Researchers follow AI path to safer senolytic compounds

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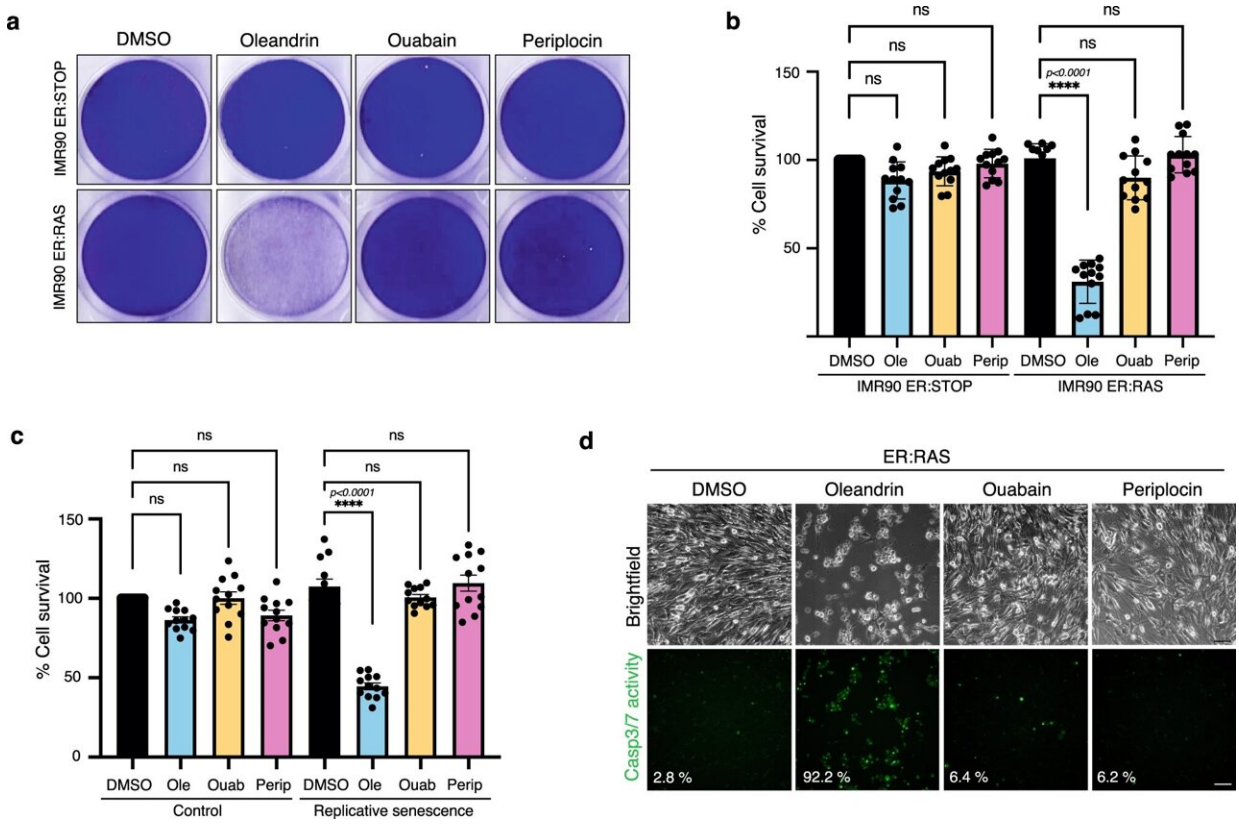

Senolytic performance of oleandrin and periplocin. **a** Cell survival assay measuring the senolytic effect in OIS. The panels show a representative crystal violet staining of tissue culture dishes of confluent senescent IMR90 ER:RAS and control IMR90 ER:STOP cells cultured with 100 nM 4OHT, and treated with 10 nM oleandrin, ouabain and periplocin, and DMSO as vehicle control for 72 h. **b** Cell survival by quantification of the crystal violet staining of the experiment shown in **a**, as described in "Methods" section. Data represented as individual data points, and bars and error bars representing the mean ± SEM of

12 independent experiments. Statistical analysis was performed using a one-way ANOVA (Tukey's test) for multiple comparisons. **c** Cell survival assay measuring the senolytic effect in replicative senescence. Graphs representing the cell survival by quantification of the crystal violet staining of confluent cultures of IMR90 cells at passage 27 (replicative senescence) and IMR90 cells at passage 13 (control) treated with 10 nM oleandrin, ouabain and periplocin, and DMSO as vehicle control for 72 h (related to Supplementary Fig. 9b). Data represented as individual data points, and bars and error bars representing the mean ± SEM of 12 independent experiments. Statistical analysis was performed using a one-way ANOVA (Tukey's test) for multiple comparisons. **d** Caspase 3/7 activity assay in control IMR90 ER:STOP and senescent IMR90 ER:RAS cells cultured in media containing 100 nM 4OHT, and treated during 35 h with 10 nM oleandrin, ouabain and periplocin, and DMSO as vehicle control. The panels show representative fluorescent images of caspase 3/7 positive cells (lower panels) and brightfield images (upper panels) of the same field for cell scoring. Percentage of green fluorescent cells per condition is indicated in the panel figures. Representative data of one of two independent experiments. Scale bars represent 100 μm. ns not significant, *p