

Novel Strategies for Cancer Combat: Drug Combination using Repurposed Drugs Induces Synergistic Growth Inhibition of MCF-7 Breast and HT-29 Colon Cancer Cells

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Supplementary Material

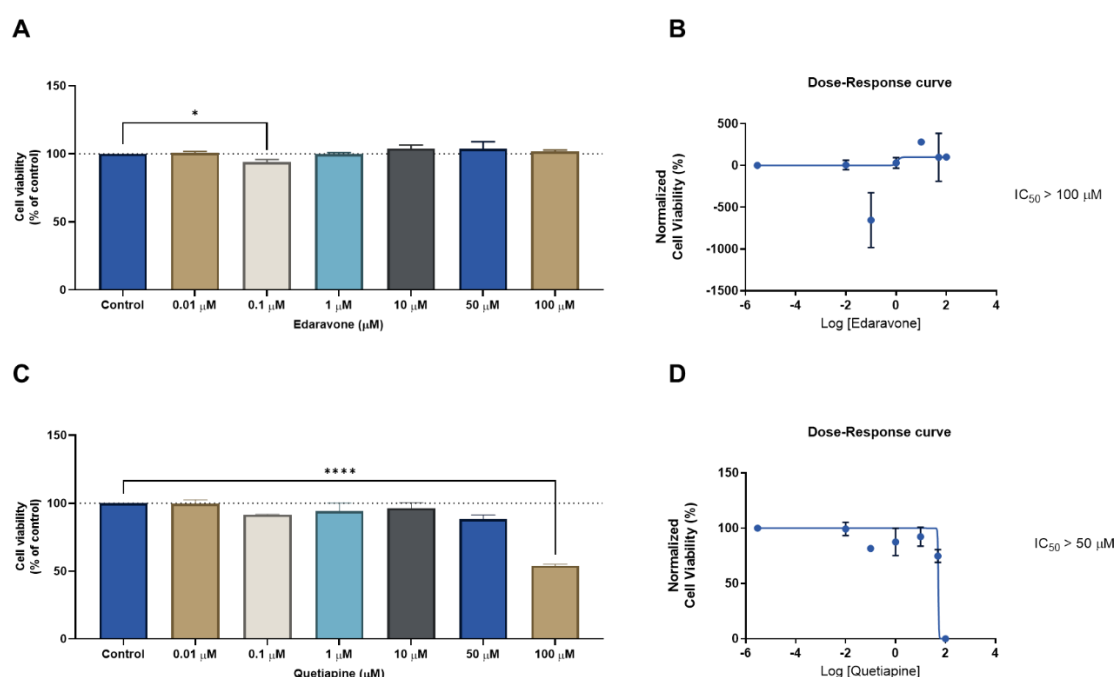


Figure S1. Cellular viability results of MCF-7 cells after treatment with the CNS drugs edaravone (top) and quetiapine (bottom). (A) MTT results and (B) dose-response curve of MCF-7 cells treated with edaravone. (C) MTT results and (D) dose-response curve of MCF-7 cells treated with quetiapine. Cells were incubated with increasing concentrations of each drug for 48 h and cell viability was evaluated using an MTT assay. Dose-response curves were obtained by normalization of cell viability results against the logarithm of the concentration of each drug. The IC_{50} value was determined using GraphPad. Experiments were performed three times independently ($n = 3$). * and **** indicate significant results at $p < 0.05$ and $p < 0.0001$, respectively.

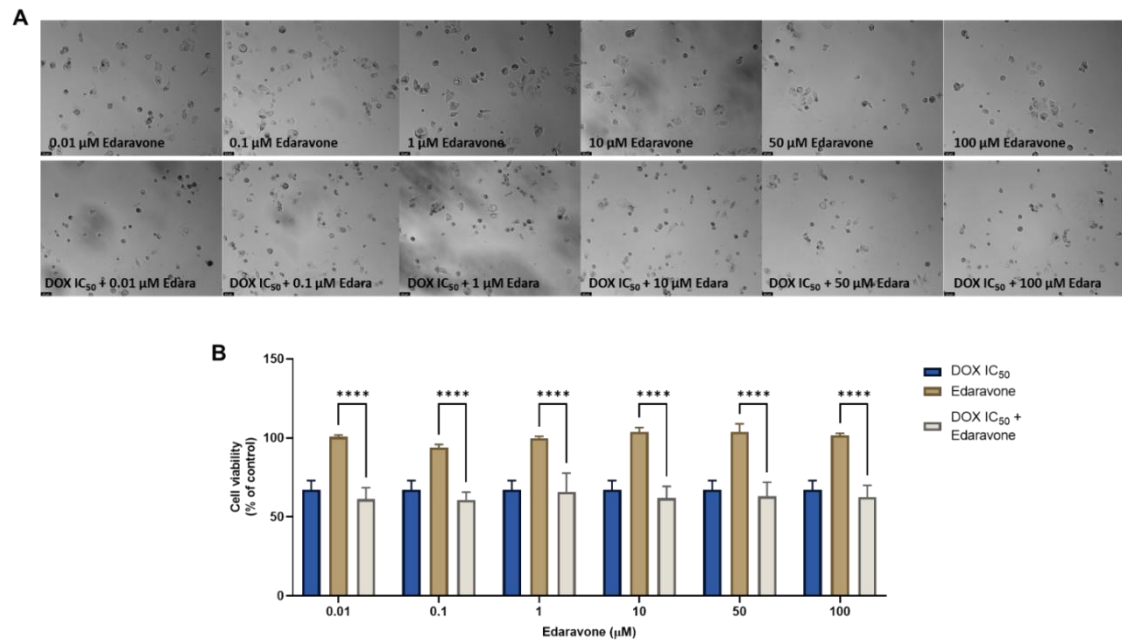


Figure S2. Morphological analysis (A) and cellular viability (B) results of MCF-7 cells after a single and combined treatment of DOX and edaravone. Cells were incubated with increasing concentrations of edaravone, alone and combined with a fixed concentration (IC₅₀) of DOX for 48 h. Cell viability was evaluated using an MTT assay. Experiments were performed three times independently ($n = 3$). **** indicate significant results at $p < 0.0001$.

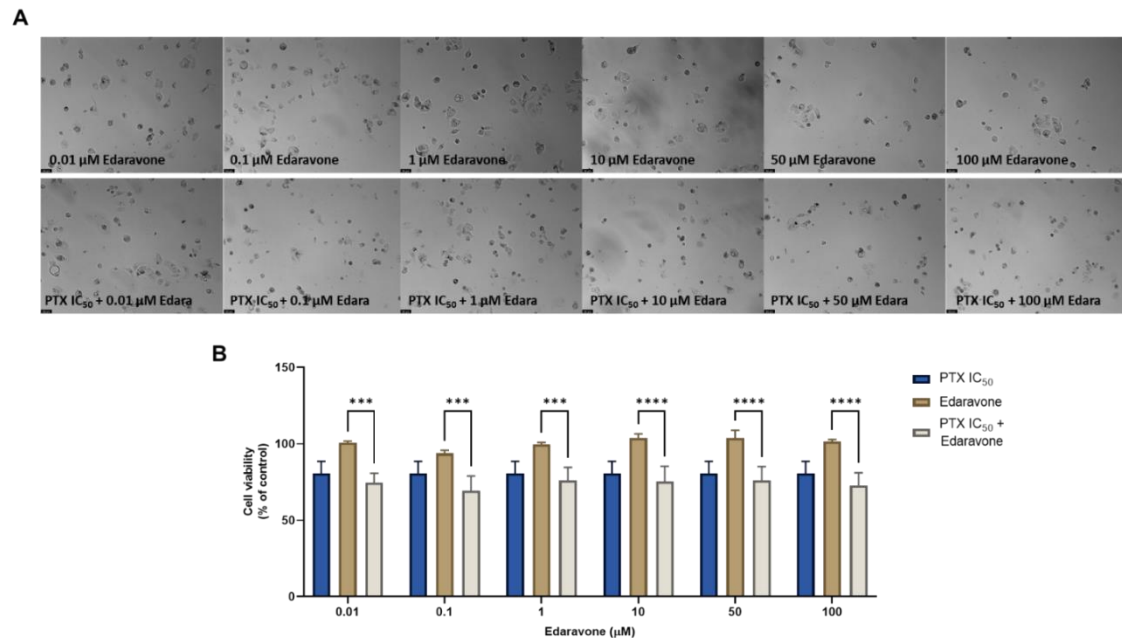


Figure S3. Morphological analysis (A) and cellular viability (B) results of MCF-7 cells after a single and combined treatment of PTX and edaravone. Cells were incubated with increasing concentrations of edaravone, alone and combined with a fixed concentration (IC₅₀) of PTX for 48 h. Cell viability was evaluated using an MTT assay. Experiments were performed three times independently ($n = 3$). *** and **** indicate significant results at $p < 0.001$ and $p < 0.0001$, respectively.

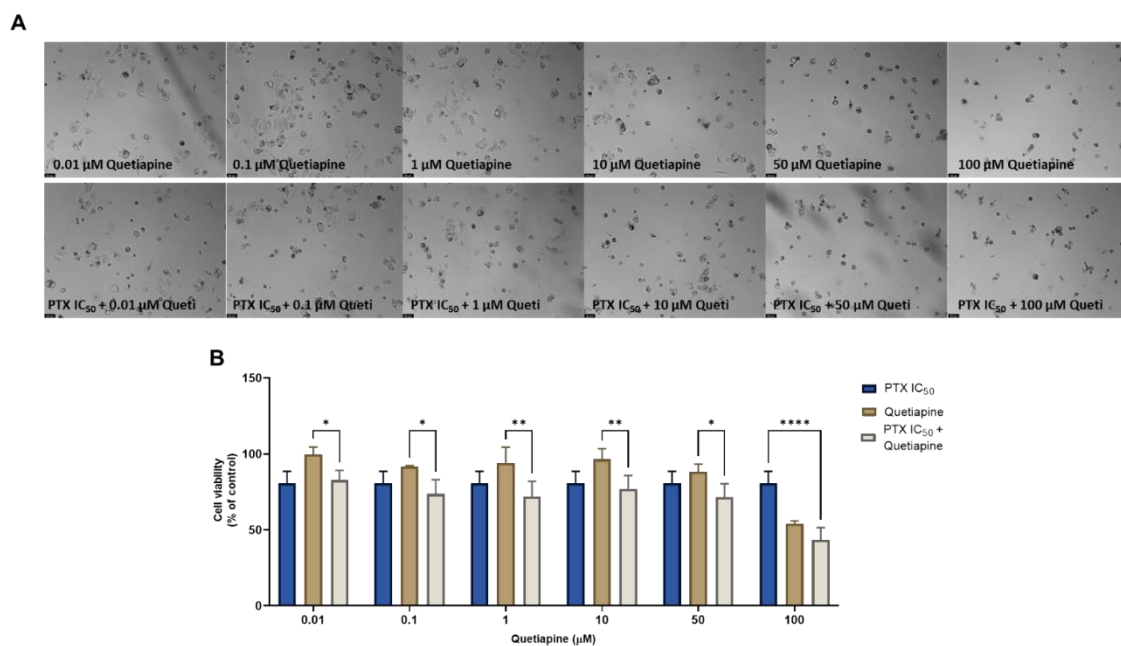


Figure S4. Morphological analysis (A) and cellular viability (B) results of MCF-7 cells after a single and combined treatment of PTX and quetiapine. Cells were incubated with increasing concentrations of quetiapine, alone and combined with a fixed concentration (IC_{50}) of PTX for 48 h. Cell viability was evaluated using an MTT assay. Experiments were performed three times independently ($n = 3$). *, ** and **** indicate significant results at $p < 0.05$, $p < 0.01$ and $p < 0.0001$, respectively.

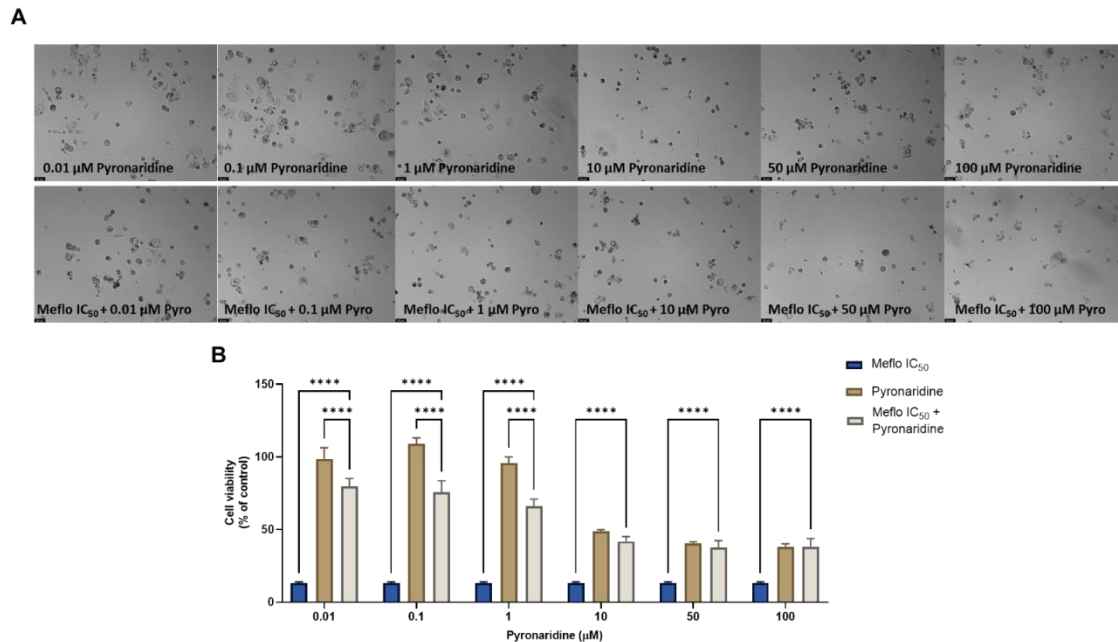


Figure S5. Morphological analysis (A) and cellular viability (B) results of MCF-7 cells after a single and combined treatment of mefloquine and pyronaridine. Cells were incubated with increasing concentrations of pyronaridine, alone and combined with a fixed concentration (IC_{50}) of mefloquine for 48 h. Cell viability was evaluated using an MTT assay. Experiments were performed three times independently ($n = 3$). **** indicate significant results at $p < 0.0001$.

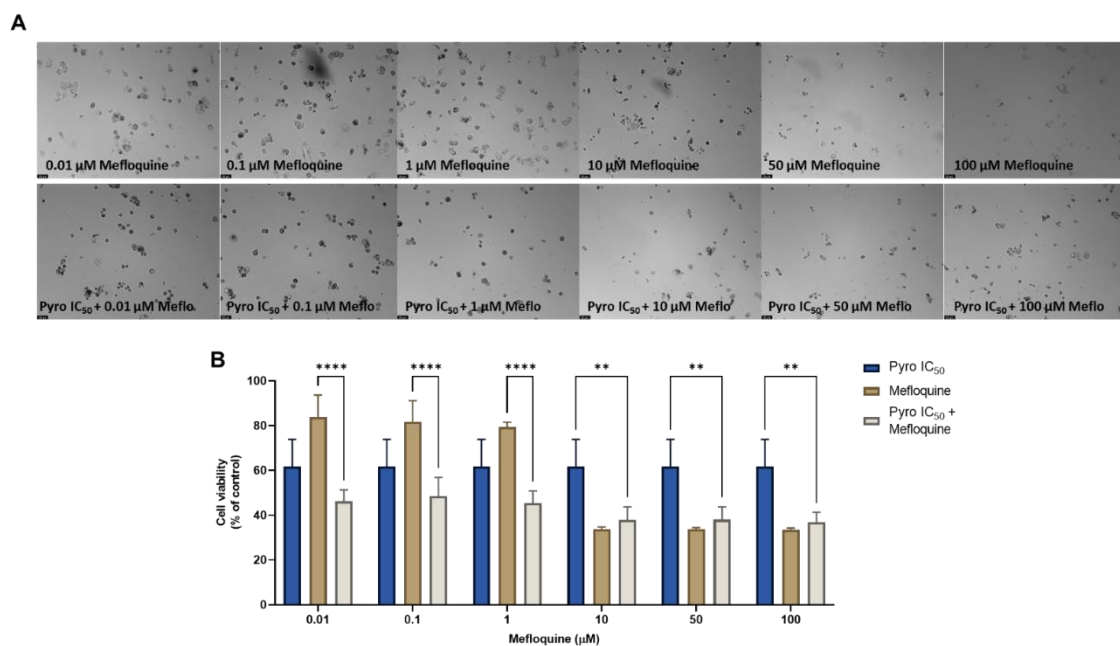


Figure S6. Morphological analysis (A) and cellular viability (B) results of MCF-7 cells after a single and combined treatment of pyronaridine and mefloquine. Cells were incubated with increasing concentrations of mefloquine, alone and combined with a fixed concentration (IC_{50}) of pyronaridine for 48 h. Cell viability was evaluated using an MTT assay. Experiments were performed three times independently ($n = 3$). ** and **** indicate significant results at $p < 0.01$ and $p < 0.0001$, respectively.

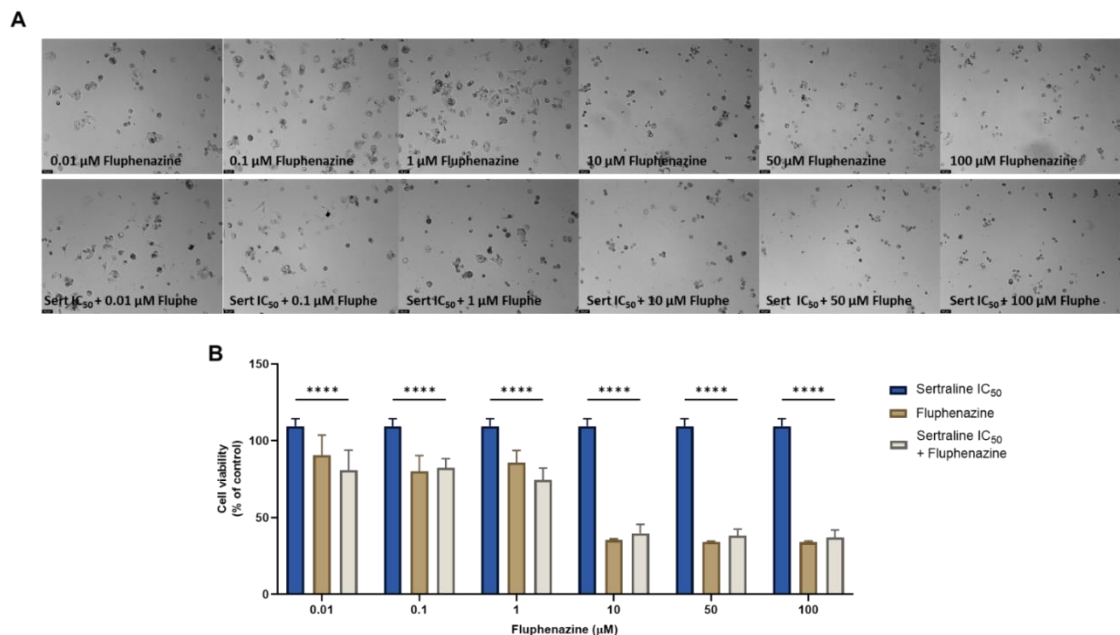


Figure S7. Morphological analysis (A) and cellular viability (B) results of MCF-7 cells after a single and combined treatment of fluphenazine and sertraline. Cells were incubated with increasing concentrations of fluphenazine, alone and combined with a fixed concentration (IC_{50}) of sertraline for 48 h. Cell viability was evaluated using an MTT assay. Experiments were performed three times independently ($n = 3$). **** indicate significant results at $p < 0.0001$.

A

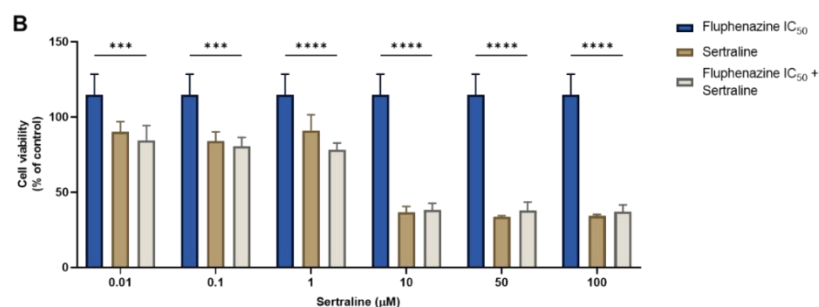
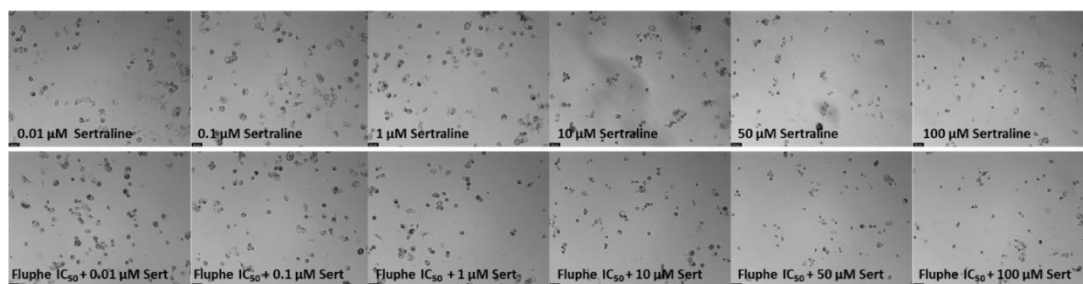


Figure S8. Morphological analysis (A) and cellular viability (B) results of MCF-7 cells after a single and combined treatment of sertraline and fluphenazine. Cells were incubated with increasing concentrations of sertraline, alone and combined with a fixed concentration (IC₅₀) of fluphenazine for 48 h. Cell viability was evaluated using an MTT assay. Experiments were performed three times independently ($n = 3$). *** and **** indicate significant results at $p < 0.001$ and $p < 0.0001$, respectively.

A

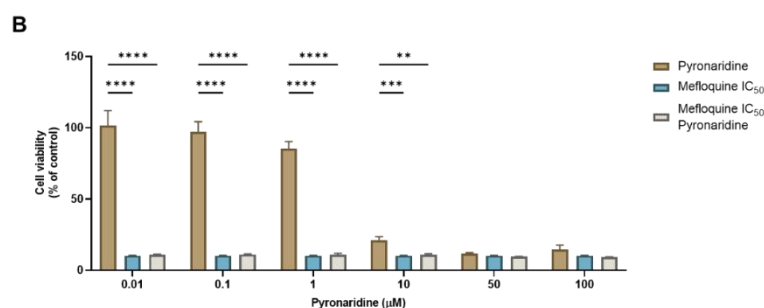
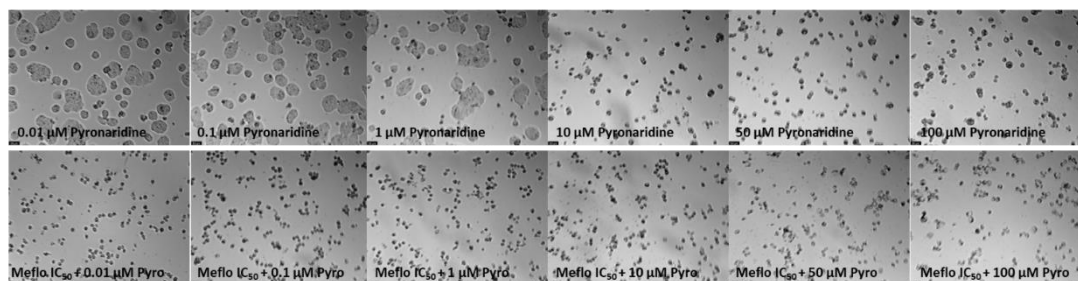


Figure S9. Morphological analysis (A) and cellular viability (B) results of HT-29 cells after a single and combined treatment of mefloquine and pyronaridine. Cells were incubated with increasing concentrations of pyronaridine, alone and combined with a fixed concentration (IC₅₀) of mefloquine for 48 h. Cell viability was evaluated using an MTT assay. Experiments were performed three times independently ($n = 3$). **, *** and **** indicate significant results at $p < 0.01$, $p < 0.001$ and $p < 0.0001$, respectively.

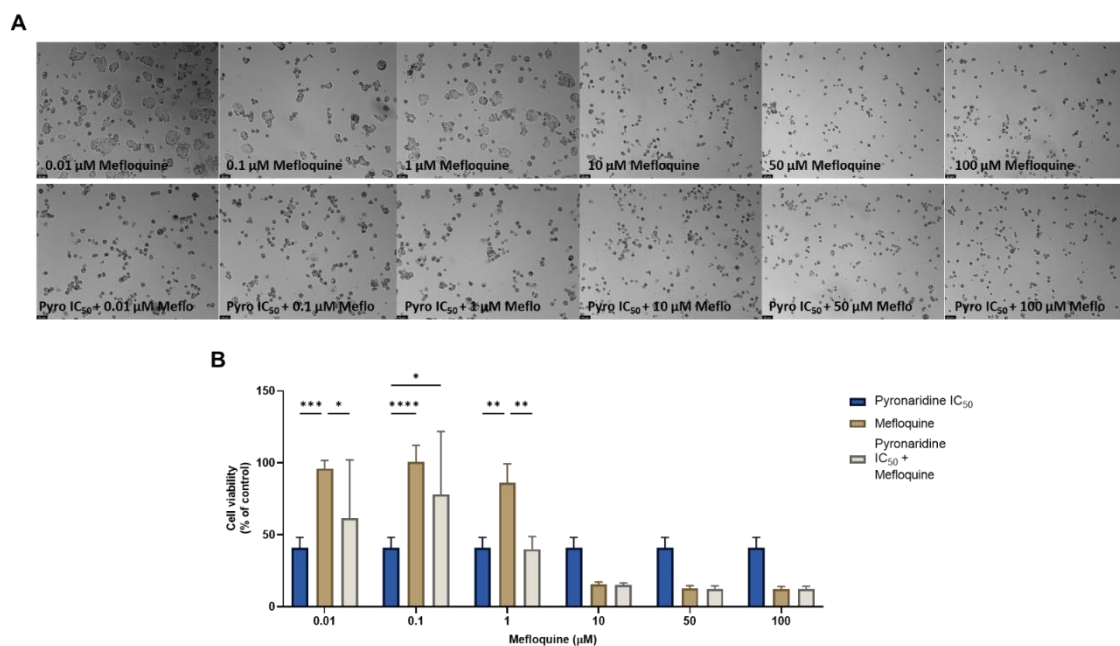


Figure S10. Morphological analysis (A) and cellular viability (B) results of HT-29 cells after a single and combined treatment of mefloquine and pyronaridine. Cells were incubated with increasing concentrations of mefloquine, alone and combined with a fixed concentration (IC_{50}) of pyronaridine for 48 h. Cell viability was evaluated using an MTT assay. Experiments were performed three times independently ($n = 3$). *, **, *** and **** indicate significant results at $p < 0.05$, $p < 0.01$, $p < 0.001$ and $p < 0.0001$, respectively.

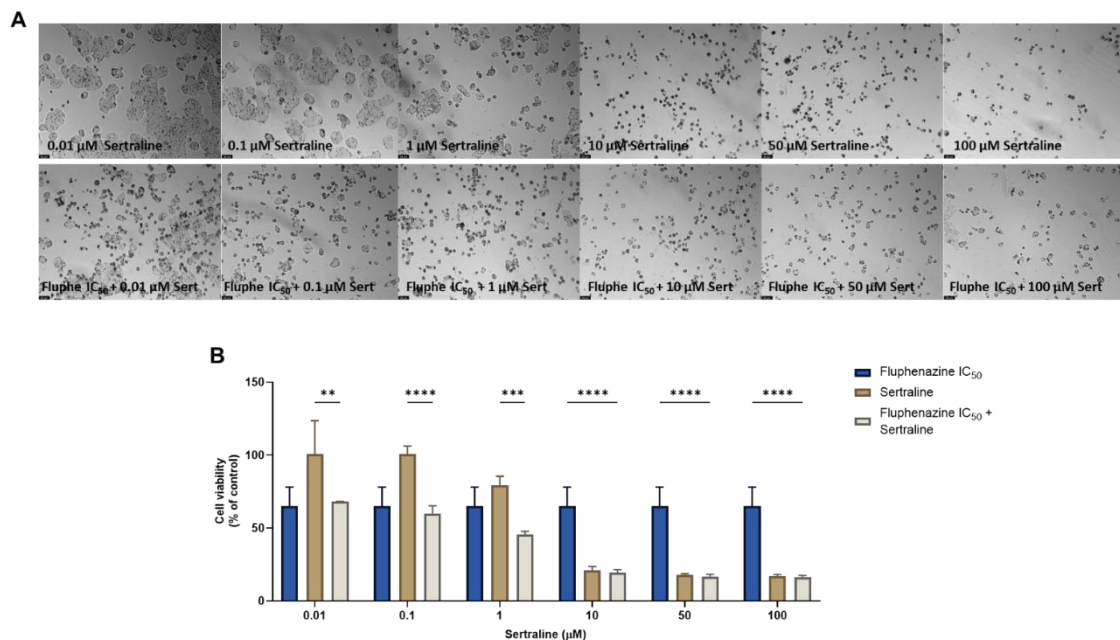


Figure S11. Morphological analysis (A) and cellular viability (B) results of HT-29 cells after a single and combined treatment of fluphenazine and sertraline. Cells were incubated with increasing concentrations of sertraline, alone and combined with a fixed concentration (IC_{50}) of fluphenazine for 48 h. Cell viability was evaluated using an MTT assay. Experiments were performed three times independently ($n = 3$). **, *** and **** indicate significant results at $p < 0.01$, $p < 0.001$ and $p < 0.0001$, respectively.