

## Supplementary material:

**Table 1:** XP Docking of available drug molecules with PknG of *M. tuberculosis*

S. No	Compounds	Glide Score	Glide Energy	H Bond Interaction	Bond Distance(DH...A) Å
1	Ciprofloxacin	-4.40	-31.959	(NH...O)A:GLU 233	2.853
2	Kanamycin	-6.91	-48.195	(OH...O)A:SER 239	3.252
				(NH...O)A:VAL 235	3.125
3	Isoniazid	-6.63	-28.956	(NH...O)A:ILE 292	2.459
				(NH...O)A:VAL 235	2.965
4	Ethionamide	-5.31	-26.184	(NH...O)A:GLU 233	2.698
5	Prothionamide	-5.82	-29.590	(NH...O)A:GLU 233	3.124
6	Pyrazinamide	-4.54	-27.236	(NH...O)A:GLU 233	2.568
				(NH...O)A:VAL 235	2.867
7	Amino salicylic acid	-5.19	-24.377	(NH...O)A:GLU 233	3.214
				(NH...O)A:VAL 235	3.312
8	Cycloserine	-4.34	-21.498	(NH...O)A:VAL 235	2.134
9	Streptomycin	-4.94	-44.669	A:LYS 241 (NH...O)	2.142
10	Ethambutol	-4.40	-31.959	(OH...O)A:GLY 237	3.217
				(NH...O)A:VAL 235	3.152

**Table 2:** XP Docking of bioactive compounds from *W somnifera* with PknG of *M. tuberculosis*

S. No	Compounds	Glide Score	Glide Energy	H Bond Interaction	Bond Distance (DH...A) Å
	AX20017	-5.63	-40.423	A:VAL 235 (NH...O)	3.381
1	<b>Withanolide D</b>	<b>-7.63</b>	<b>-42.901</b>	(NH...O) A:GLU 233	3.327
				<b>A:GLN 238 (NH...O)</b>	<b>2.779</b>
				<b>A:VAL 235 (NH...O)</b>	<b>3.068</b>
				<b>A:SER 239 (OH...O)</b>	<b>3.109</b>
2	Withanolide A	-4.51	-40.724	A:GLN 238 (NH...O)	3.005
3	<b>Withanolide E</b>	<b>-7.86</b>	<b>-48.905</b>	<b>A:VAL 235 (NH...O)</b>	<b>3.094</b>
				<b>(OH...O) A:GLY 237</b>	<b>2.739</b>
4	<b>Withanolide F</b>	<b>-7.69</b>	<b>-47.077</b>	<b>A:SER 293 (NH...O)</b>	<b>3.375</b>
				<b>A:VAL 235 (NH...O)</b>	<b>2.739</b>
5	4β-Hydroxywithanolide E	-6.46	-48.767	A:HIS 159 (NH...O)	2.980
				(OH...O) A:GLY 237	2.828
6	Withaferin A	-6.84	-36.108	(OH...O) A:ILE 292	2.849
				A:VAL 235 (NH...O)	2.935
7	Diacetate 2-phenylcarbonate withaferin A	-4.75	-41.948	-	-
8	2,3 dihydro withaferin A	-4.58	-34.799	A:SER 239 (OH...O)	2.856
				(OH...O) A:HIS 159	2.769
				A:LYS 241 (NH...O)	2.985
9	2,7 deoxy 2,3 dihydro withaferin A	-4.58	-34.799	A:SER 239 (OH...O)	2.856
				(OH...H) A:HIS 159	2.769
				A:LYS 241 (NH...O)	2.985
10	Deoxytetrahydroacetate withaferin A	-5.73	-41.078	A:GLN 238 (NH...O)	2.923
				(OH...O) A:GLY 237	2.979

**Table 3:** ADME results for the Withanolide compounds

S. No	Compounds	Molecular Weight (130.0 to 725.0)	Donor HB (0.0 to 6.0)	Accept HB (2.0 to 20.0)	QP LOG O/W (-2 to 6.5)	% Human Oral Absorption (>80% is high & <25% is poor)	Rule of Five
	Ligand	268.37	2.000	4.500	0.946	77.723	0
1	Withanolide D	454.61	1.000	8.700	3.481	100.00	0
2	Withanolide A	470.61	2.000	9.450	3.067	91.634	0
3	Withanolide E	486.60	3.000	9.250	3.153	95.431	0
4	Withanolide F	488.62	4.000	8.950	2.784	81.153	0
5	Withaferin	500.67	0.000	9.000	3.936	88.150	1