

**Supplemental Table S1. IC50s (nM) for inhibition of enzyme activity for PARP family members**

	Veliparib	Olaparib	Talazoparib	Rucaparib	A-934935
PARP1	1.05 ±0.4	0.47 ±0.04	0.50 ±0.03	0.38 ±0.01	0.77 ±0.03
PARP2	0.42 ±0.09	0.27 ±0.01	0.26 ±0.04	0.26 ±0.01	0.31 ±0.02
PARP3	98.3 ±10.0	15.9 ±2.96	23.4 ±3.41	19.2 ±4.73	109 ±16.2
TNKS1	7,573 ±2,011	1,447 ±72.3	17.7 ±2.1	296 ±5.0	121 ±16.3
TNKS2	1,927 ±696	579 ±53.6	5.13 ±1.1	66.7 ±41.2	21.1 ±9.7
PARP6	> 10,000	1,137 ±545	530 ±179	> 10,000	> 10,000
PARP7	> 10,000	1,522 ±1,099	> 10,000	> 10,000	> 10,000
PARP8	> 10,000	1,319 ±622	254 ±129	> 10,000	3,213 ±1,350
PARP10	> 10,000	589 ±269	9,293 ±1,852	446 ±89.8	2,410 ±272
PARP11	No Inhibition	79% @ 10 µM	596 ±100	1,200 ±173	No Inhibition
PARP12	> 10,000	3,577 ±790	> 10,000	6,240 ±1,629	6,680 ±1,205
PARP15	> 10,000	5,483 ±588	> 10,000	> 10,000	> 10,000