## SUPPLEMENTARY FIGURE LEGENDS

**Fig. 1S. Effect of MEHD7945A on cell cycle progression and EGFR/HER3 signaling in cetuximab-resistant cells**. CetR H226 or SCC6 cells were either non-treated (control) or treated with 10 μg/ml of cetuximab (Cet) or MEHD7945A (MEHD) for 24 hrs. Cells were then harvested and processed for flow cytometric cell cycle analysis (A) or immunoblotting analysis (B) as described in "Materials and Methods".

**Fig. 2S. MEHD7945A** increases cell fraction in apoptotic sub-G0 phase. CetR H226 or SCC6 cells were either non-treated (NT) or pre-treated with 10 μg/ml of cetuximab (Cet) or MEHD7945A (MEHD) for 24 hrs followed by 6 Gy radiation. Cells were then harvested at day 0 (D0), day 1 (D1) or day 2 (D2) following radiation and processed for cell cycle analysis by flow cytometry as described in "Materials and Methods".

**Fig. 3S. MEHD7945A is more potent than the combination of cetuximab and erlotinib.** CetR H226 or SCC6 cells were either non-treated (NT) or treated with 10 μg/ml of cetuximab (C), MEHD7945A (M) or the combination of cetuximab and erlotinib with doses indicated in the graph for 96 hrs. Thereafter, growth of tumor cells was determined by cell proliferation analysis. \*p<0.05, Student's t test, MEHD7945A versus cetuximab+5 μM erlotinib.