

### **Supplementary Movie Legends:**

**Title:** Supplementary Movie 1

**Description:** Growth of DMSO-treated (0.5%) hTERT-RPE1 cells, with YOYO-3.

**Title:** Supplementary Movie 2

**Description:** Growth of RAL-treated (50  $\mu$ M) hTERT-RPE1 cells, with YOYO-3.

**Title:** Supplementary Movie 3

**Description:** Growth of LAS-treated (50  $\mu$ M) hTERT-RPE1 cells, with YOYO-3.

**Title:** Supplementary Movie 4

**Description:** Growth of 5C6-treated (50  $\mu$ M) hTERT-RPE1 cells, with YOYO-3.

**Title:** Supplementary Movie 5

**Description:** Growth of 5C7-treated (50  $\mu$ M) hTERT-RPE1 cells, with YOYO-3.

**Title:** Supplementary Movie 6

**Description:** Growth of OB7-treated (50  $\mu$ M) hTERT-RPE1 cells, with YOYO-3.

**Title:** Supplementary Movie 7

**Description:** Growth of all treatments side-by-side (from Supplementary Movie 1-7).

### **Supplementary Data Legends:**

**Title:** Supplementary Data 1

**Description:** PocketFeature Scores for compounds in the broad in silico similarity screen.

**Title:** Supplementary Data 2

**Description:** Predicted affinities for predicted taxane binding compounds.

**Title:** Supplementary Data 3

**Description:** PocketFeature Scores for compounds in the targeted estrogen receptor screen.

**Title:** Supplementary Data 4

**Description:** Quantification of immunofluorescence microtubules effects observed.

**Title:** Supplementary Data 5

**Description:** Compounds used in the manuscript and their sources.

**Title:** Supplementary Data 6

**Description:** NCI60 cell line SERM treatment based on the ER status.