

Supplementary material:

Table 1: List of amino acid residues involved in protein-protein interaction between E6-p53 & E7-RB1 as predicted by SHARP2.

| Ligand | Receptor | Moldock score | No: of Hbond | Hbond Energy | Amino acids with which Hydrogen Bonds are formed |
|--------------|----------|---------------|--------------|--------------|--|
| Nicandrenone | 1AD6/RB1 | -95.0387 | 5 | -9.38092 | Val531, Ser534, Ser463, Val531 |
| | 1VZN/E6 | -121.578 | 5 | -11.77 | Lys79, Tyr99, Glu120, Glu 97 |
| | 2B9D/E7 | -84.8187 | 6 | -8.13861 | Glu74, Asn82, Leu77, val49, glu56 |
| | 1TUP/P53 | -106.56 | 5 | -8.71093 | Thr231, Thr230, Glu221, Glu224, Arg202 |
| Ginsenosides | 1AD6/RB1 | -99.66408 | 3 | -5.63265 | Met460, Lys530, Asp479 |
| | 1VZN/E6 | -97.1809 | 3 | -3.01999 | Glu74 |
| | 2B9D/E7 | -76.9515 | 3 | -6.97368 | Ser51 |
| | 1TUP/P53 | -96.8829 | 5 | -6.7669 | Val97, Asn200, Arg202 |
| Pregnane | 1AD6/RB1 | -93.7979 | 0 | 0 | |
| | 1VZN/E6 | -120.998 | 0 | 0 | |
| | 2B9D/E7 | -67.0394 | 0 | 0 | |
| | 1TUP/P53 | -89.6934 | 0 | 0 | |
| Steriol | 1AD6/RB1 | -89.2408 | 1 | -2.01832 | |
| Glycosides | 1VZN/E6 | -119.959 | 2 | 3.28452 | Ser534 |
| | 2B9D/E7 | -72.9879 | 2 | -1.4832 | Glu48 |
| | 1TUP/P53 | -94.4142 | 1 | -0.847297 | Arg71, Ser68 |

Table 2: Docking Analysis of the four best compounds from the list of 88 compounds screened. Table depicts the Moldock scores, Hydrogen bond interaction and the list of amino acids with which hydrogen bonds are formed.

| | E6 | P53 |
|-------------------------------|--|--|
| Site of interaction of P53-E6 | 22 LEU , 23 CYS , 41 LYS , 42 GLN , 43 GLN , 45 LEU , 46 ARG , 47 ARG , 49 VAL , 50 TYR , 51 ASP , 53 ALA , 54 PHE , 57 LEU , 71 ASP , 74 LEU , 75 LYS , 76 PHE , 78 SER , 79 LYS 80 ILE , 82 GLU , 83 TYR , 84 ARG 85 HIS , 86 TYR , 99 TYR | 110 ARG , 111 LEU , 112 GLY , 113 PHE , 114 LEU , 115 HIS , 116 SER , 124 CYS , 126 TYR , 128 PRO , 131 ASN , 142 PRO , 144 GLN , 146 TRP , 229 CYS , 231 THR |
| | E7 | Rb1 |
| Site of interaction of E7-RB1 | 45 PRO , 46 TYR , 47 ALA , 57 LYS , 58 LEU , 59 VAL , 60 ARG , 61 LEU , 62 THR , 63 VAL , 64 LEU , 73 LEU , 74 GLU , 76 MET , 77 LEU , 81 LEU , 82 ASN , 83 ILE , 84 VAL , 86 PRO , 87 LEU , 89 THR , 90 LEU , 91 GLN 92 ARG , 93 GLN | 378 VAL , 379 MET , 380 ASN 381 THR , 382 ILE , 383 GLN 384 GLN , 387 MET , 388 ILE 390 ASN , 497 THR , 498 TYR 499 SER , 500 ARG , 501 SER 503 SER , 531VAL |