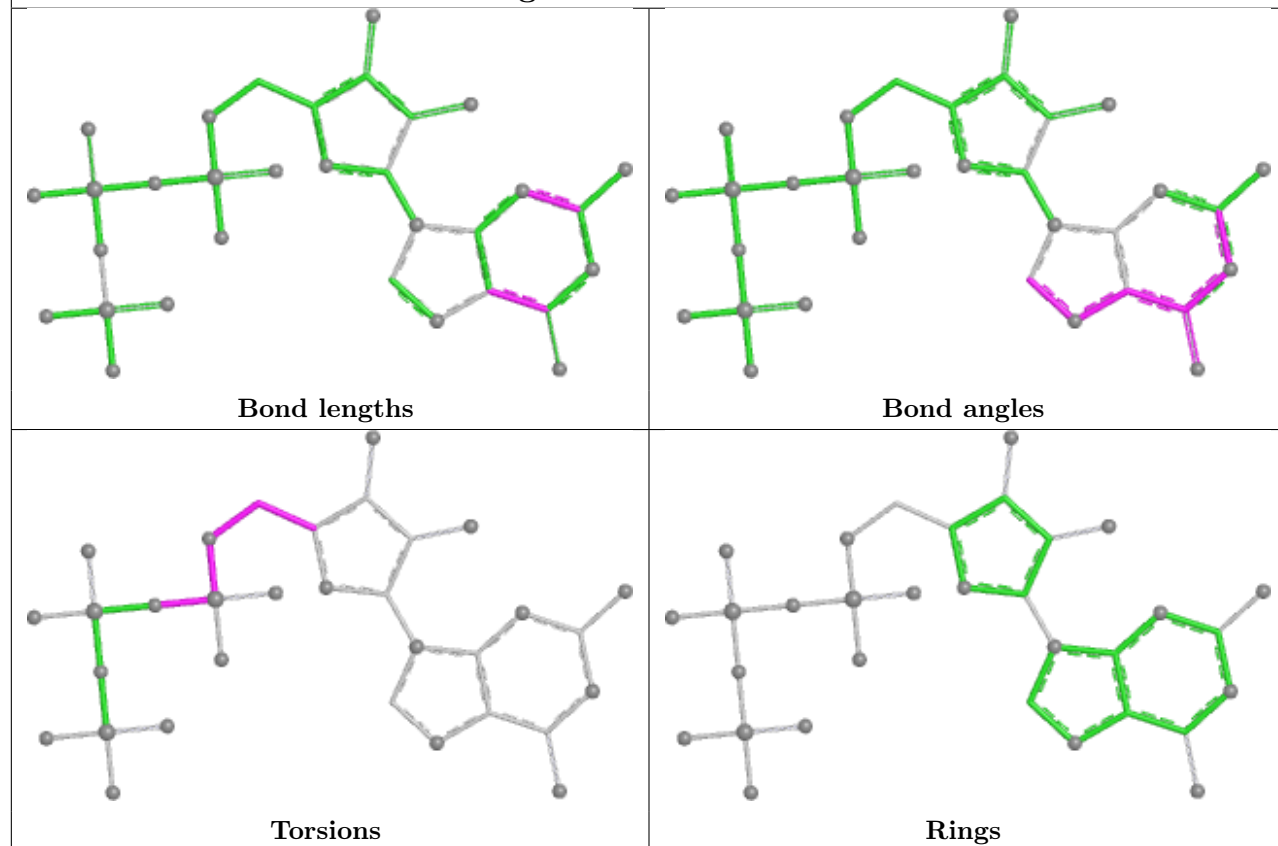




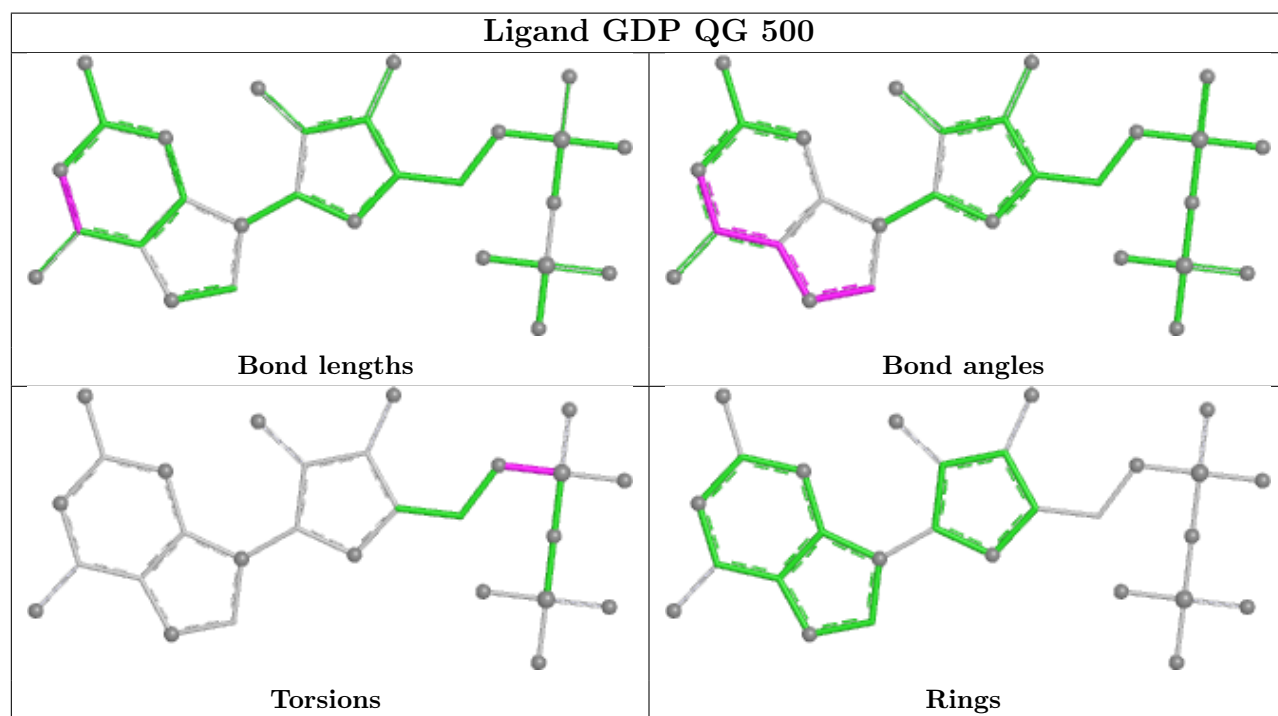
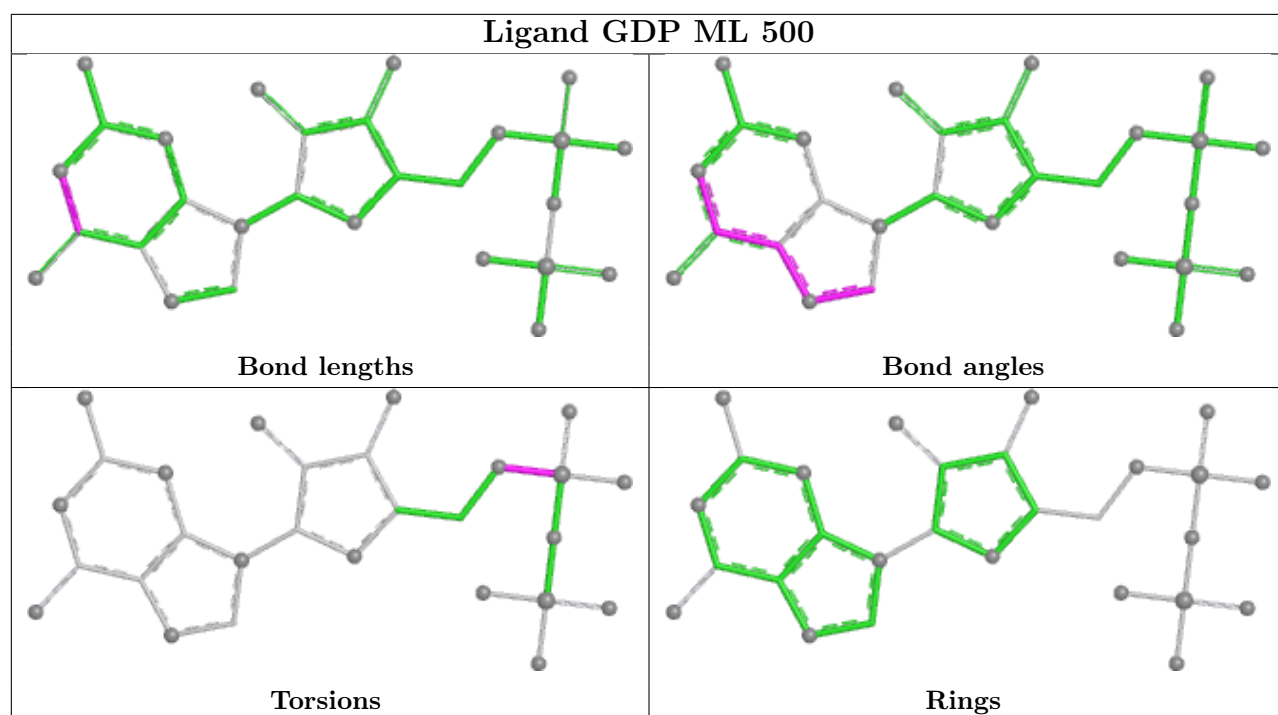
## Ligand GTP NG 501



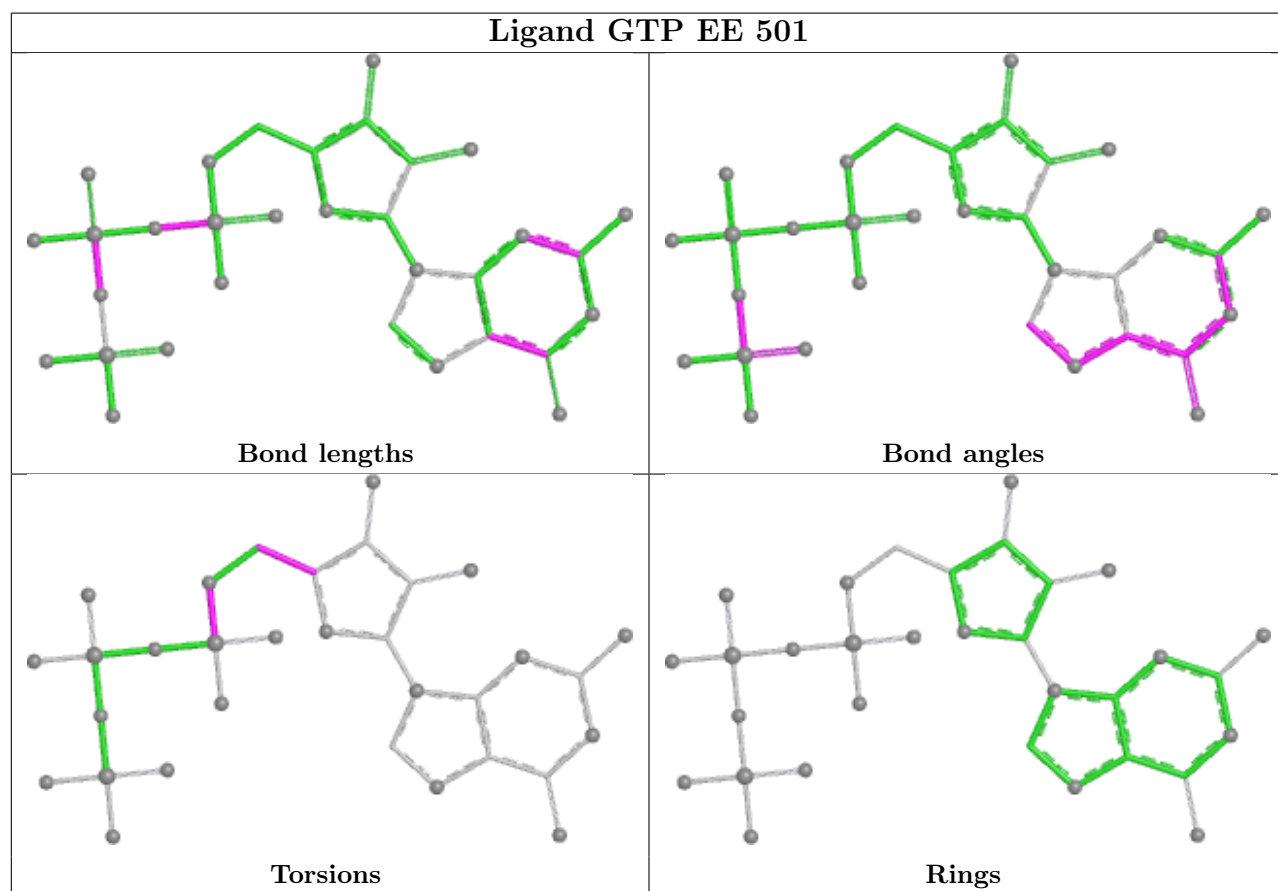
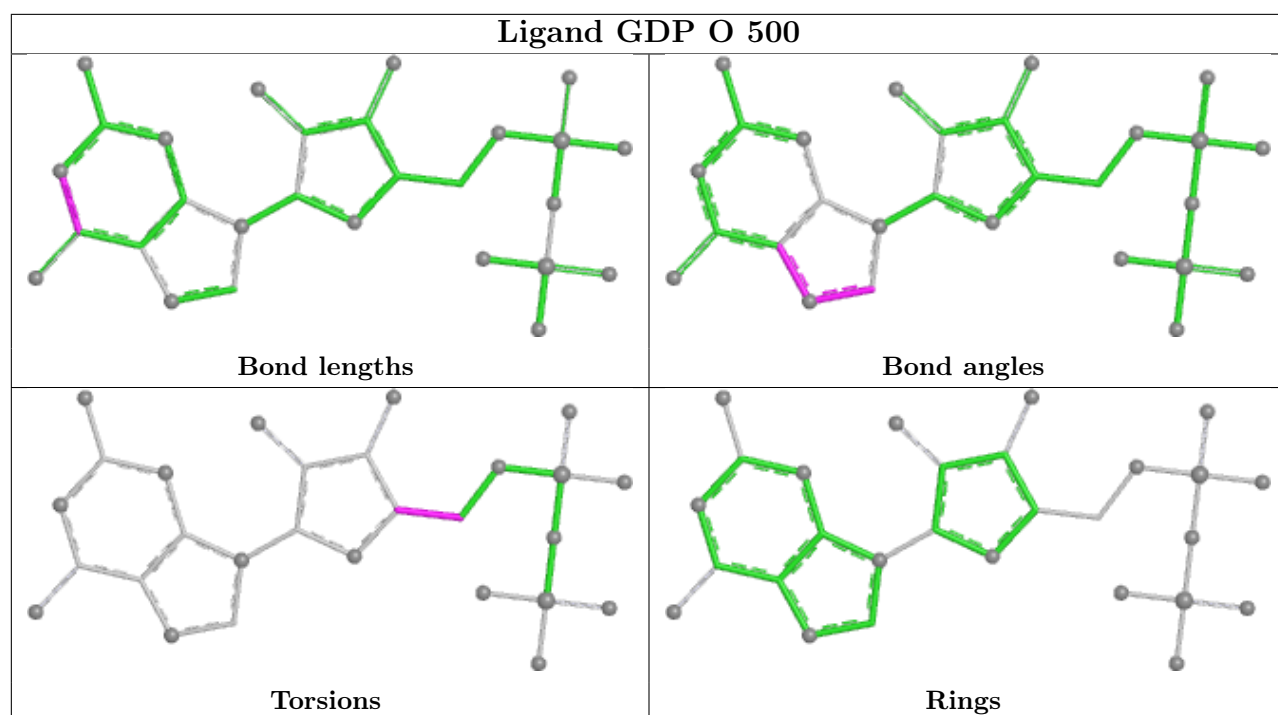
## Ligand GTP FG 501



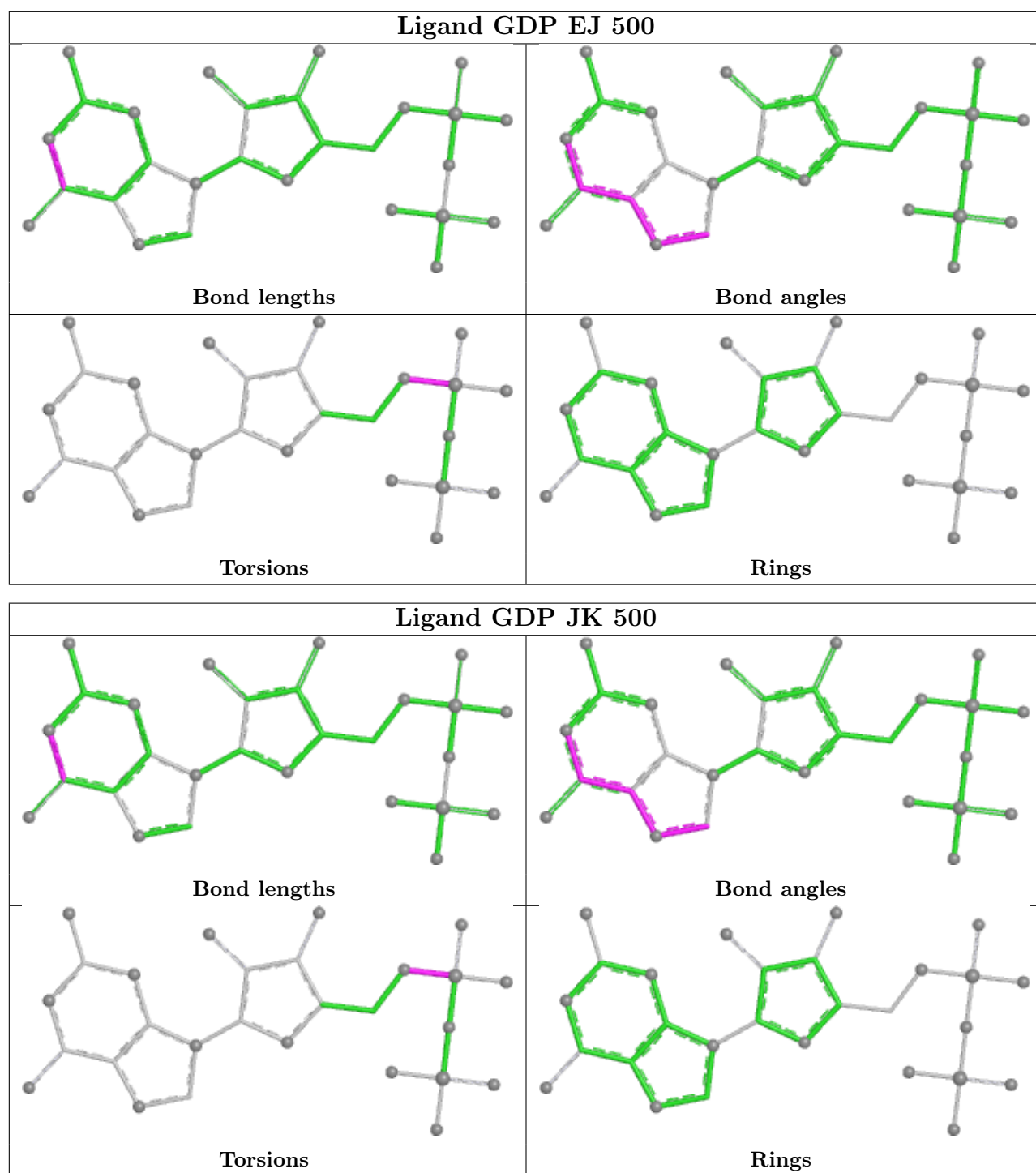






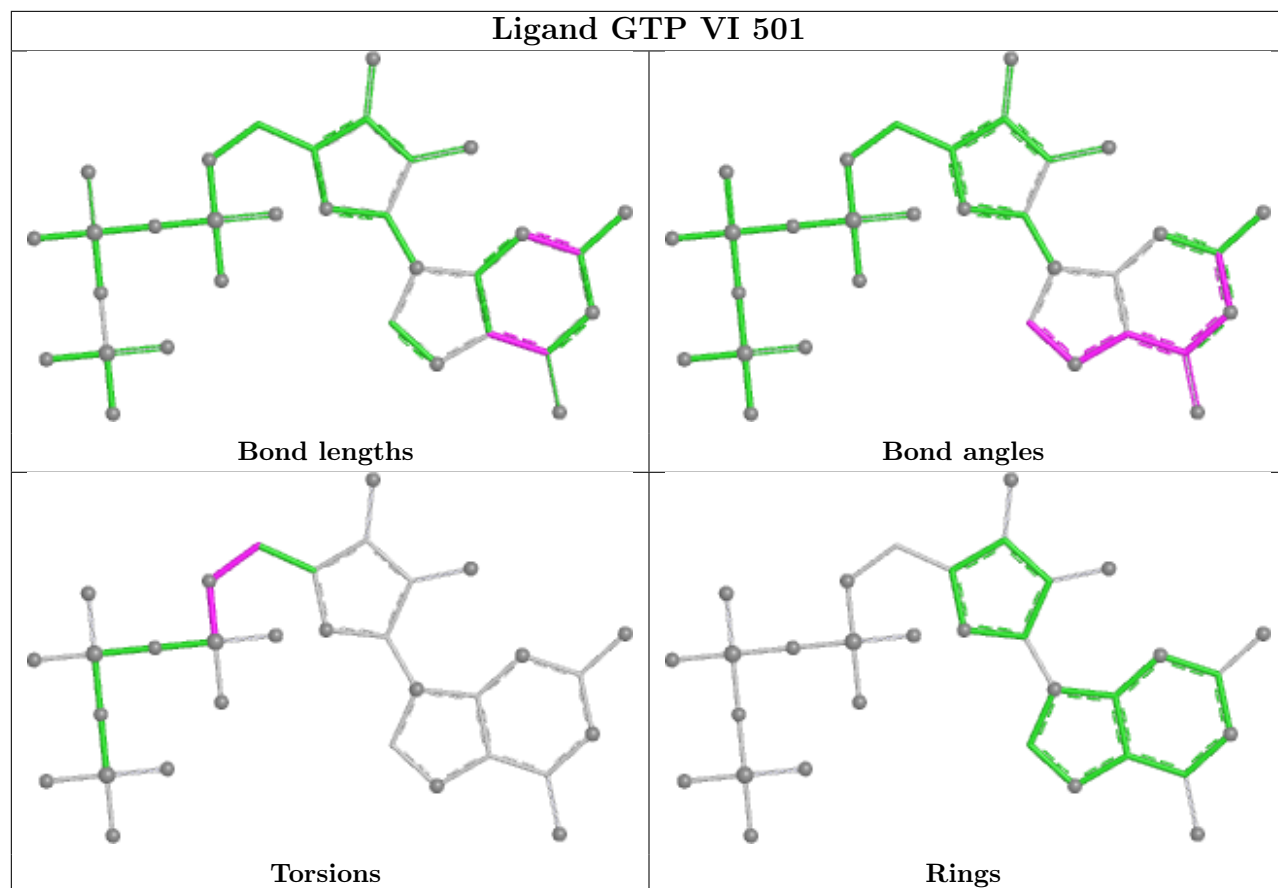




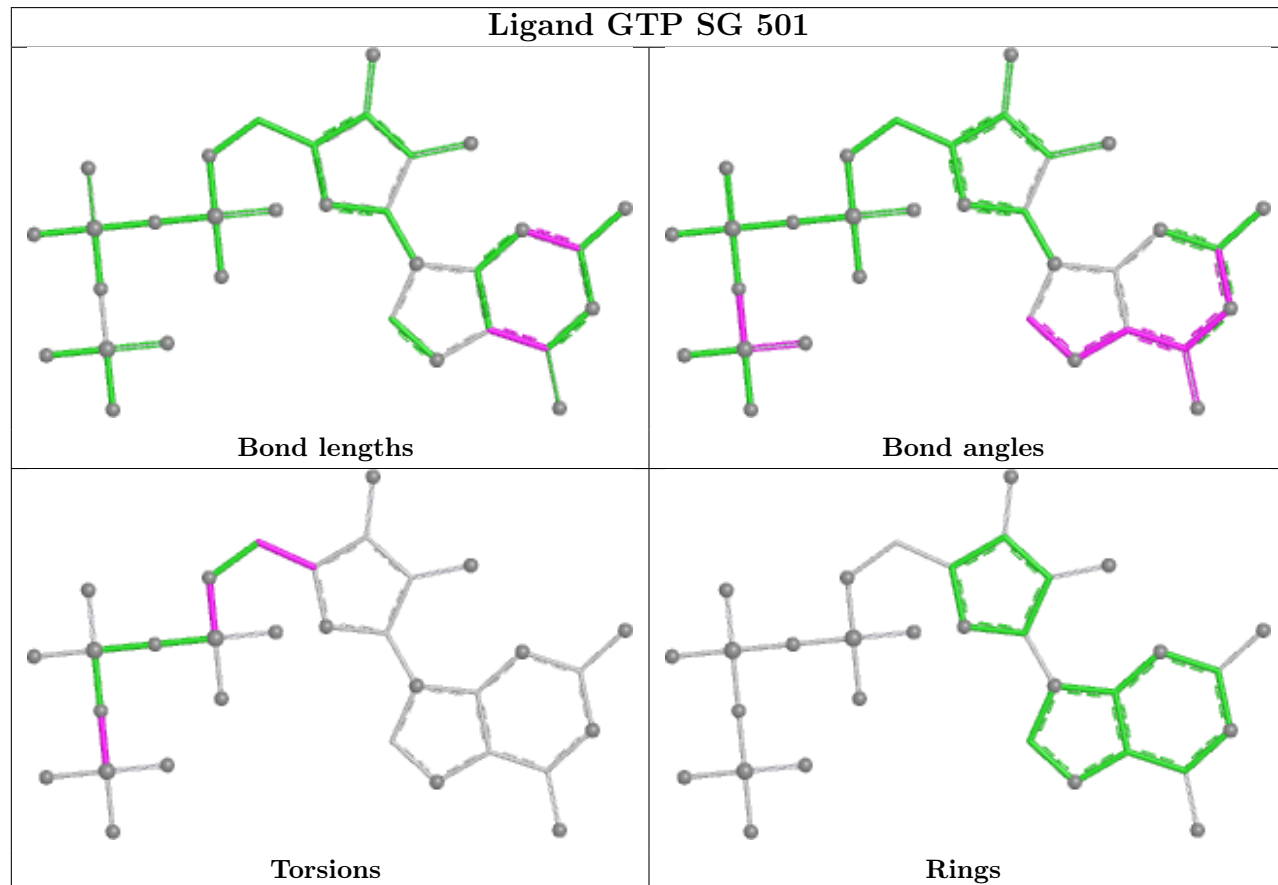




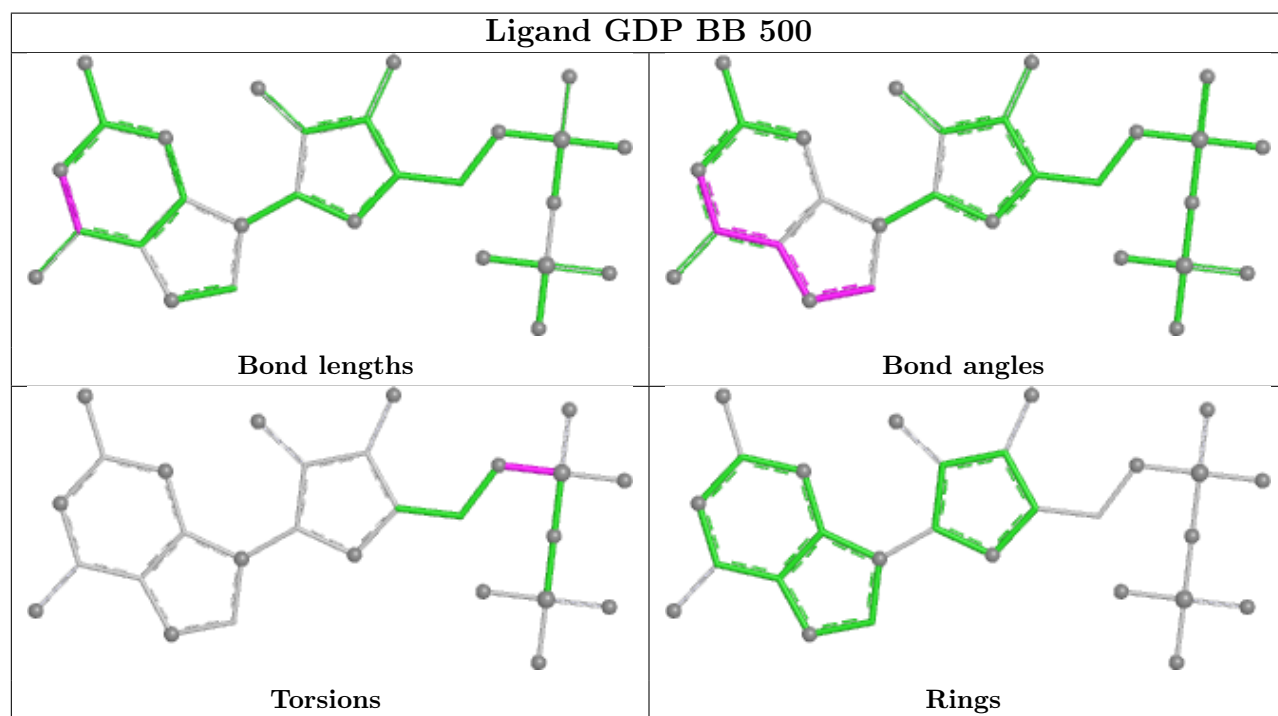
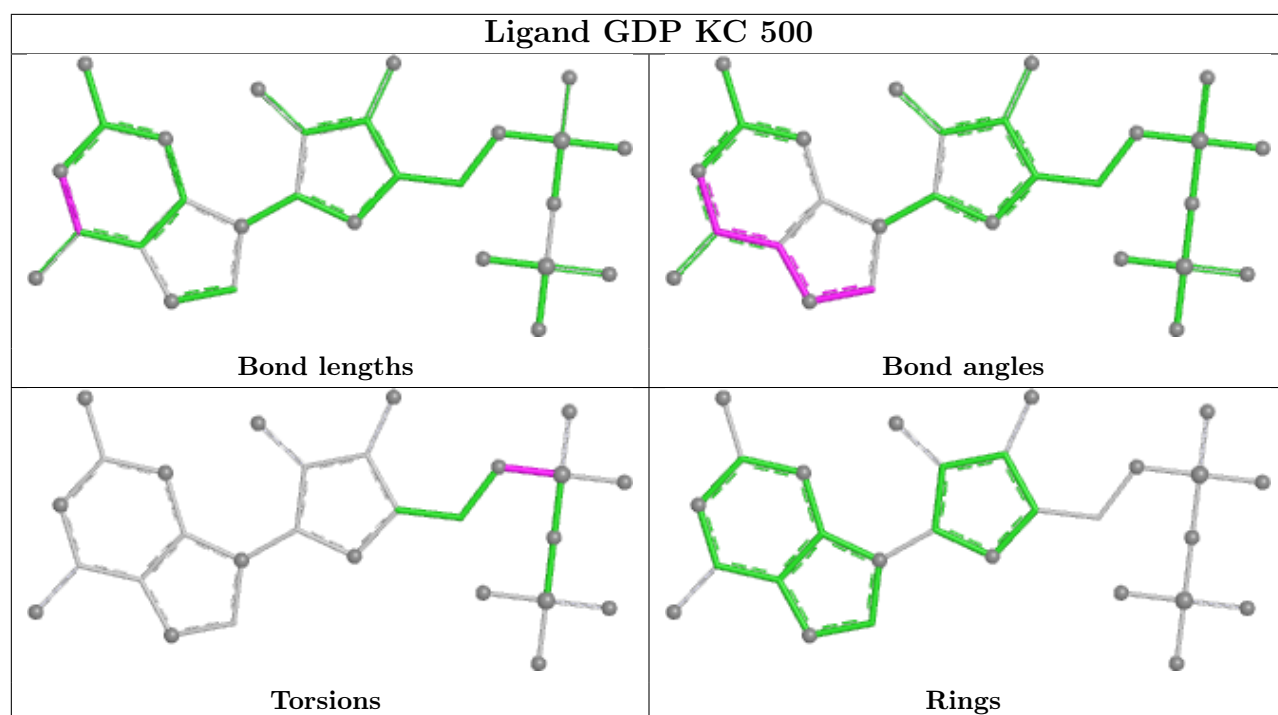
## Ligand GTP VI 501



## Ligand GTP SG 501

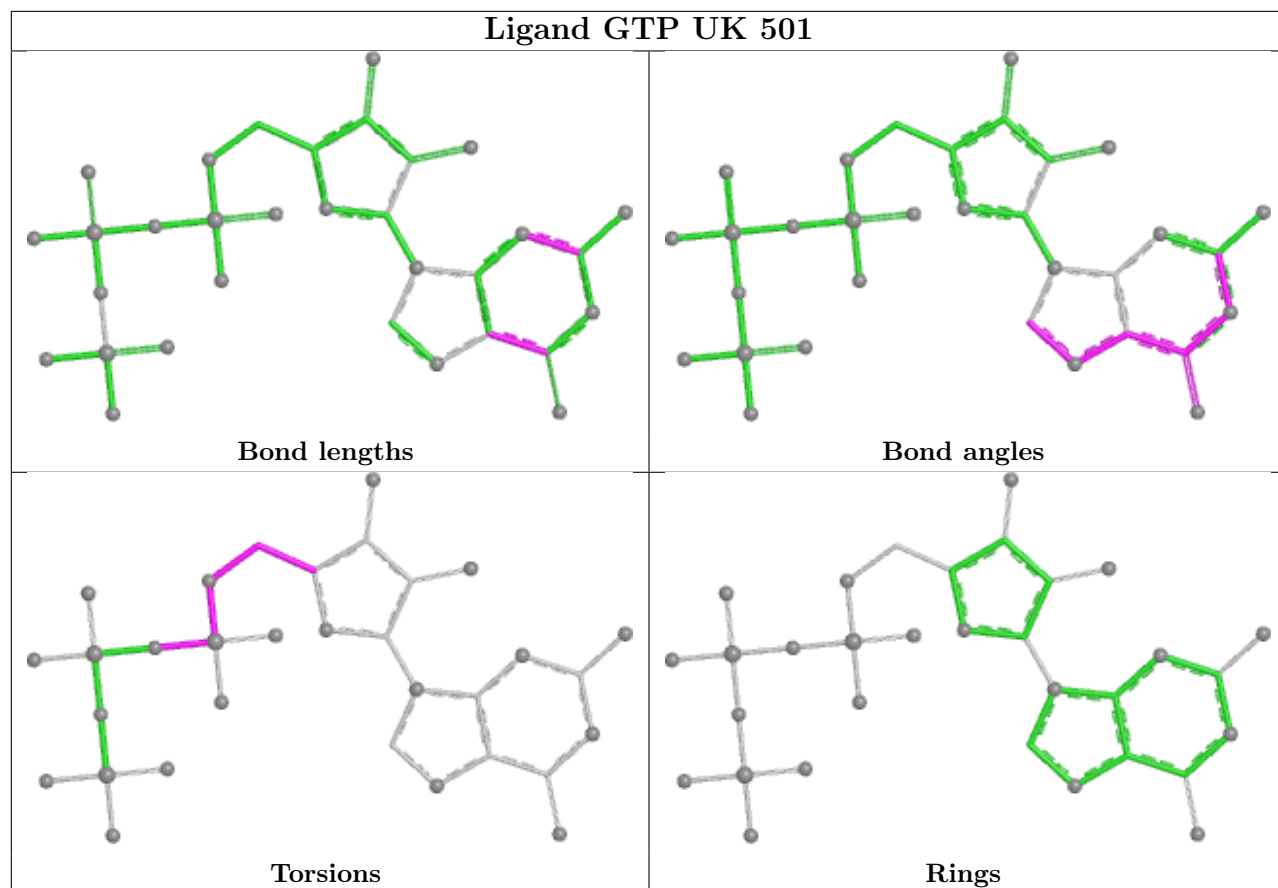




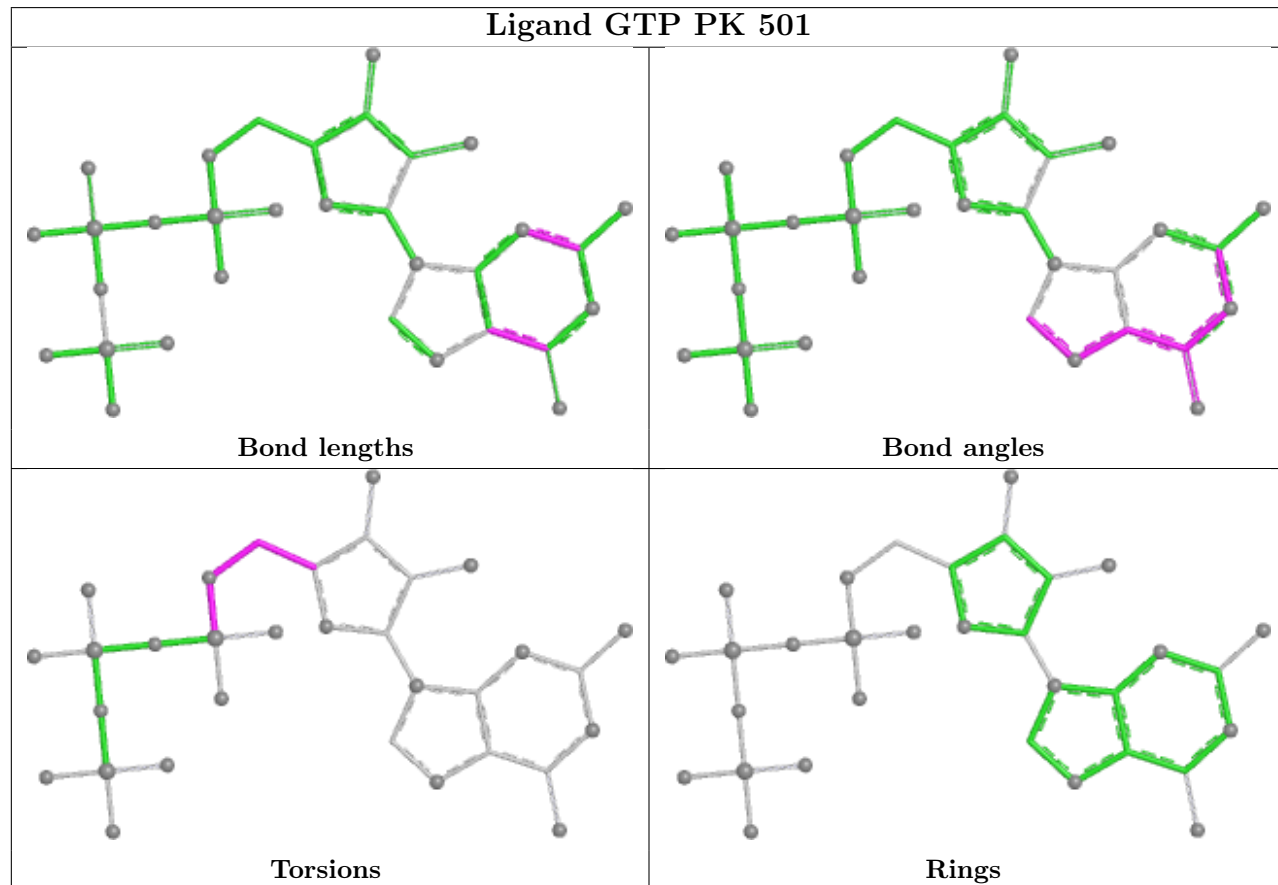




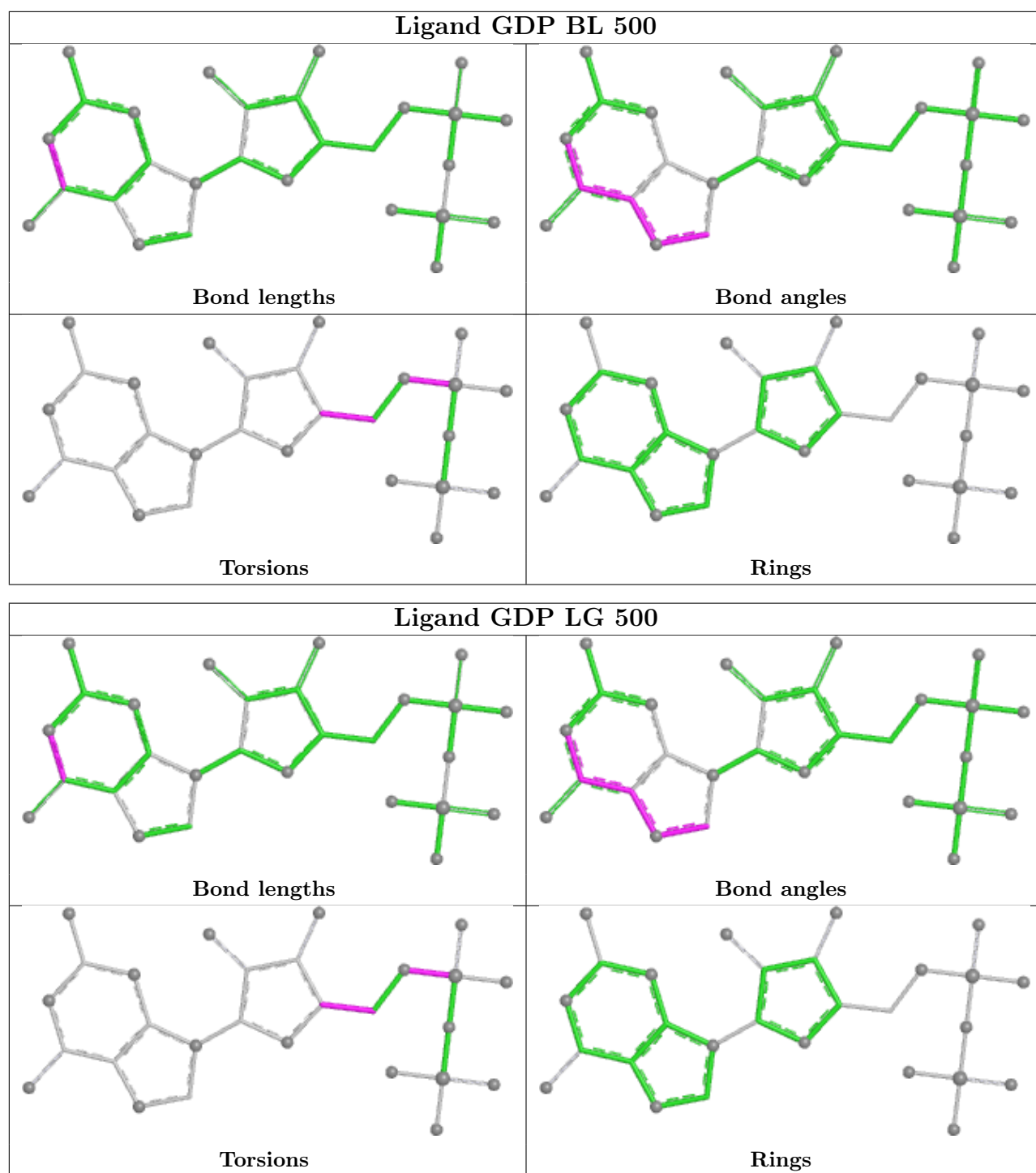
## Ligand GTP UK 501



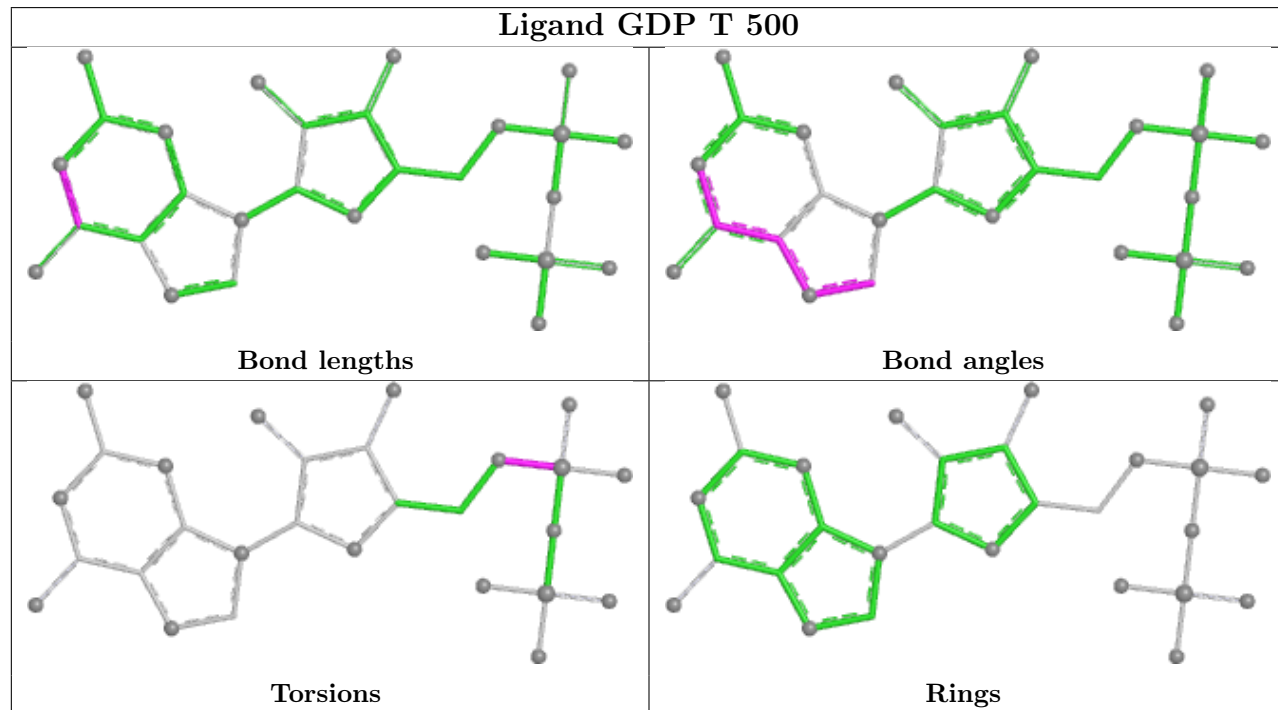
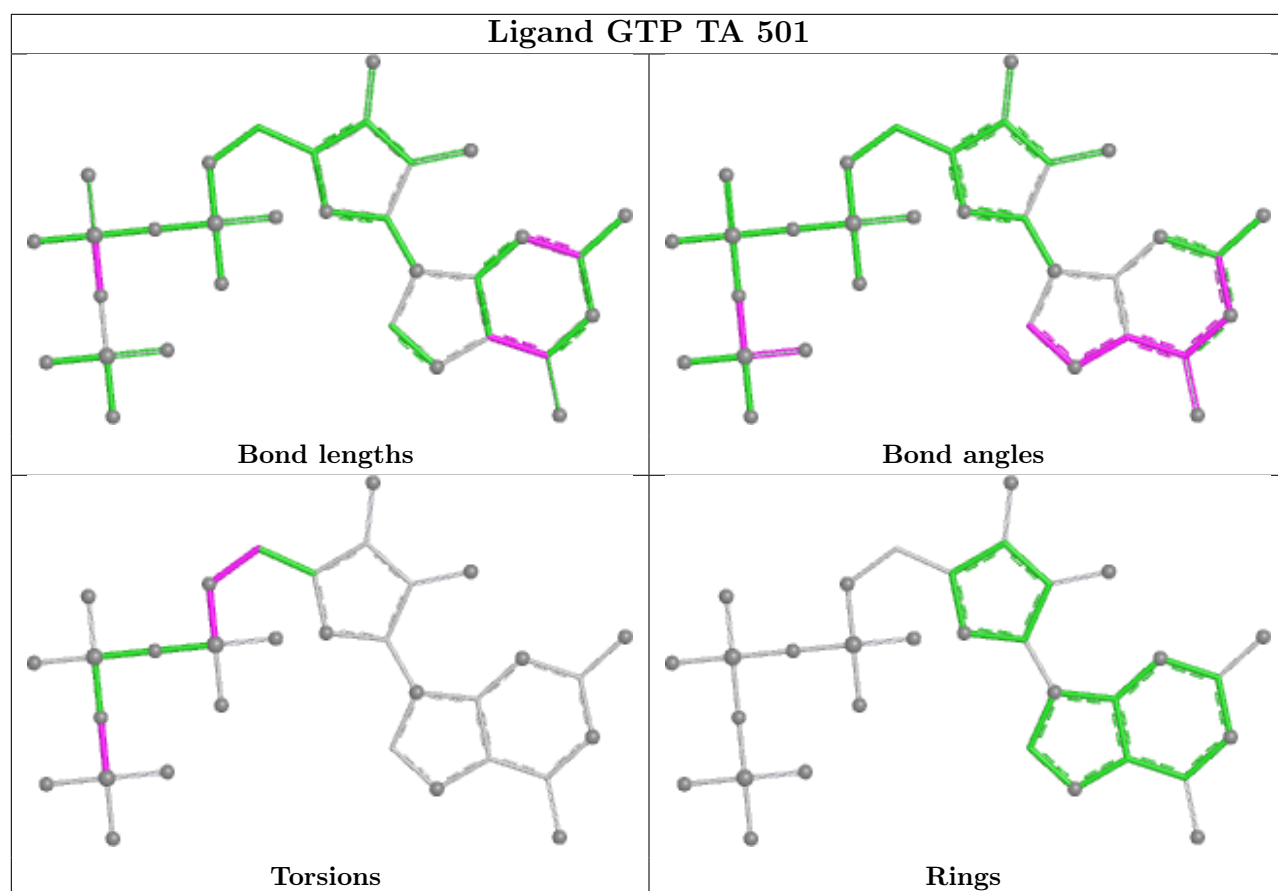
## Ligand GTP PK 501



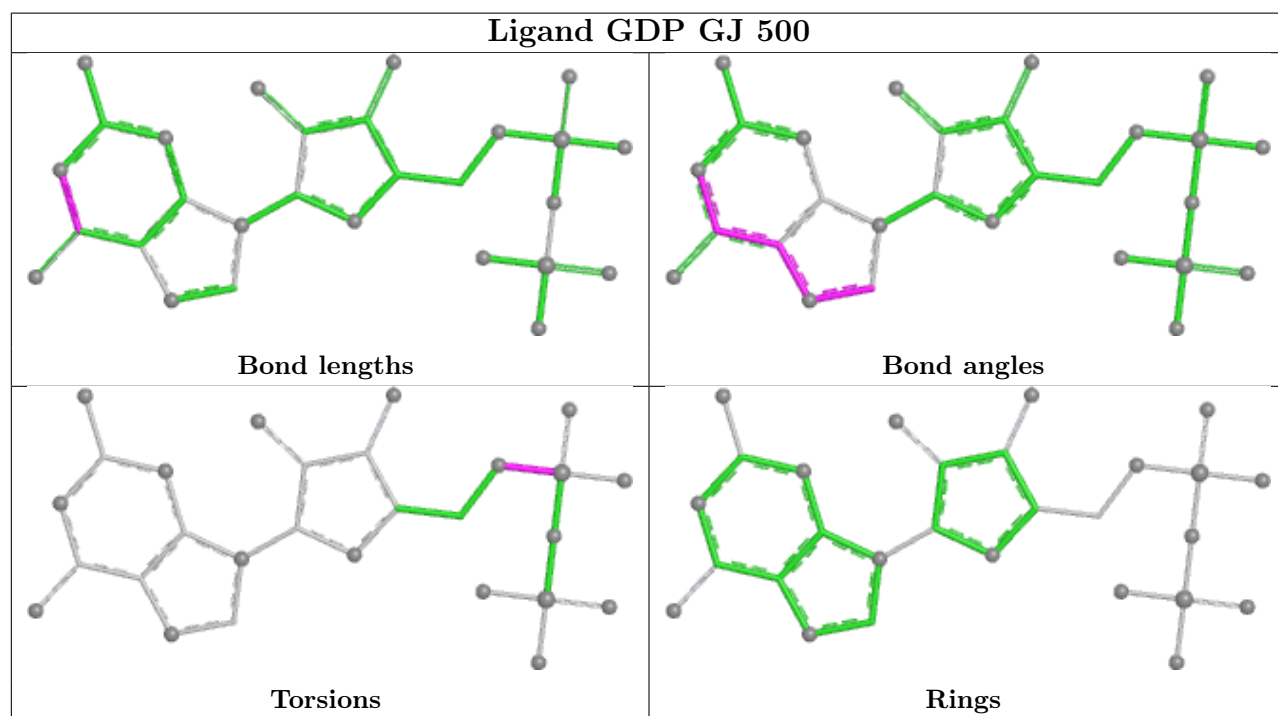
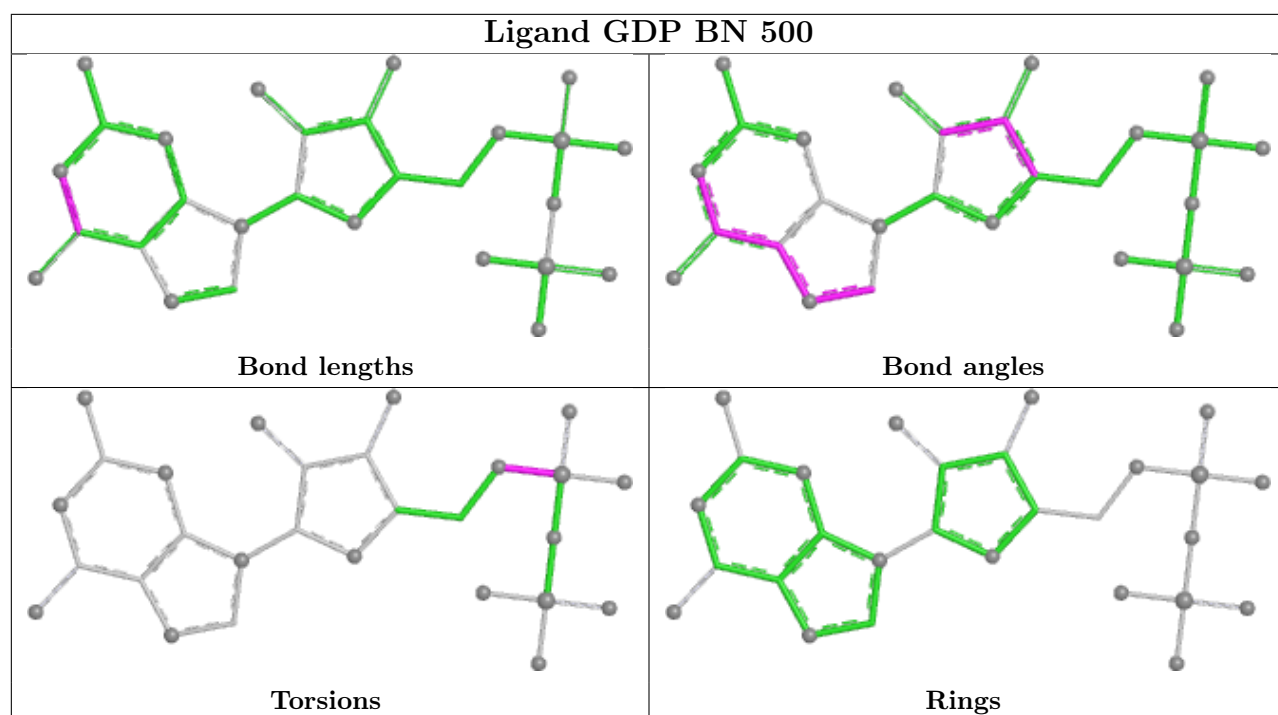




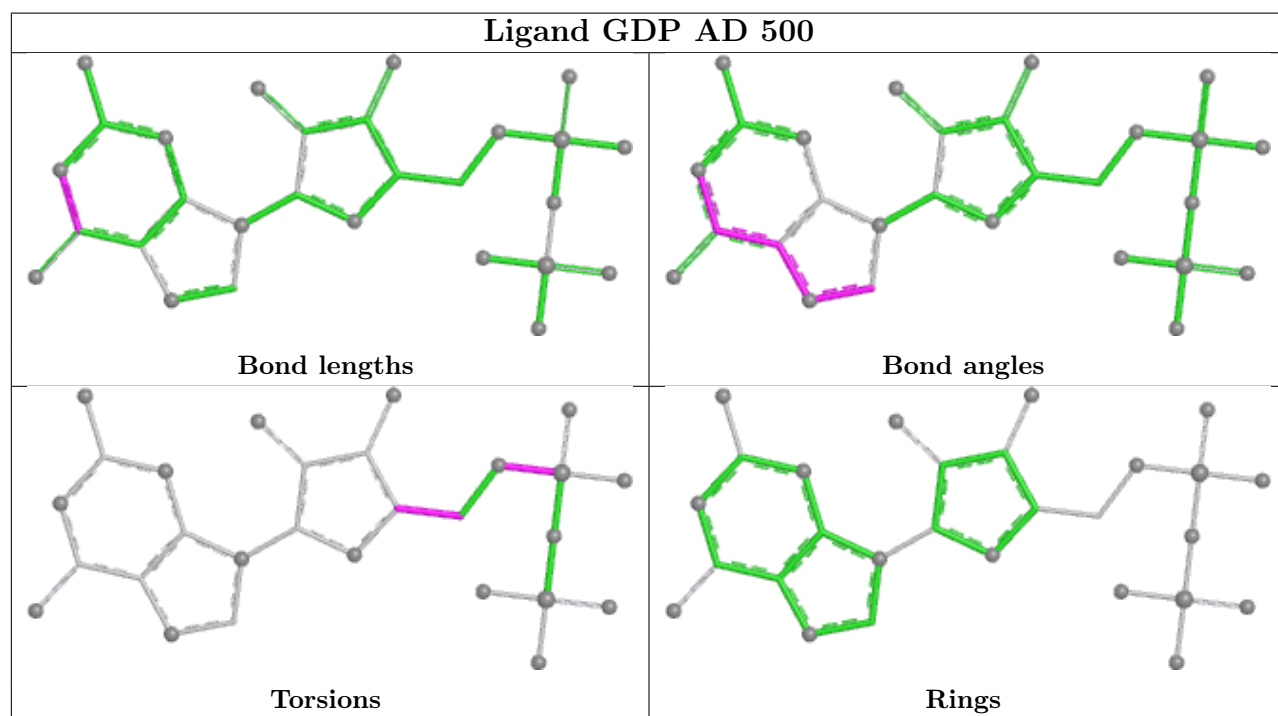
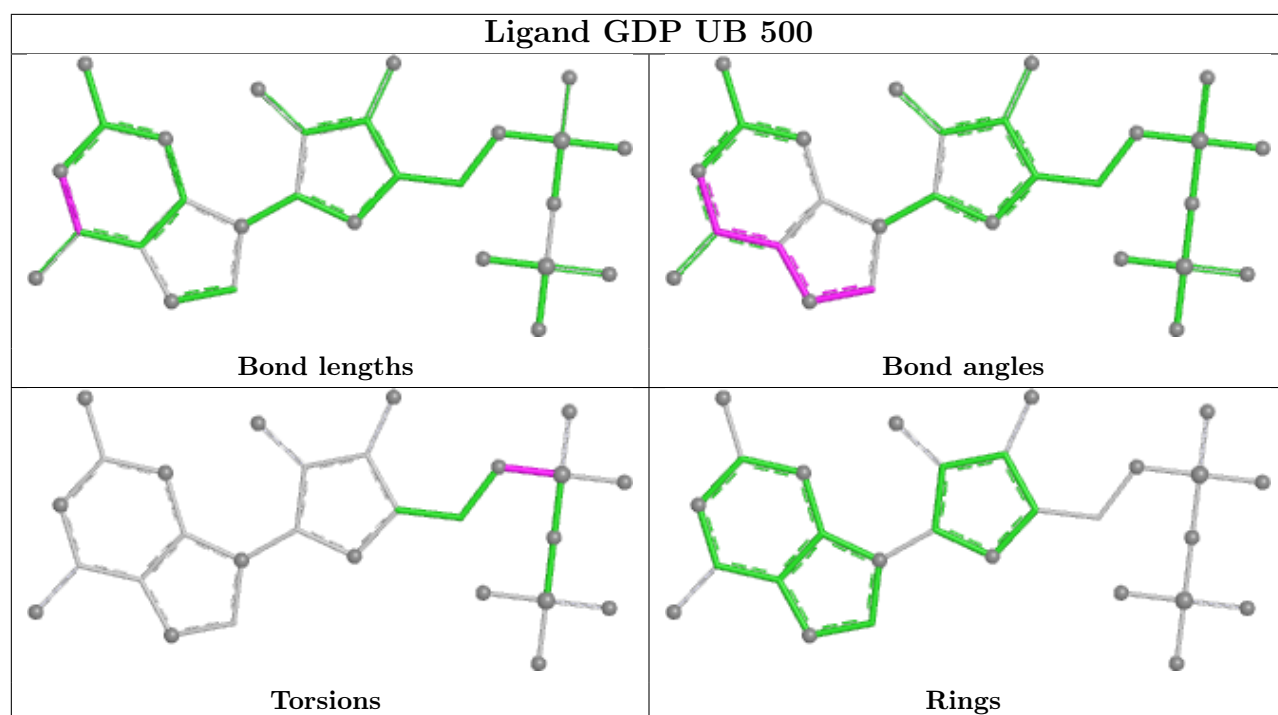




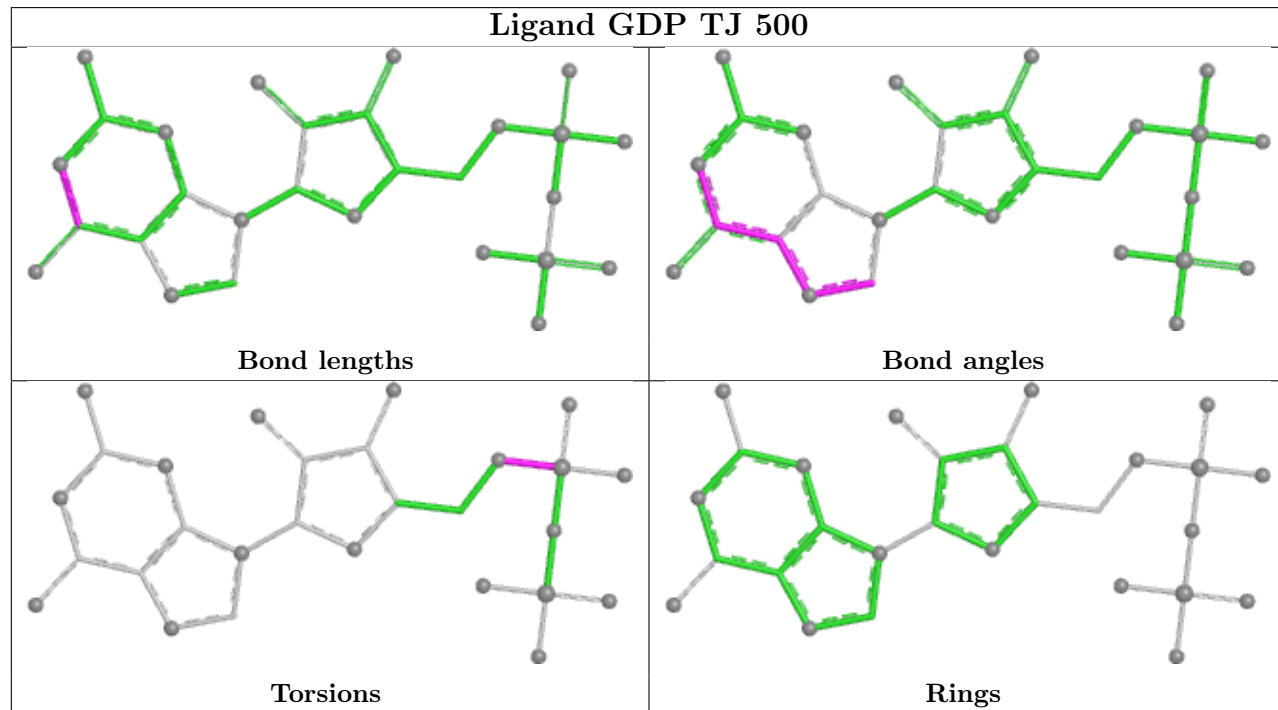
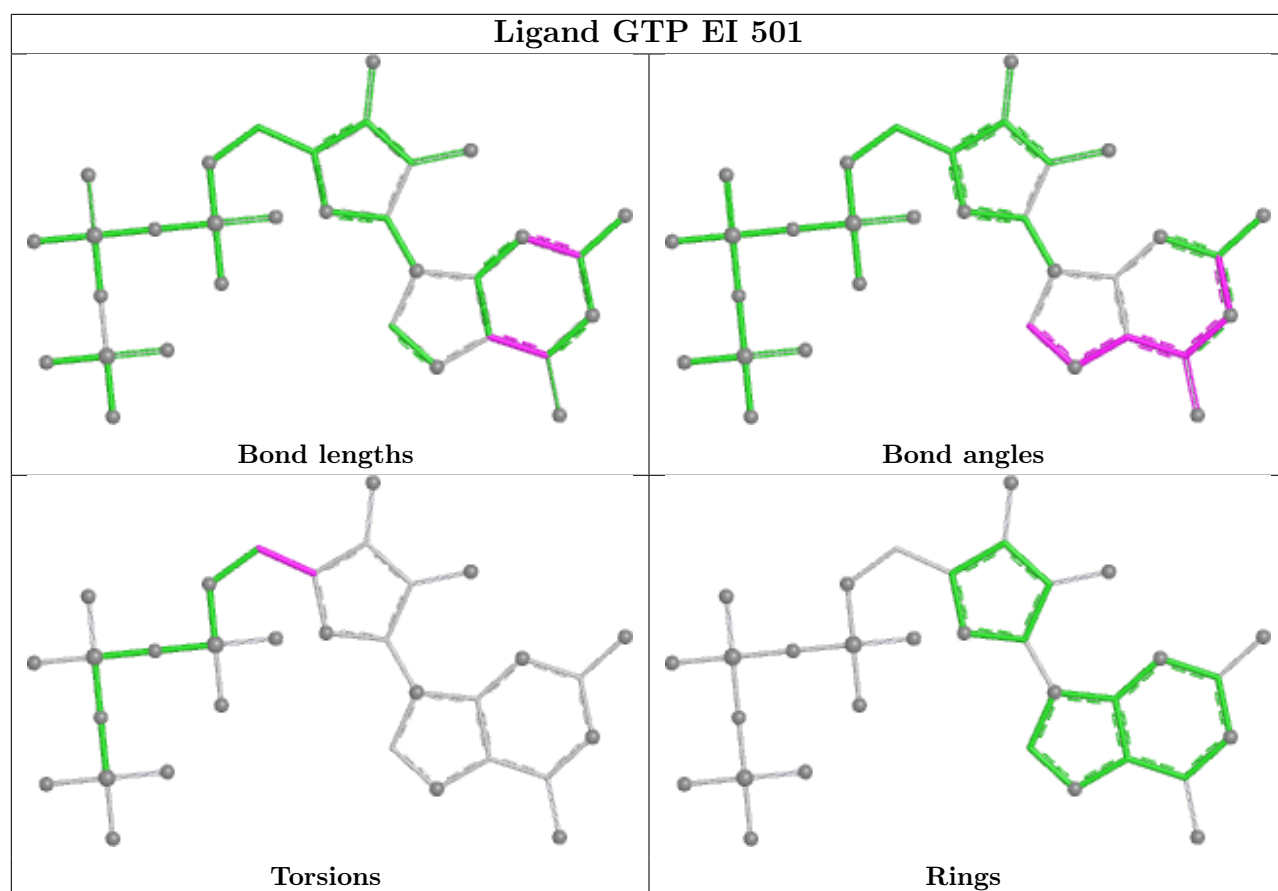




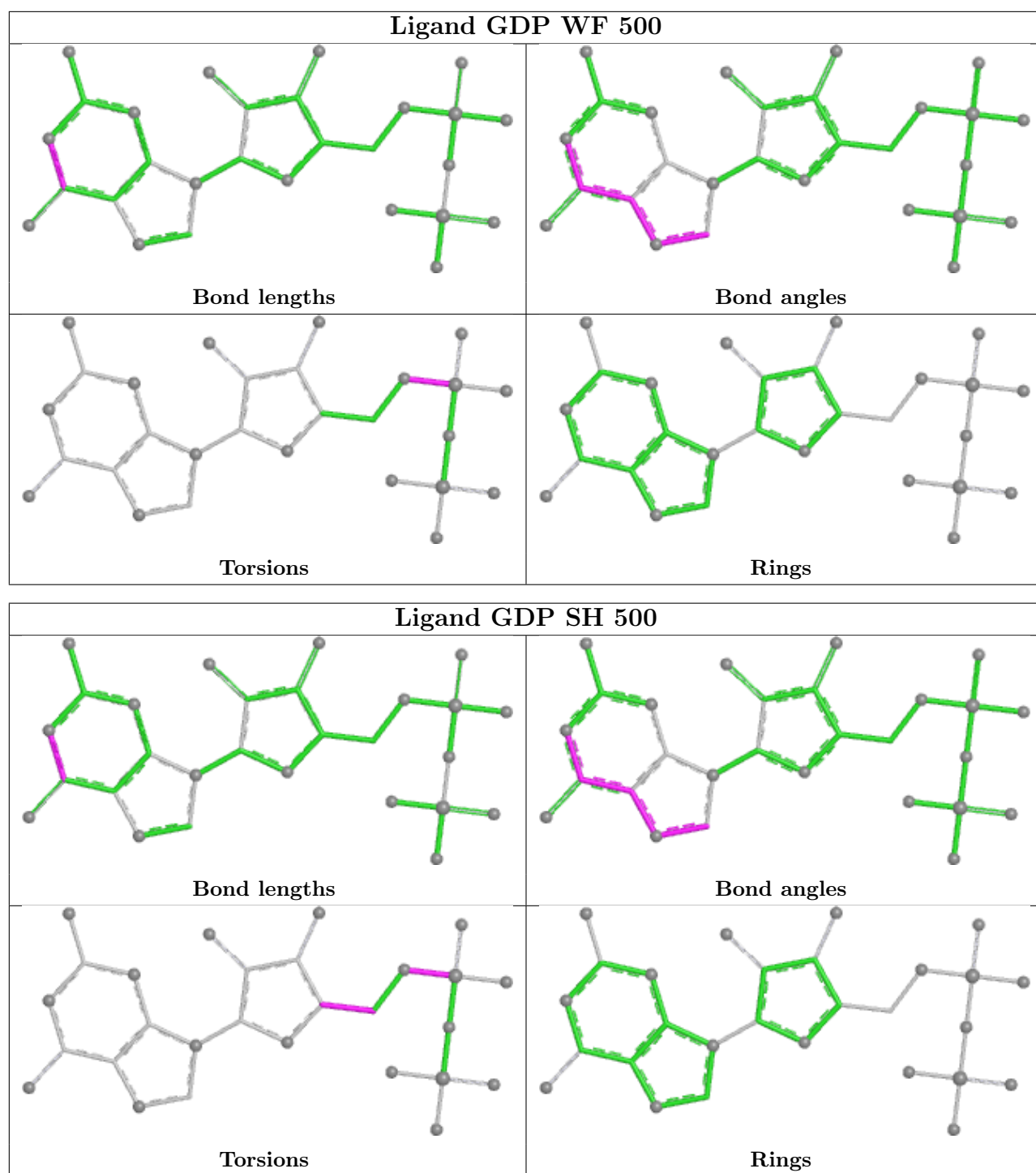






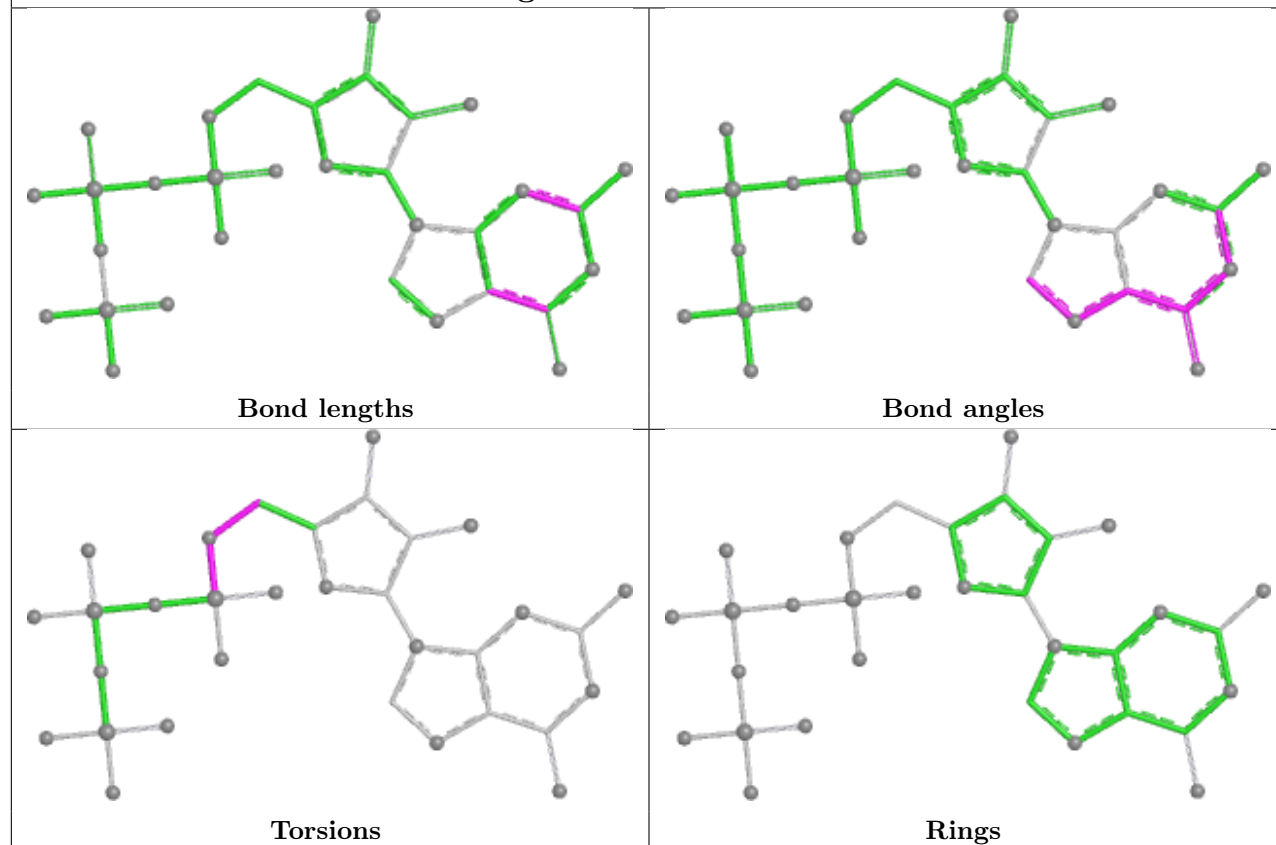




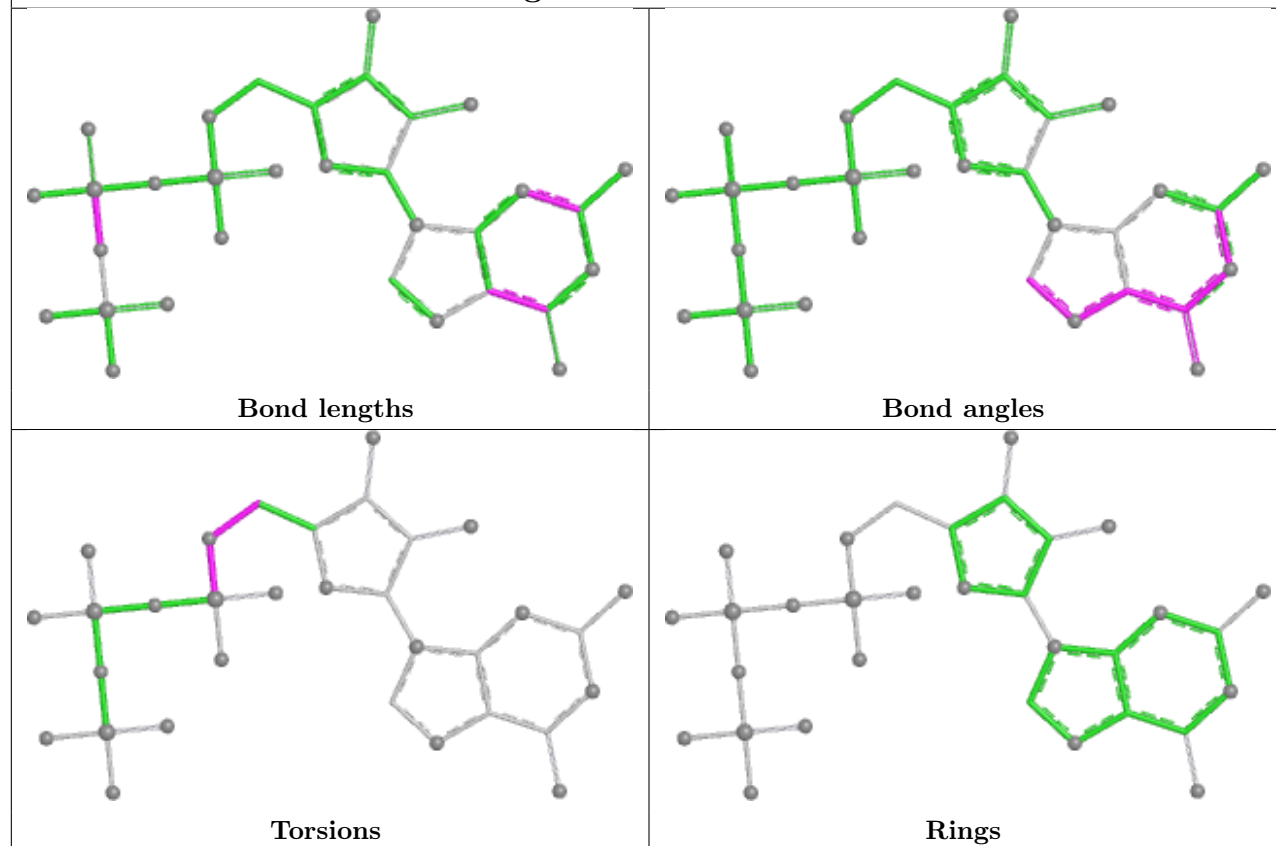




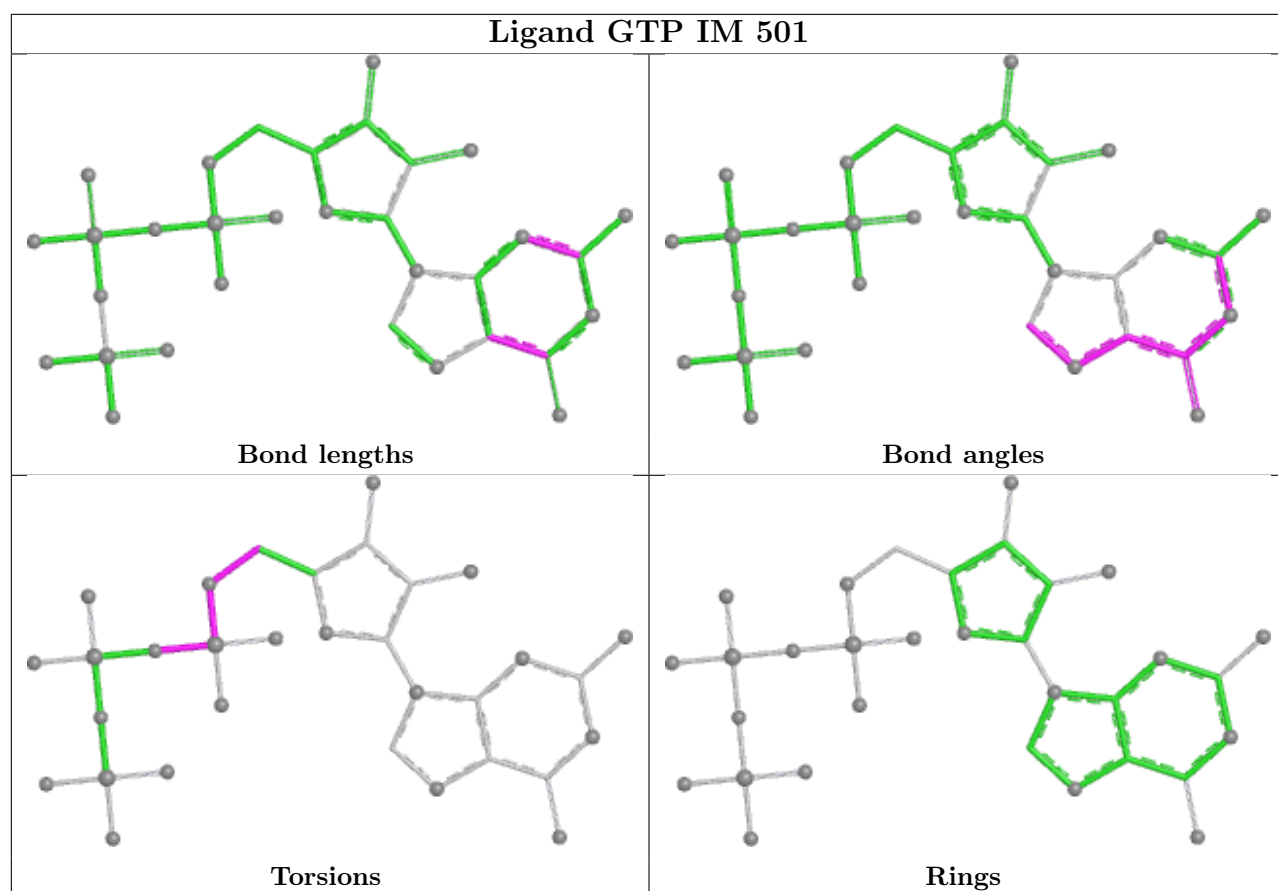
## Ligand GTP AC 501



## Ligand GTP IC 501







## 5.7 Other polymers [i](#)

There are no such residues in this entry.

## 5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.



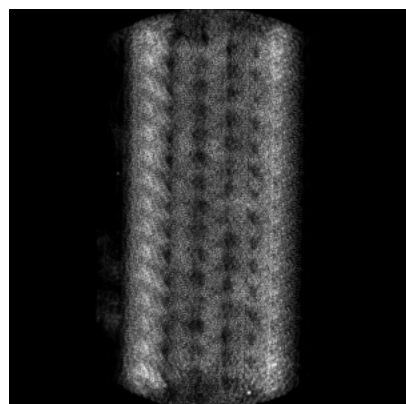
## 6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-47661. These allow visual inspection of the internal detail of the map and identification of artifacts.

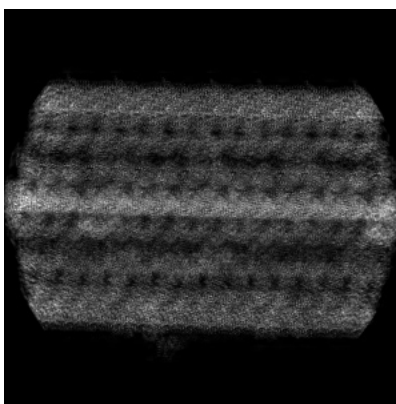
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

### 6.1 Orthogonal projections [i](#)

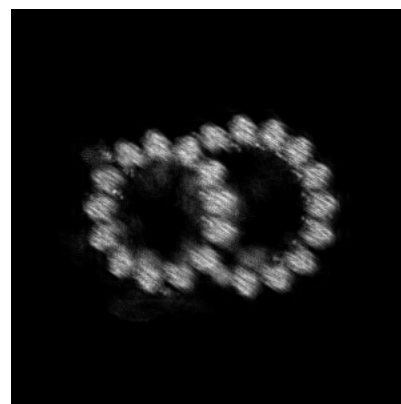
#### 6.1.1 Primary map



X

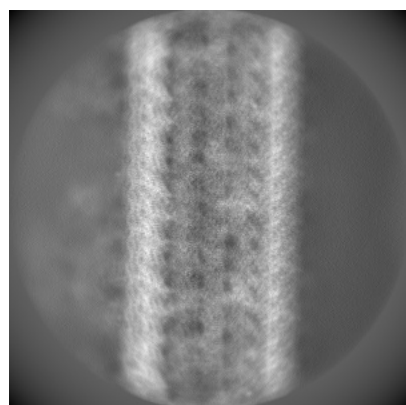


Y

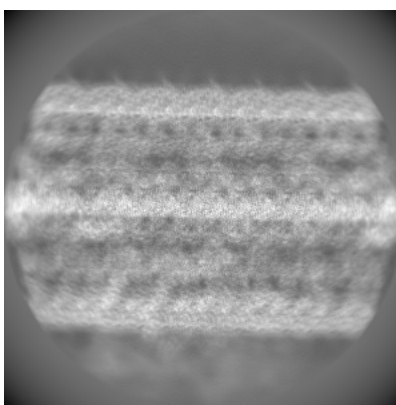


Z

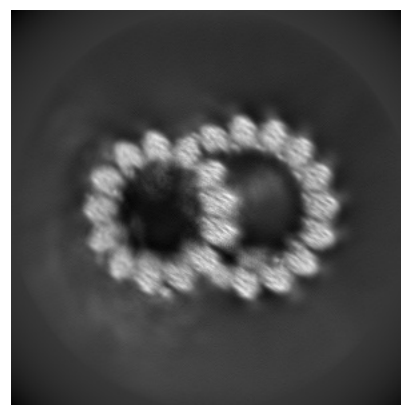
#### 6.1.2 Raw map



X



Y



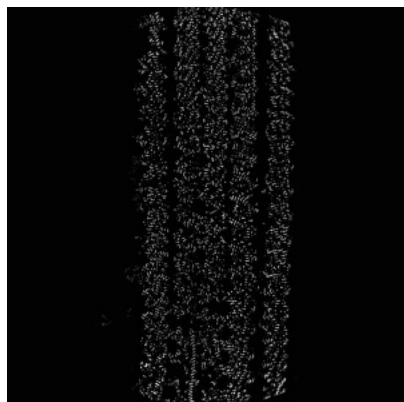
Z

The images above show the map projected in three orthogonal directions.

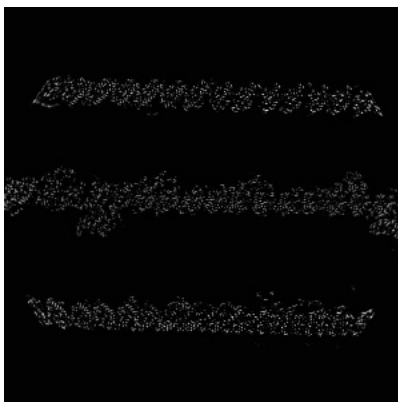


## 6.2 Central slices [i](#)

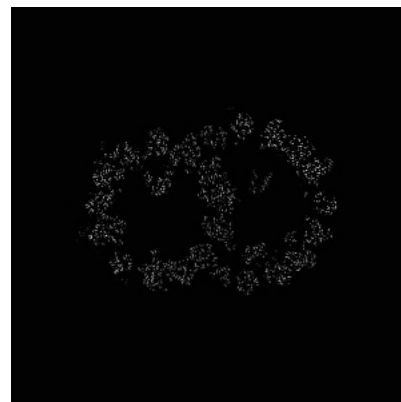
### 6.2.1 Primary map



X Index: 256

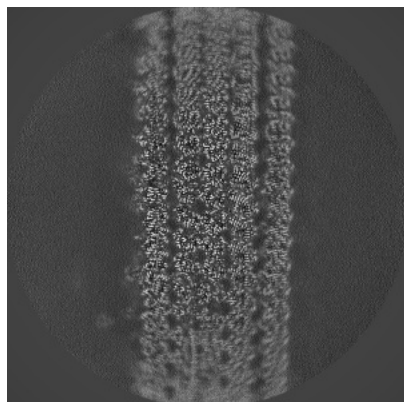


Y Index: 256

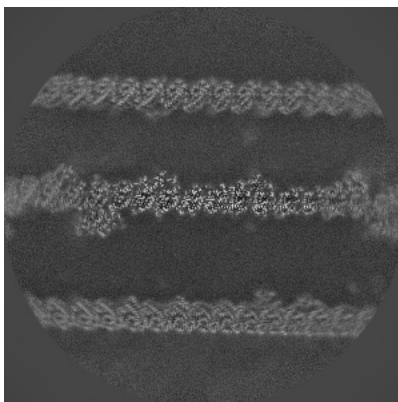


Z Index: 256

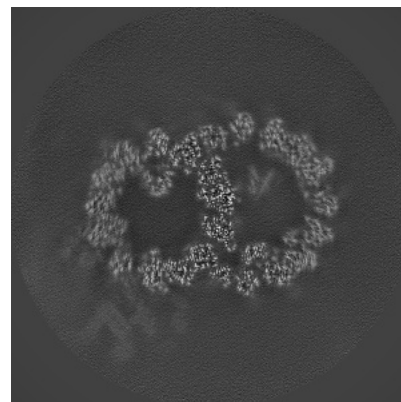
### 6.2.2 Raw map



X Index: 256



Y Index: 256



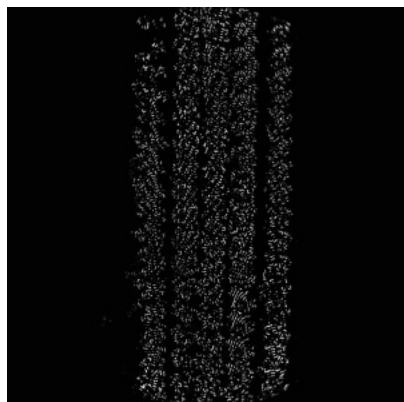
Z Index: 256

The images above show central slices of the map in three orthogonal directions.

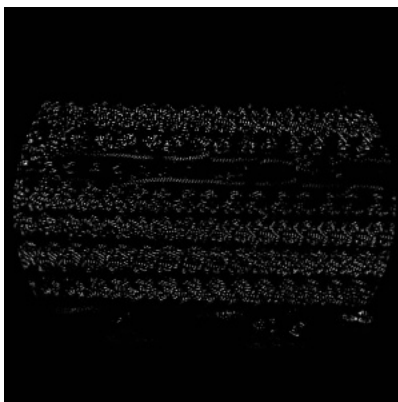


## 6.3 Largest variance slices [i](#)

### 6.3.1 Primary map



X Index: 260

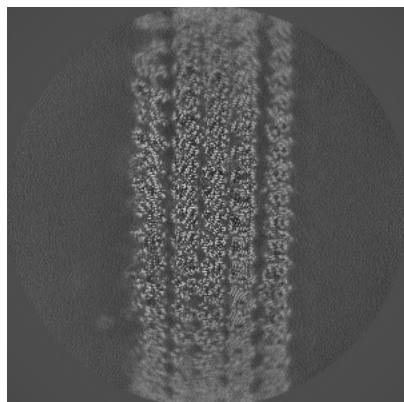


Y Index: 335

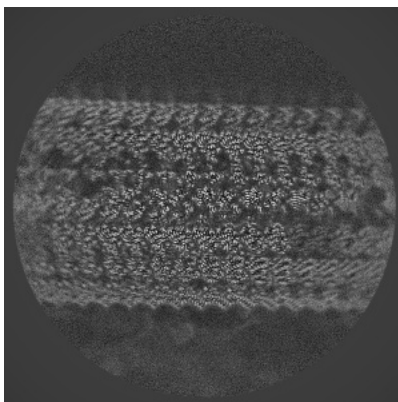


Z Index: 57

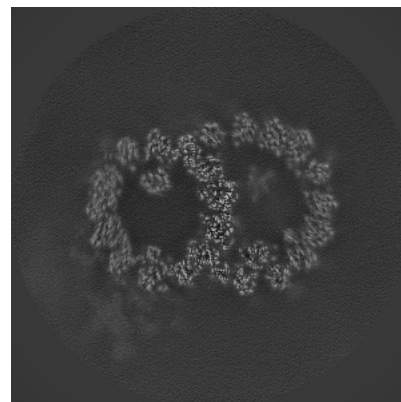
### 6.3.2 Raw map



X Index: 260



Y Index: 176



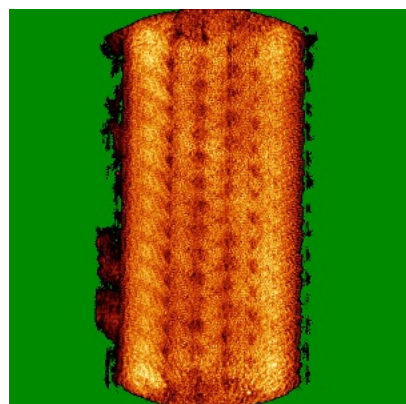
Z Index: 250

The images above show the largest variance slices of the map in three orthogonal directions.

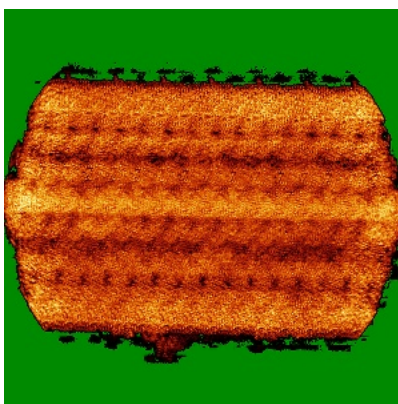


## 6.4 Orthogonal standard-deviation projections (False-color) [i](#)

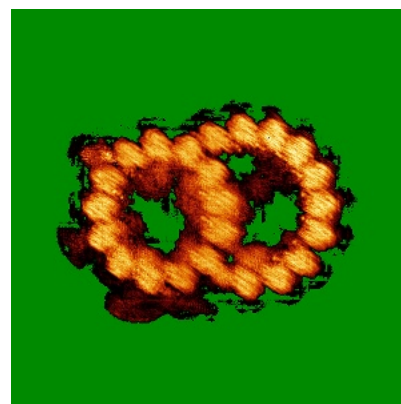
### 6.4.1 Primary map



X

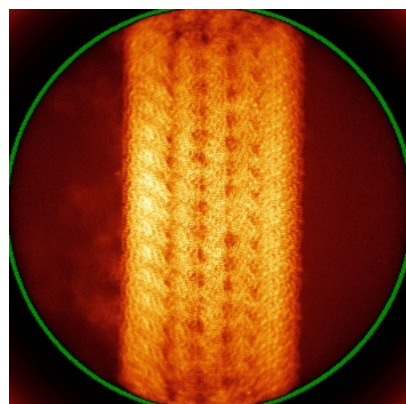


Y

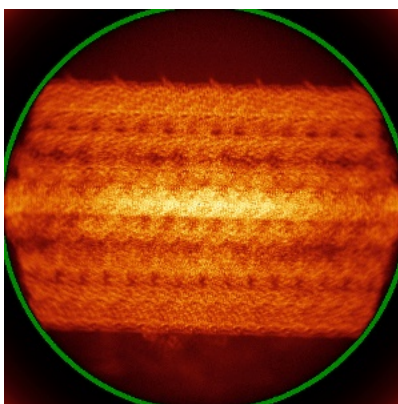


Z

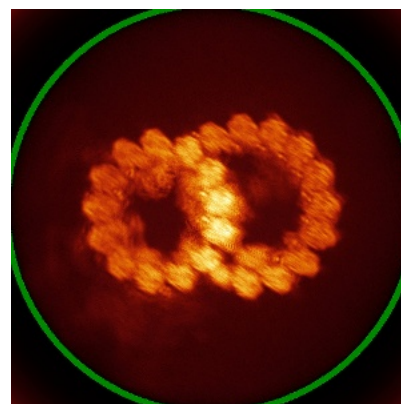
### 6.4.2 Raw map



X



Y



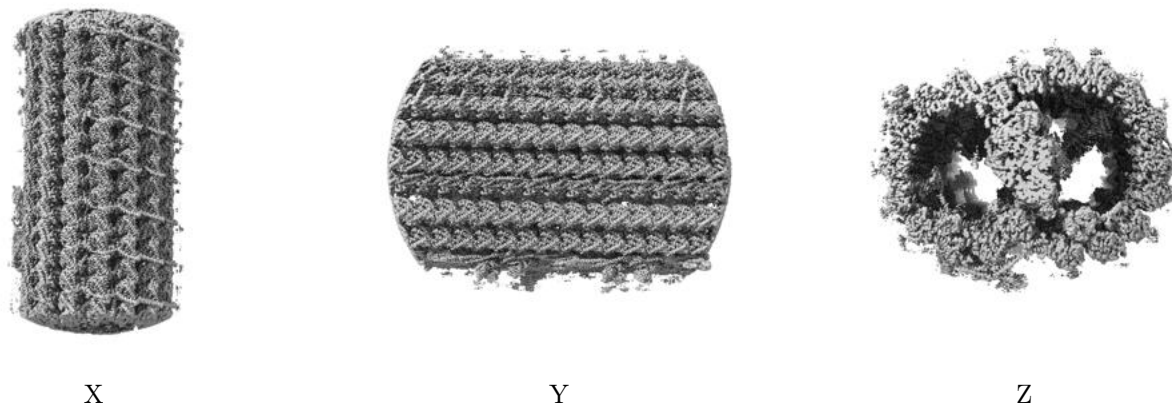
Z

The images above show the map standard deviation projections with false color in three orthogonal directions. Minimum values are shown in green, max in blue, and dark to light orange shades represent small to large values respectively.



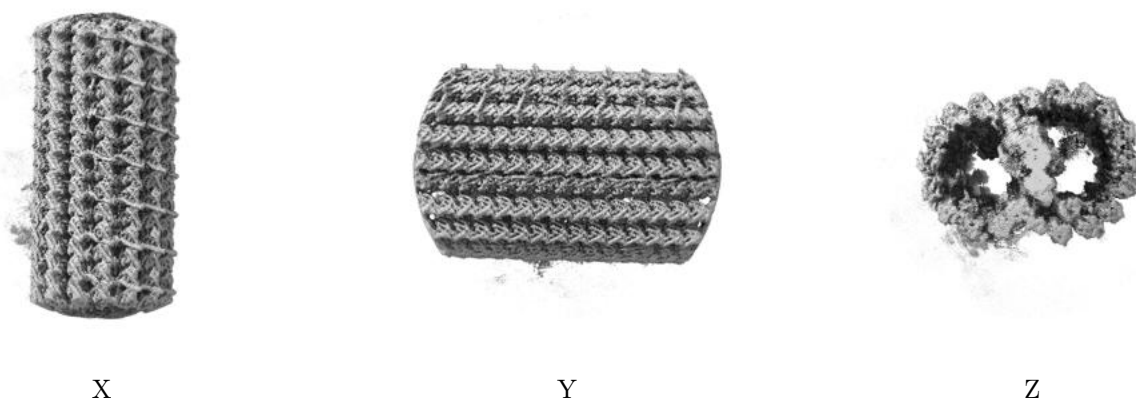
## 6.5 Orthogonal surface views [i](#)

### 6.5.1 Primary map



The images above show the 3D surface view of the map at the recommended contour level 0.0435. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

### 6.5.2 Raw map



These images show the 3D surface of the raw map. The raw map's contour level was selected so that its surface encloses the same volume as the primary map does at its recommended contour level.

## 6.6 Mask visualisation [i](#)

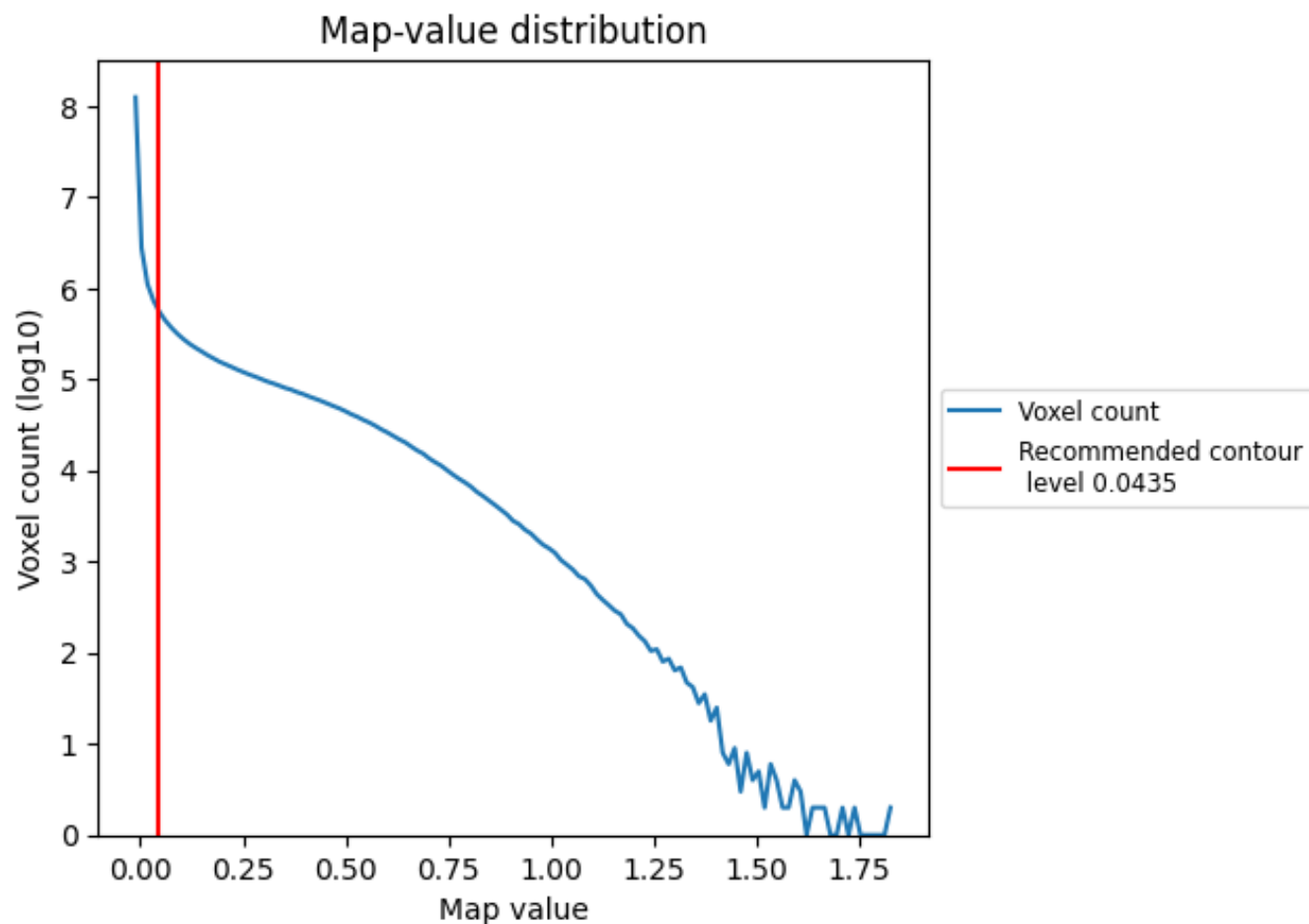
This section was not generated. No masks/segmentation were deposited.



## 7 Map analysis [i](#)

This section contains the results of statistical analysis of the map.

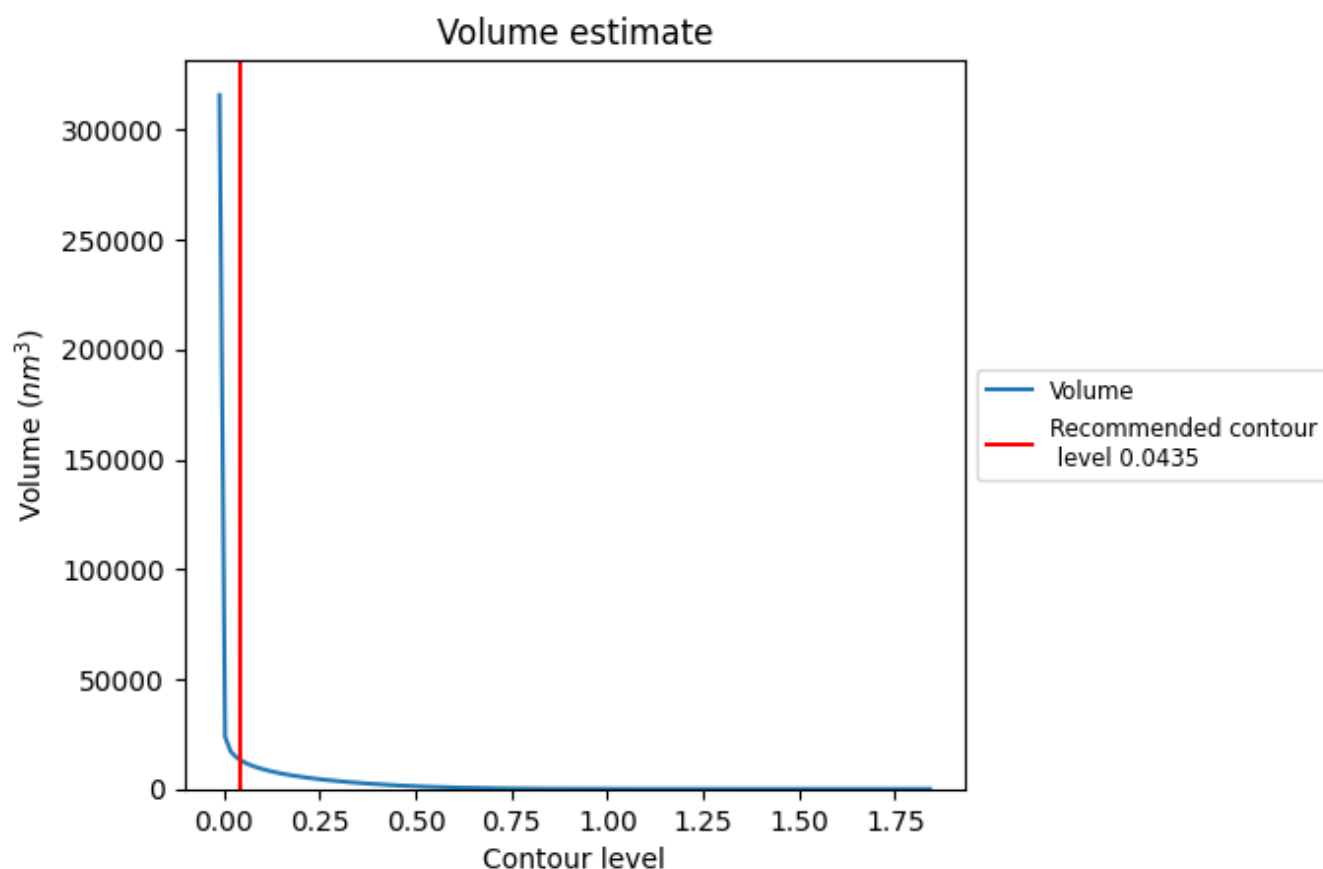
### 7.1 Map-value distribution [i](#)



The map-value distribution is plotted in 128 intervals along the x-axis. The y-axis is logarithmic. A spike in this graph at zero usually indicates that the volume has been masked.



## 7.2 Volume estimate [i](#)

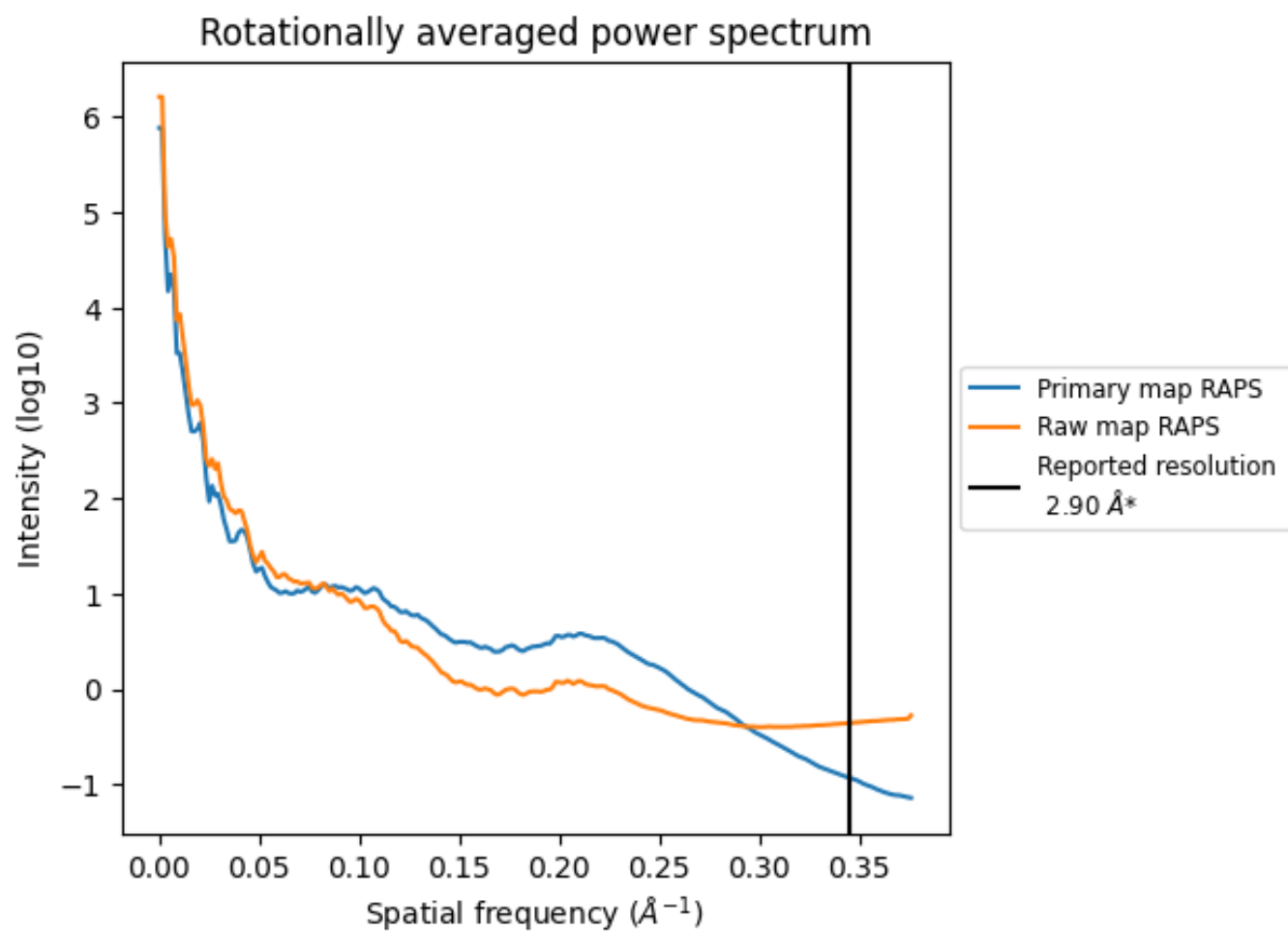


The volume at the recommended contour level is 13083  $\text{nm}^3$ ; this corresponds to an approximate mass of 11818 kDa.

The volume estimate graph shows how the enclosed volume varies with the contour level. The recommended contour level is shown as a vertical line and the intersection between the line and the curve gives the volume of the enclosed surface at the given level.



### 7.3 Rotationally averaged power spectrum ⓘ



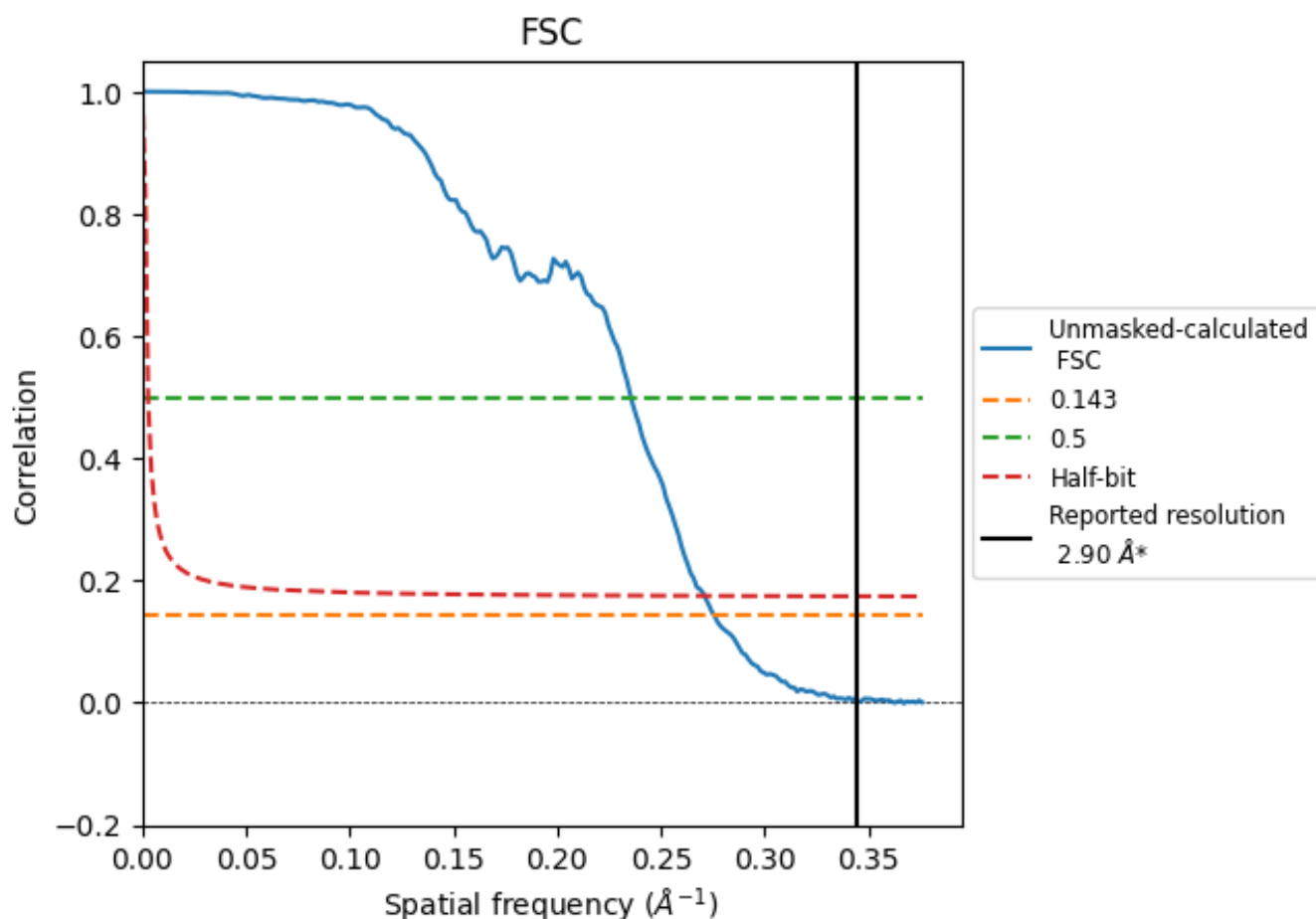
\*Reported resolution corresponds to spatial frequency of 0.345 Å<sup>-1</sup>



## 8 Fourier-Shell correlation [i](#)

Fourier-Shell Correlation (FSC) is the most commonly used method to estimate the resolution of single-particle and subtomogram-averaged maps. The shape of the curve depends on the imposed symmetry, mask and whether or not the two 3D reconstructions used were processed from a common reference. The reported resolution is shown as a black line. A curve is displayed for the half-bit criterion in addition to lines showing the 0.143 gold standard cut-off and 0.5 cut-off.

### 8.1 FSC [i](#)



\*Reported resolution corresponds to spatial frequency of 0.345 Å<sup>-1</sup>



## 8.2 Resolution estimates [i](#)

Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	2.90	-	-
Author-provided FSC curve	-	-	-
Unmasked-calculated*	3.63	4.25	3.69

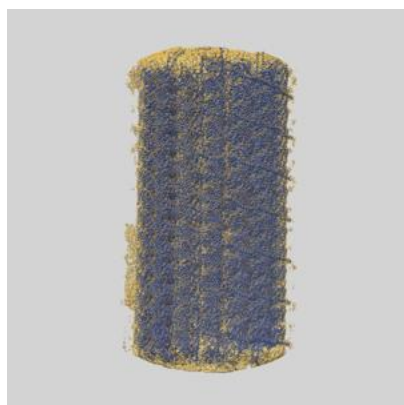
\*Resolution estimate based on FSC curve calculated by comparison of deposited half-maps. The value from deposited half-maps intersecting FSC 0.143 CUT-OFF 3.63 differs from the reported value 2.9 by more than 10 %



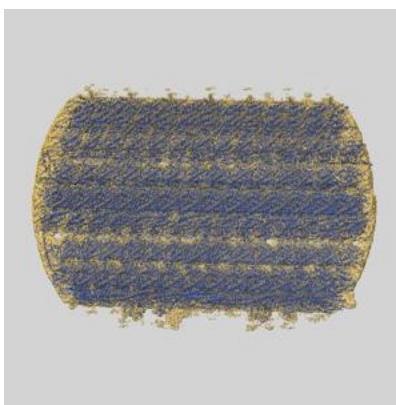
## 9 Map-model fit [i](#)

This section contains information regarding the fit between EMDB map EMD-47661 and PDB model 9E78. Per-residue inclusion information can be found in section [3](#) on page [78](#).

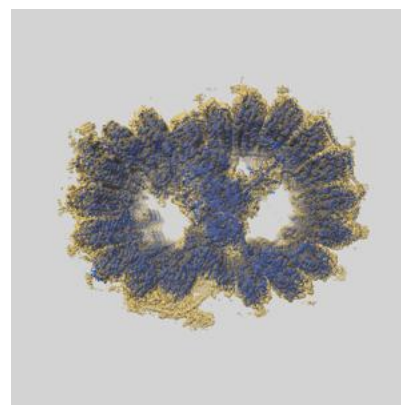
### 9.1 Map-model overlay [i](#)



X



Y

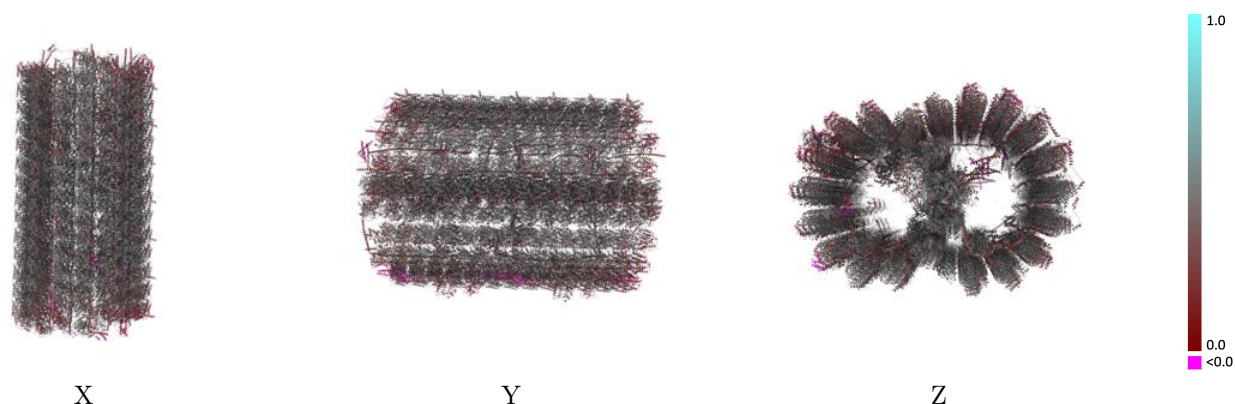


Z

The images above show the 3D surface view of the map at the recommended contour level 0.0435 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

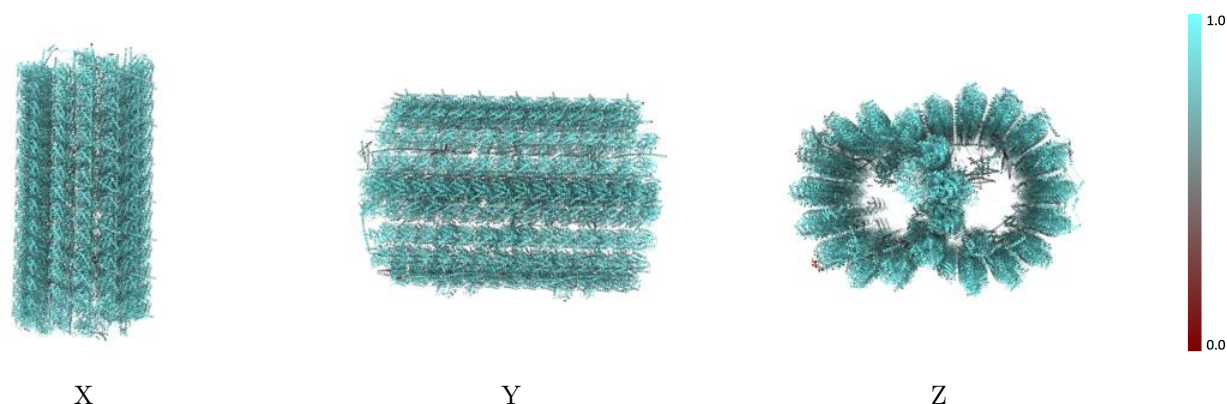


## 9.2 Q-score mapped to coordinate model [i](#)



The images above show the model with each residue coloured according its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions at which atoms can be resolved. Low Q-score values may therefore be expected for many entries.

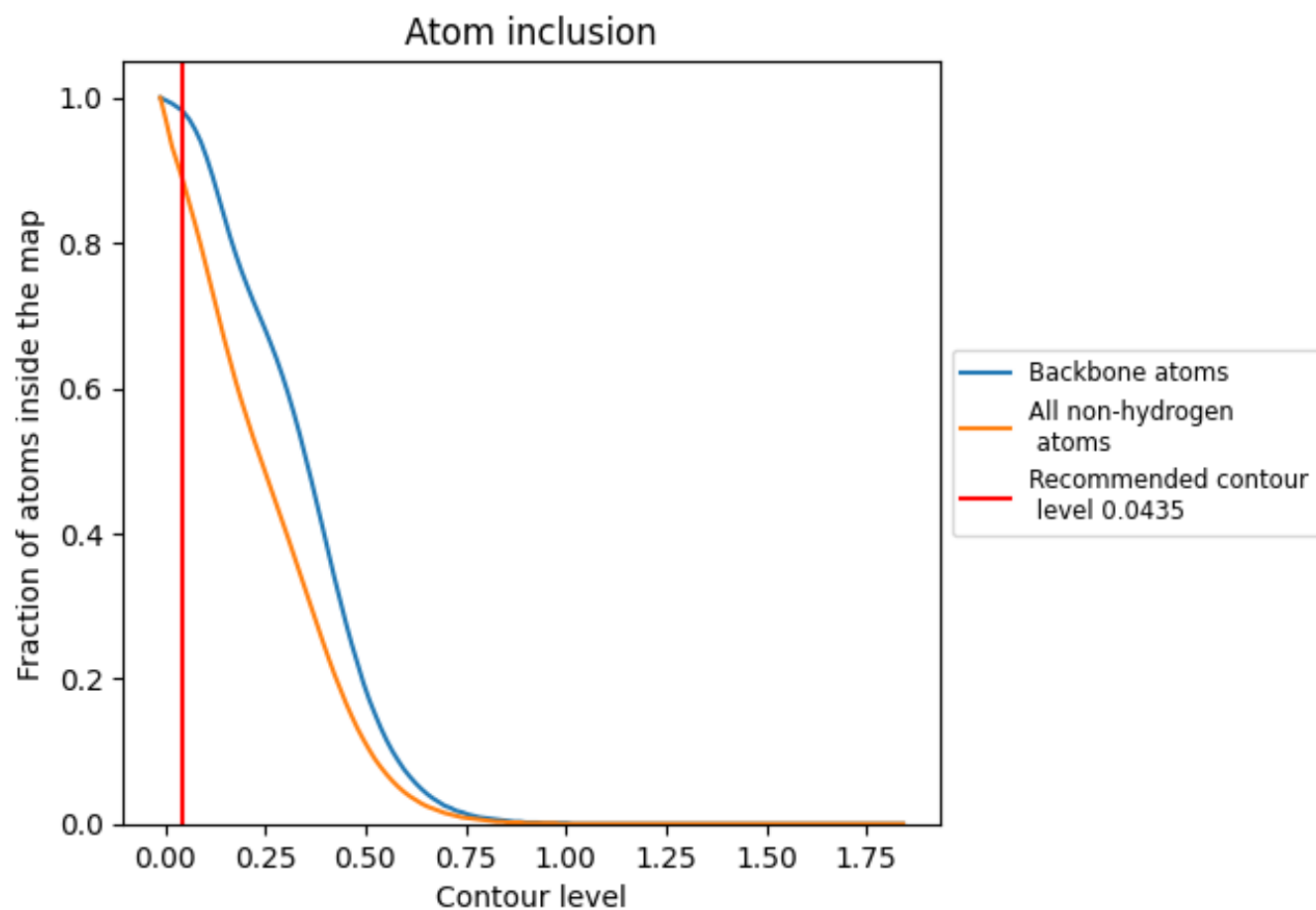
## 9.3 Atom inclusion mapped to coordinate model [i](#)



The images above show the model with each residue coloured according to its atom inclusion. This shows to what extent they are inside the map at the recommended contour level (0.0435).



## 9.4 Atom inclusion [i](#)









































































At the recommended contour level, 98% of all backbone atoms, 89% of all non-hydrogen atoms, are inside the map.



## 9.5 Map-model fit summary ⓘ

The table lists the average atom inclusion at the recommended contour level (0.0435) and Q-score for the entire model and for each chain.





















































































Chain	Atom inclusion	Q-score
All	 0.8880	 0.4210
0	 0.9160	 0.4480
0A	 0.8850	 0.4350
0C	 0.8910	 0.3690
0D	 0.8720	 0.3660
0F	 0.7950	 0.3640
0G	 0.7170	 0.3190
0H	 0.7580	 0.2040
0I	 0.7390	 0.3240
0J	 0.6720	 0.2350
0L	 0.8890	 0.4600
0M	 0.8840	 0.4480
0N	 0.8950	 0.4530
0O	 0.8840	 0.3550
0R	 0.8060	 0.3460
0S	 0.7640	 0.2880
0U	 0.9020	 0.4490
0W	 0.8800	 0.4120
0Y	 0.8680	 0.4330
0Z	 0.8530	 0.4300
0a	 0.9300	 0.4500
0c	 0.8520	 0.3860
0d	 0.8200	 0.3890
0f	 0.9100	 0.4450
0g	 0.9630	 0.4340
0k	 0.6530	 0.3150
0l	 0.6000	 0.2870
0m	 0.7810	 0.3010
0n	 0.7260	 0.2490
0o	 0.8230	 0.2330
0p	 0.7980	 0.3660
0r	 0.8720	 0.4170
0t	 0.9170	 0.4450
0u	 0.9330	 0.3880
0v	 0.8010	 0.2720



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

























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Chain	Atom inclusion	Q-score
0w	 0.8000	 0.3660
0x	 0.8590	 0.3840
0z	 0.6470	 0.2820
1A	 0.9000	 0.4510
1B	 0.8750	 0.4150
1D	 0.9080	 0.4130
1E	 0.8990	 0.4500
1F	 0.9150	 0.4370
1H	 0.8070	 0.3570
1I	 0.8390	 0.3890
1J	 0.8380	 0.3950
1K	 0.8160	 0.3610
1O	 0.8620	 0.4220
1Q	 0.8580	 0.4180
1S	 0.8690	 0.4380
1T	 0.8940	 0.3180
1U	 0.7920	 0.3710
1V	 0.8590	 0.3940
1X	 0.8000	 0.3550
1Y	 0.8010	 0.3670
1a	 0.7680	 0.3020
1b	 0.8410	 0.3670
1c	 0.8800	 0.3020
1d	 0.7740	 0.3520
1e	 0.8810	 0.4110
1g	 0.7090	 0.3340
1h	 0.7740	 0.3420
1j	 0.9090	 0.4510
1k	 0.8890	 0.4250
1l	 0.9060	 0.4540
1m	 0.9510	 0.4220
1o	 0.8860	 0.4380
1q	 0.7780	 0.3830
1r	 0.6860	 0.2710
1s	 0.6750	 0.2930
1t	 0.5320	 0.0680
1w	 0.7560	 0.3270
1x	 0.7860	 0.3480
1y	 0.7280	 0.2370
2B	 0.8930	 0.4620
2C	 0.8960	 0.4540
2F	 0.9060	 0.4620

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Chain	Atom inclusion	Q-score
2G	 0.8950	 0.4600
2H	 0.8950	 0.4490
2I	 0.9160	 0.4440
2L	 0.8160	 0.3620
2N	 0.8980	 0.4500
2O	 0.8930	 0.4300
2Q	 0.8320	 0.3880
2S	 0.8920	 0.4610
2U	 0.8670	 0.3950
2V	 0.8510	 0.3620
2X	 0.8130	 0.3930
2Z	 0.8650	 0.4380
2b	 0.8390	 0.3770
2c	 0.7420	 0.3070
2e	 0.7770	 0.3410
2f	 0.8440	 0.3040
2h	 0.7640	 0.3220
2i	 0.7280	 0.2720
2k	 0.7740	 0.3290
2l	 0.7340	 0.2760
2n	 0.7450	 0.2540
2o	 0.7050	 0.2880
2p	 0.7240	 0.1920
2r	 0.8400	 0.3680
2t	 0.8660	 0.3870
2v	 0.9380	 0.4070
2w	 0.9270	 0.4560
2y	 0.8830	 0.4480
2z	 0.8970	 0.4320
3B	 0.8900	 0.4300
3D	 0.8480	 0.4040
3F	 0.5500	 0.1620
3G	 0.6840	 0.2400
3H	 0.5300	 0.1880
3I	 0.6770	 0.2210
3L	 0.8060	 0.4230
3M	 0.3800	 0.2070
3P	 0.9170	 0.4040
3Q	 0.9120	 0.4390
3S	 0.8660	 0.4270
3U	 0.8770	 0.4240
3W	 0.7950	 0.3860

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






































































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Chain	Atom inclusion	Q-score
3X	 0.7930	 0.3590
3Z	 0.7920	 0.4000
3a	 0.8620	 0.4370
3b	 0.8100	 0.3510
3d	 0.7290	 0.3150
3f	 0.7670	 0.2750
3g	 0.7660	 0.3530
3h	 0.7410	 0.3130
3i	 0.7600	 0.2080
3m	 0.7850	 0.3700
3o	 0.8040	 0.3350
3p	 0.8160	 0.3940
3r	 0.7720	 0.3230
3s	 0.7770	 0.3470
3t	 0.7420	 0.2640
3w	 0.8640	 0.4210
3x	 0.8260	 0.3810
4A	 0.8190	 0.3750
4B	 0.8280	 0.4110
4I	 0.5320	 0.2360
4O	 0.8310	 0.3900
4P	 0.8790	 0.4120
4V	 0.8320	 0.3940
4W	 0.8170	 0.3940
4Y	 0.7560	 0.3100
4a	 0.8030	 0.3660
4b	 0.8520	 0.4110
5B	 0.7560	 0.2440
5C	 0.6470	 0.1700
5D	 0.5490	 0.0640
5G	 0.7830	 0.2690
5H	 0.6710	 0.1750
5I	 0.5360	 0.0410
5K	 0.7980	 0.3300
5L	 0.7240	 0.2430
5O	 0.8050	 0.3160
5P	 0.6270	 0.1820
5S	 0.7540	 0.3230
5T	 0.6320	 0.2100
A	 0.9280	 0.4400
AA	 0.9150	 0.4540
AB	 0.9190	 0.4630

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






































































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Chain	Atom inclusion	Q-score
AC	 0.9080	 0.4530
AD	 0.9210	 0.4610
AE	 0.9100	 0.4490
AF	 0.9190	 0.4580
AG	 0.9000	 0.4470
AH	 0.9220	 0.4510
AI	 0.9140	 0.4460
AJ	 0.9210	 0.4560
AK	 0.9030	 0.4480
AL	 0.9250	 0.4610
AM	 0.9280	 0.4610
AN	 0.9270	 0.4280
B	 0.9080	 0.4110
BA	 0.9010	 0.4380
BB	 0.8440	 0.4250
BC	 0.8100	 0.4050
BD	 0.9030	 0.4400
BE	 0.9120	 0.4380
BF	 0.9110	 0.4510
BG	 0.9100	 0.4370
BH	 0.9120	 0.4410
BI	 0.8940	 0.4200
BJ	 0.9060	 0.4360
BK	 0.9100	 0.4500
BL	 0.9230	 0.4550
BM	 0.9160	 0.4370
BN	 0.8530	 0.3720
C	 0.9040	 0.4260
CA	 0.9150	 0.4690
CB	 0.9050	 0.4580
CC	 0.9090	 0.4500
CD	 0.9150	 0.4340
CE	 0.9150	 0.4520
CF	 0.9120	 0.4510
CG	 0.9090	 0.4450
CH	 0.9110	 0.4270
CI	 0.9150	 0.4410
CJ	 0.9160	 0.4540
CK	 0.9040	 0.4350
CL	 0.9130	 0.4330
CM	 0.9100	 0.3410
D	 0.8050	 0.3160

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





























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Chain	Atom inclusion	Q-score
DA	 0.8960	 0.4500
DB	 0.8980	 0.4630
DC	 0.9000	 0.4510
DD	 0.9050	 0.4450
DE	 0.9100	 0.4490
DF	 0.9130	 0.4570
DG	 0.9070	 0.4440
DH	 0.9160	 0.4430
DI	 0.9190	 0.4440
DJ	 0.9180	 0.4530
DK	 0.9180	 0.4490
DL	 0.9160	 0.4300
DM	 0.8830	 0.3200
E	 0.8940	 0.4210
EA	 0.8950	 0.4500
EB	 0.8930	 0.4610
EC	 0.9010	 0.4570
ED	 0.9050	 0.4560
EE	 0.9030	 0.4540
EF	 0.9120	 0.4600
EG	 0.9140	 0.4400
EH	 0.9110	 0.4340
EI	 0.9070	 0.4420
EJ	 0.9070	 0.4460
EK	 0.9140	 0.4360
EL	 0.9040	 0.3670
F	 0.9040	 0.4010
FA	 0.8880	 0.4290
FB	 0.9090	 0.4650
FC	 0.9170	 0.4680
FD	 0.9010	 0.4590
FE	 0.9060	 0.4660
FF	 0.9220	 0.4660
FG	 0.9240	 0.4580
FH	 0.9230	 0.4530
FI	 0.9210	 0.4520
FJ	 0.9200	 0.4490
FK	 0.9210	 0.4380
FL	 0.9290	 0.4100
G	 0.7650	 0.2810
GA	 0.8330	 0.3440
GB	 0.8000	 0.3760

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Chain	Atom inclusion	Q-score
GC	 0.8420	 0.3790
GD	 0.8750	 0.4130
GE	 0.8940	 0.4380
GF	 0.8930	 0.4410
GG	 0.9000	 0.4450
GH	 0.9080	 0.4350
GI	 0.9060	 0.4310
GJ	 0.9070	 0.4310
GK	 0.9110	 0.4320
GL	 0.9020	 0.3870
H	 0.8110	 0.2930
HA	 0.8780	 0.3640
HB	 0.8430	 0.3840
HC	 0.8480	 0.3890
HD	 0.8810	 0.4070
HE	 0.8770	 0.4100
HF	 0.8910	 0.4200
HG	 0.8930	 0.4230
HH	 0.8970	 0.4210
HI	 0.8870	 0.4120
HJ	 0.8960	 0.4160
HK	 0.9110	 0.4270
HL	 0.8920	 0.3840
HM	 0.9110	 0.3570
I	 0.9050	 0.3480
IA	 0.9070	 0.4040
IB	 0.9200	 0.4310
IC	 0.9180	 0.4330
ID	 0.9100	 0.4310
IE	 0.9050	 0.4260
IF	 0.9050	 0.4300
IG	 0.9150	 0.4450
IH	 0.9120	 0.4390
II	 0.9070	 0.4390
IJ	 0.9100	 0.4370
IK	 0.9080	 0.4180
IL	 0.9030	 0.3860
IM	 0.9150	 0.3820
J	 0.9080	 0.3680
JA	 0.9170	 0.4230
JB	 0.9130	 0.4330
JC	 0.9130	 0.4310

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Chain	Atom inclusion	Q-score
JD	 0.9120	 0.4360
JE	 0.9120	 0.4370
JF	 0.9030	 0.4410
JG	 0.9050	 0.4440
JH	 0.8960	 0.4340
JI	 0.9050	 0.4500
JJ	 0.9020	 0.4380
JK	 0.9040	 0.4190
JL	 0.9090	 0.4190
JM	 0.9190	 0.4020
JN	 0.9210	 0.3650
K	 0.9360	 0.4230
KA	 0.9290	 0.4480
KB	 0.9280	 0.4540
KC	 0.9150	 0.4550
KD	 0.9230	 0.4600
KE	 0.9250	 0.4590
KF	 0.8960	 0.4460
KG	 0.9090	 0.4570
KH	 0.9000	 0.4530
KI	 0.9110	 0.4650
KJ	 0.9200	 0.4600
KK	 0.9110	 0.4430
KL	 0.9180	 0.4360
KM	 0.9210	 0.4350
KN	 0.9350	 0.4250
L	 0.9450	 0.4420
LA	 0.9500	 0.4670
LB	 0.9390	 0.4660
LC	 0.9340	 0.4750
LD	 0.9300	 0.4680
LE	 0.9330	 0.4730
LF	 0.9200	 0.4730
LG	 0.9140	 0.4730
LH	 0.9290	 0.4770
LI	 0.9350	 0.4810
LJ	 0.9240	 0.4630
LK	 0.9280	 0.4720
LL	 0.9320	 0.4560
LM	 0.9440	 0.4620
LN	 0.9420	 0.4580
LO	 0.9440	 0.4340

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

























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Chain	Atom inclusion	Q-score
M	 0.9390	 0.4720
MA	 0.9330	 0.4770
MB	 0.9300	 0.4780
MC	 0.9160	 0.4650
MD	 0.9170	 0.4610
ME	 0.9240	 0.4710
MF	 0.9220	 0.4710
MG	 0.9050	 0.4550
MH	 0.9140	 0.4560
MI	 0.9060	 0.4510
MJ	 0.9270	 0.4590
MK	 0.9050	 0.4380
ML	 0.9150	 0.4600
MM	 0.9390	 0.4680
MN	 0.9400	 0.4590
N	 0.8900	 0.3720
NA	 0.8560	 0.3730
NB	 0.8830	 0.4050
NC	 0.8640	 0.3980
ND	 0.8830	 0.4140
NE	 0.8620	 0.4020
NF	 0.8600	 0.4090
NG	 0.8400	 0.3940
NH	 0.8730	 0.4170
NI	 0.8680	 0.4170
NJ	 0.8820	 0.4230
NK	 0.8640	 0.3950
NL	 0.8730	 0.3780
NM	 0.8660	 0.3410
O	 0.8820	 0.3260
OA	 0.9030	 0.3900
OB	 0.9070	 0.4190
OC	 0.9010	 0.4210
OD	 0.9040	 0.4250
OE	 0.9110	 0.4310
OF	 0.9010	 0.4330
OG	 0.8860	 0.4200
OH	 0.9090	 0.4380
OI	 0.8940	 0.4370
OJ	 0.8990	 0.4300
OK	 0.8870	 0.4120
OL	 0.8740	 0.3610

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

























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Chain	Atom inclusion	Q-score
OM	 0.8740	 0.3230
P	 0.8820	 0.3310
PA	 0.9080	 0.3870
PB	 0.9120	 0.4380
PC	 0.9140	 0.4440
PD	 0.9130	 0.4390
PE	 0.9140	 0.4380
PF	 0.9100	 0.4500
PG	 0.8980	 0.4460
PH	 0.9110	 0.4580
PI	 0.9080	 0.4590
PJ	 0.9080	 0.4590
PK	 0.9050	 0.4500
PL	 0.8880	 0.3930
PM	 0.8900	 0.3560
Q	 0.8860	 0.3640
QA	 0.9160	 0.4420
QB	 0.9190	 0.4540
QC	 0.9150	 0.4550
QD	 0.9140	 0.4460
QE	 0.9130	 0.4560
QF	 0.9100	 0.4560
QG	 0.9150	 0.4720
QH	 0.8940	 0.4530
QI	 0.9130	 0.4630
QJ	 0.9240	 0.4610
QK	 0.8930	 0.4020
QL	 0.9100	 0.3670
R	 0.8710	 0.3580
RA	 0.9130	 0.4400
RB	 0.9140	 0.4440
RC	 0.9080	 0.4450
RD	 0.9100	 0.4380
RE	 0.9100	 0.4500
RF	 0.9080	 0.4610
RG	 0.9060	 0.4690
RH	 0.9060	 0.4550
RI	 0.9190	 0.4530
RJ	 0.9040	 0.4310
RK	 0.9040	 0.4220
RL	 0.9100	 0.3860
S	 0.9250	 0.4520

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Chain	Atom inclusion	Q-score
SA	 0.9210	 0.4590
SB	 0.9130	 0.4540
SC	 0.9160	 0.4470
SD	 0.9160	 0.4610
SE	 0.9140	 0.4740
SF	 0.9180	 0.4760
SG	 0.9240	 0.4750
SH	 0.9170	 0.4470
SI	 0.9210	 0.4500
SJ	 0.9110	 0.4520
SK	 0.9170	 0.4210
T	 0.9130	 0.4200
TA	 0.9000	 0.4420
TB	 0.9000	 0.4420
TC	 0.8910	 0.4120
TD	 0.8990	 0.4220
TE	 0.9120	 0.4630
TF	 0.9180	 0.4650
TG	 0.9140	 0.4600
TH	 0.9150	 0.4440
TI	 0.9130	 0.4440
TJ	 0.9130	 0.4440
TK	 0.9140	 0.4340
TL	 0.8410	 0.2440
U	 0.8820	 0.3880
UA	 0.8790	 0.4190
UB	 0.8760	 0.4210
UC	 0.8900	 0.4210
UD	 0.9020	 0.4400
UE	 0.8950	 0.4400
UF	 0.9010	 0.4490
UG	 0.9040	 0.4410
UH	 0.9030	 0.4290
UI	 0.9030	 0.4310
UJ	 0.8970	 0.4320
UK	 0.8920	 0.4190
UL	 0.8710	 0.3490
V	 0.9120	 0.4190
VA	 0.9070	 0.4440
VB	 0.9120	 0.4620
VC	 0.9150	 0.4570
VD	 0.9170	 0.4550

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Chain	Atom inclusion	Q-score
VE	 0.9070	 0.4540
VF	 0.9150	 0.4660
VG	 0.9070	 0.4570
VH	 0.9100	 0.4530
VI	 0.9140	 0.4580
VJ	 0.9180	 0.4690
VK	 0.9160	 0.4680
VL	 0.9160	 0.4510
VM	 0.8750	 0.3870
W	 0.9130	 0.4280
WA	 0.9160	 0.4520
WB	 0.9150	 0.4580
WC	 0.9160	 0.4520
WD	 0.9050	 0.4400
WE	 0.9100	 0.4450
WF	 0.9100	 0.4480
WG	 0.9080	 0.4500
WH	 0.9040	 0.4460
WI	 0.9120	 0.4450
WJ	 0.9160	 0.4680
WK	 0.9140	 0.4680
WL	 0.9030	 0.4480
WM	 0.9080	 0.4230
X	 0.9080	 0.4630
X1	 0.8840	 0.4300
XA	 0.8990	 0.4670
XB	 0.9250	 0.4630
XC	 0.9050	 0.4600
XD	 0.9140	 0.4670
XE	 0.9150	 0.4710
XF	 0.9140	 0.4650
XM	 0.8950	 0.4500
XN	 0.8770	 0.4240
XO	 0.8980	 0.4450
XP	 0.8640	 0.4220
XQ	 0.9010	 0.4530
XR	 0.9110	 0.4260