**Supplementary Figure Legends**

**Supplementary Figure S1.** Western blot showing differential expression of PP2A-C (catalytic subunit) and PP2A-A (scaffold subunit) in different ovarian cancer cell lines.

**Supplementary Figure S2.** LB100 is not a substrate for ATP-binding cassette (ABC) efflux transporters. HEK 293 human embryonic kidney cell lines overexpressing Pgp (A), ABCG2 (B), and MRP1 (C), were treated with a serial dilution of LB 100 and cell viability was assessed *via* MTT assay. IC50s of the transfected lines were not different compared with parent (non-transporter-expressing) cells (A, B, C) or in the presence of an inhibitor (A, B).

**Supplementary Figure S3.** LB100 has minimal cross-resistance with cisplatin. Cisplatin-resistant KB-CP.5 cells and parental KB-3-1 cells were treated with serially diluted concentrations of LB100 and cell viability was assessed via MTT assay. Cisplatin sensitivity for both cell lines is shown for comparison of the degrees of resistance.

**Supplementary Figure S4.** Inhibition of PP2A by LB100 sensitizes resistant ovarian cancer cells to cisplatin. MTT assay showing LB100-induced cisplatin sensitivity in the cisplatin-sensitive PEO-1m (A) and PEO-1s (B) cells as well as cisplatin-resistant PEO-6 cells (C).

**Supplementary Figure S5.** Western blots showing effect of LB100 on cell-cycle dependent kinases. A, Western blot of cisplatin-resistant PEO-4 cells showing LB100-induced cell cycle progression as indicated by decreased Wee1 and increased cdc2 activation compared to cisplatin alone. B, Western blot showing LB100 pre-treatment does not alter the phosphorylation state of Chk1 at S317 as compared to S345 (Fig. 3). C, Western blot of *ex vivo* kidney extracts demonstrating no significant hyperphosphorylation of γH2AX in the kidney after LB100 treatment. Immunoblotting for F-Luciferase is shown to indicate minimal tumor contamination of the sample.