

# Supplementary material

**New insight in breast cancer cells involving drug combinations for dopamine and serotonin receptors**

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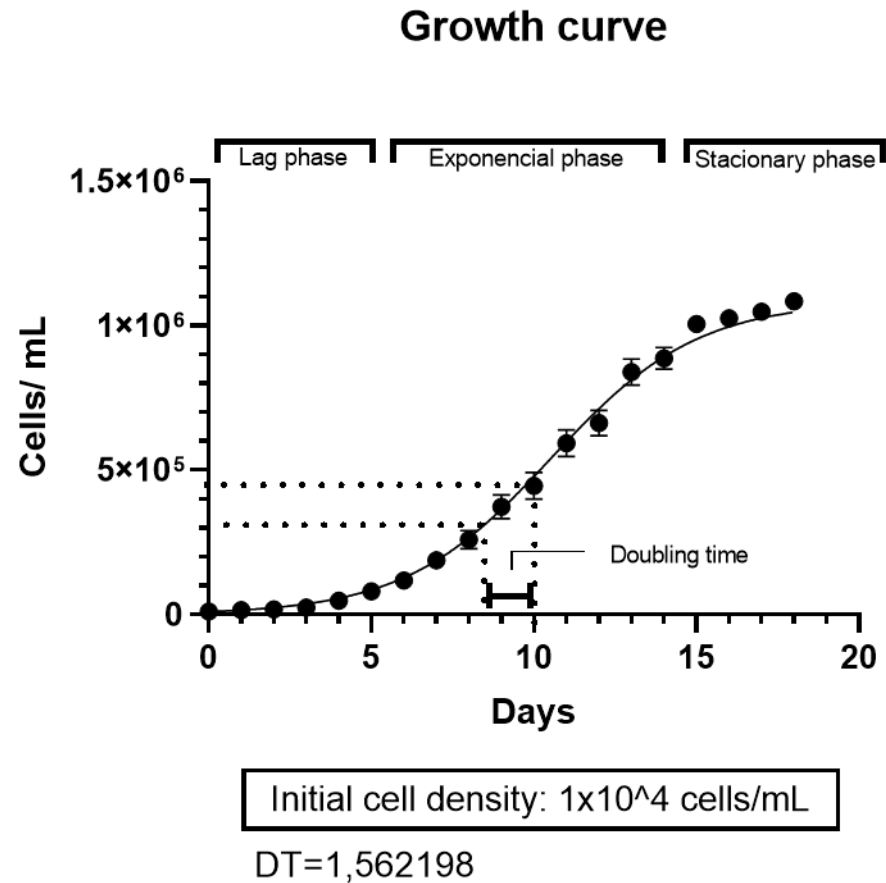
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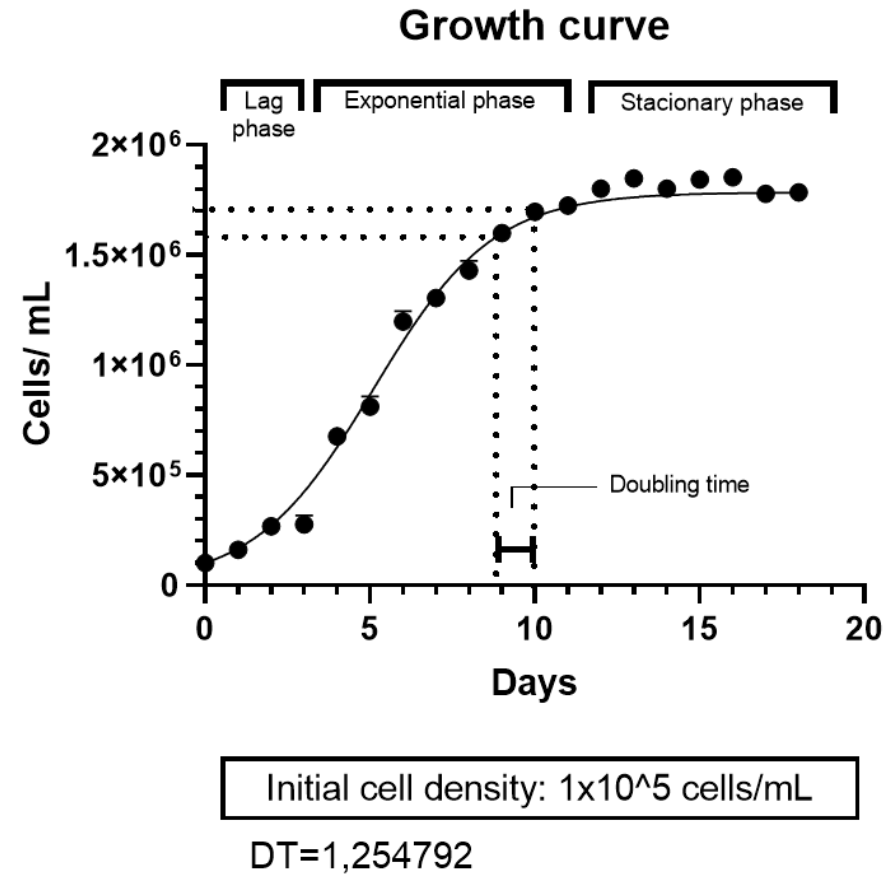
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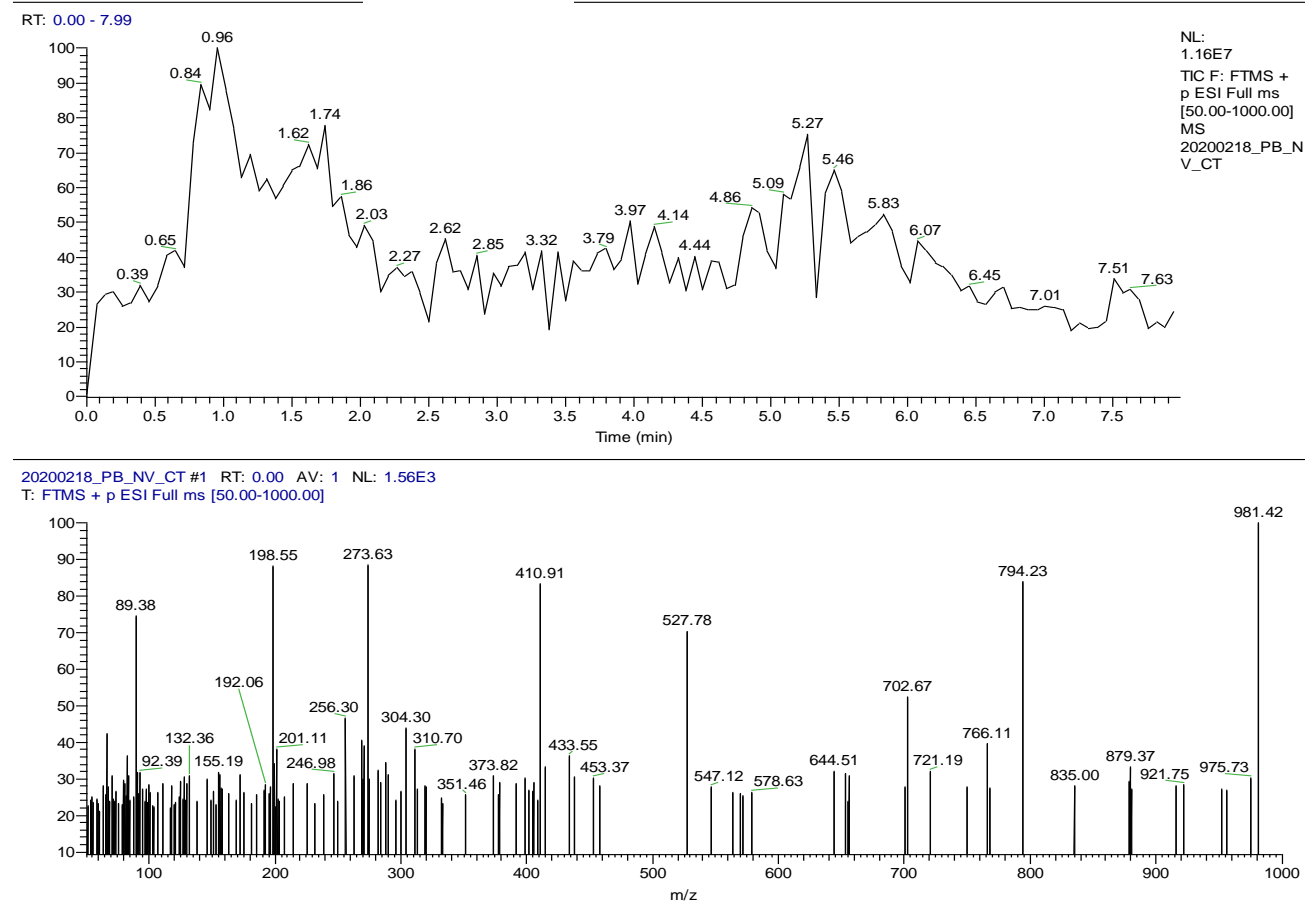
\* Correspondence: [nunovale@med.up.pt](mailto:nunovale@med.up.pt);



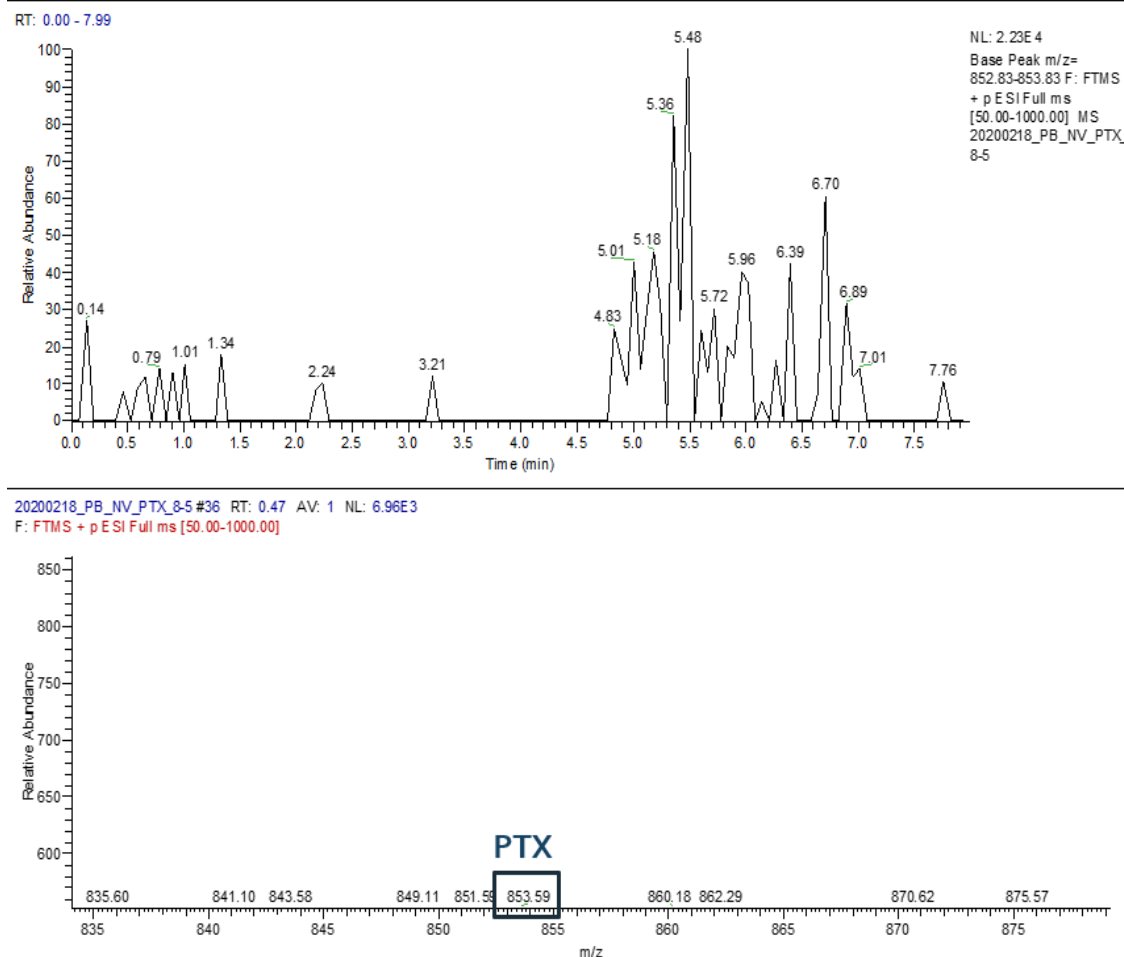
**Figure S1** – Growth curve of MCF-7 cells growth in culture. Initial cell density of  $1 \times 10^4$  cells/mL. Results are expressed as mean  $\pm$  standard error of the mean (SEM). In three independent experiments (n=3).



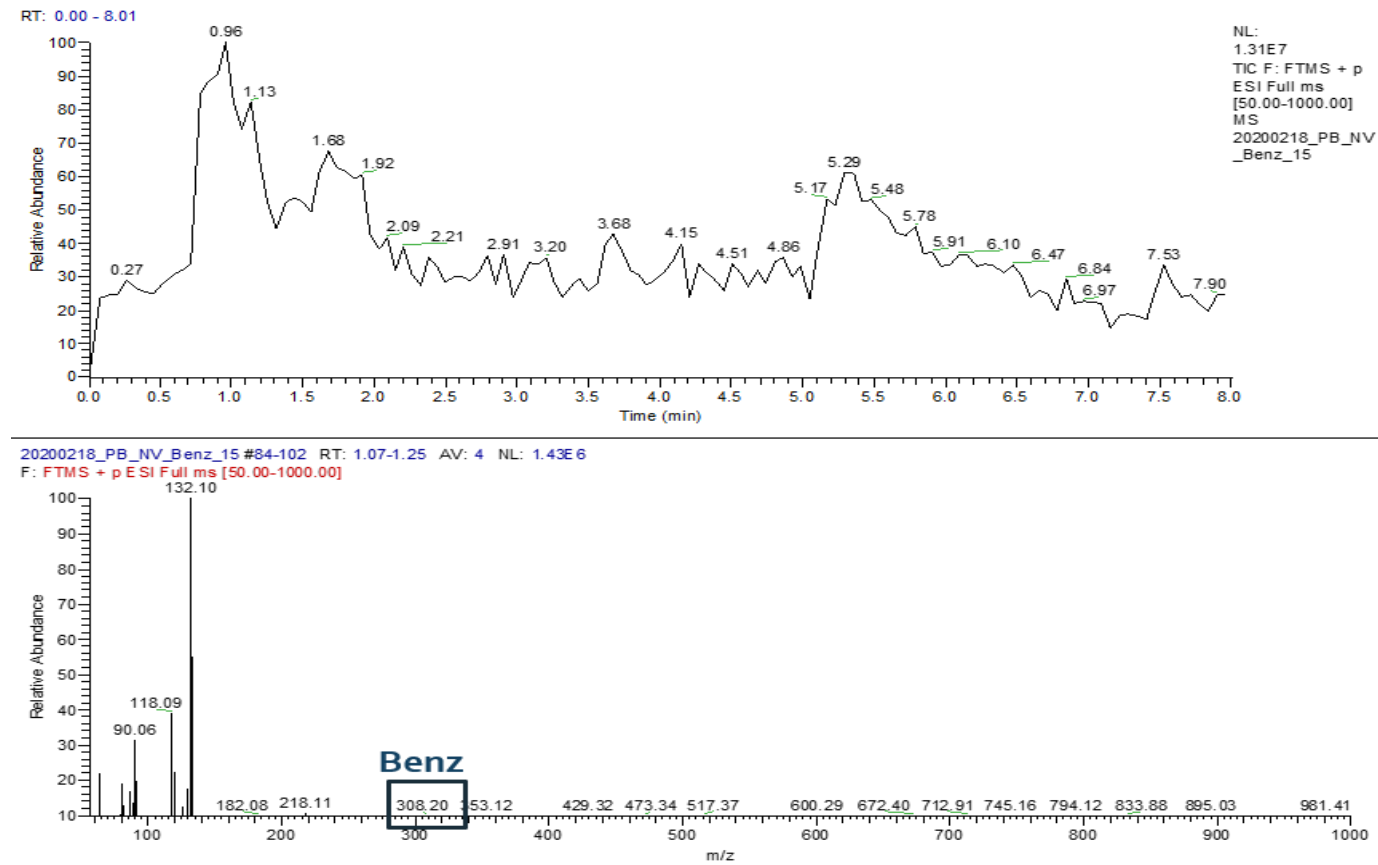
**Figure S2** – Growth curve of MCF-7 cells growth in culture. Initial cell density of  $1 \times 10^5$  cells/mL. Results are expressed as mean  $\pm$  standard error of the mean (SEM). In three independent experiments (n=3).



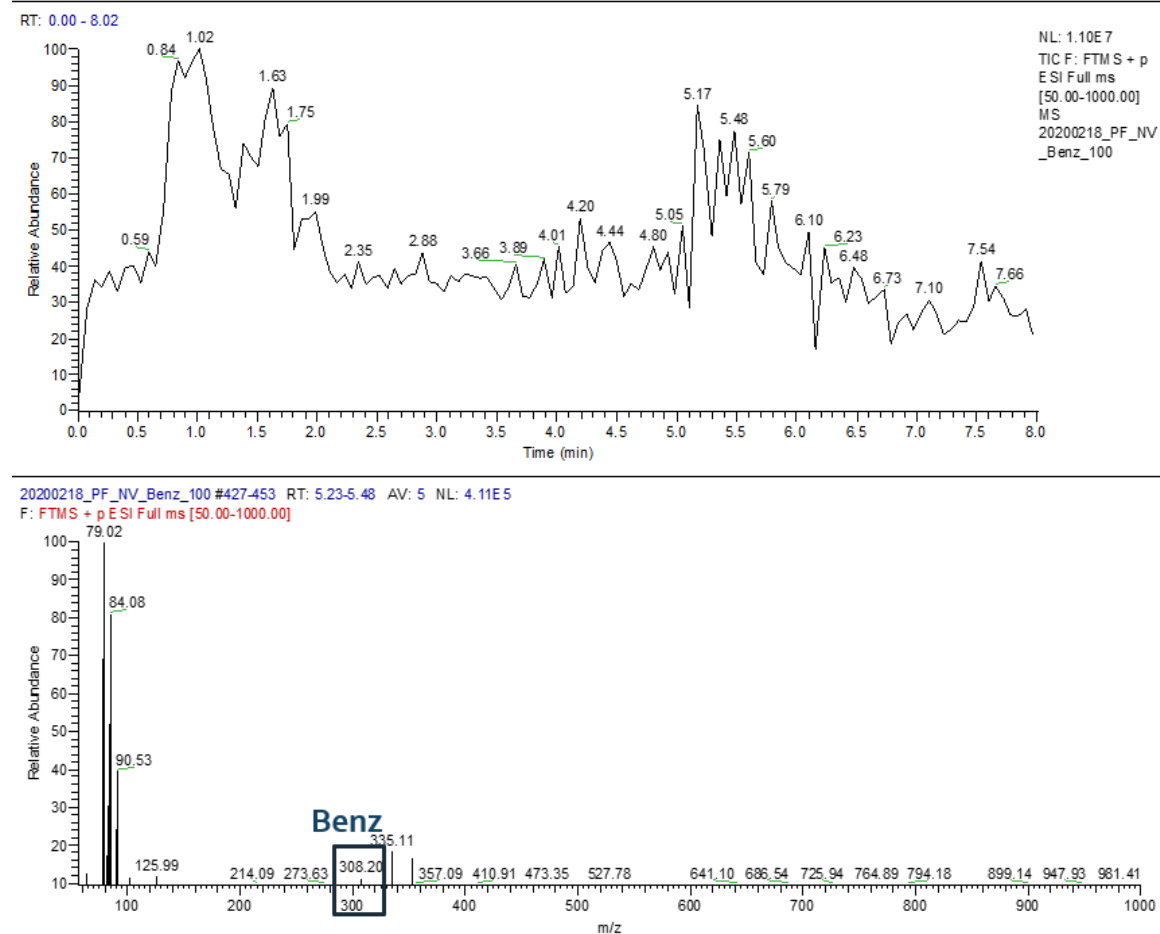
**Figure S3** – LC-MS chromatogram of the supernatant obtained from the MCF-7 cells without treatment.



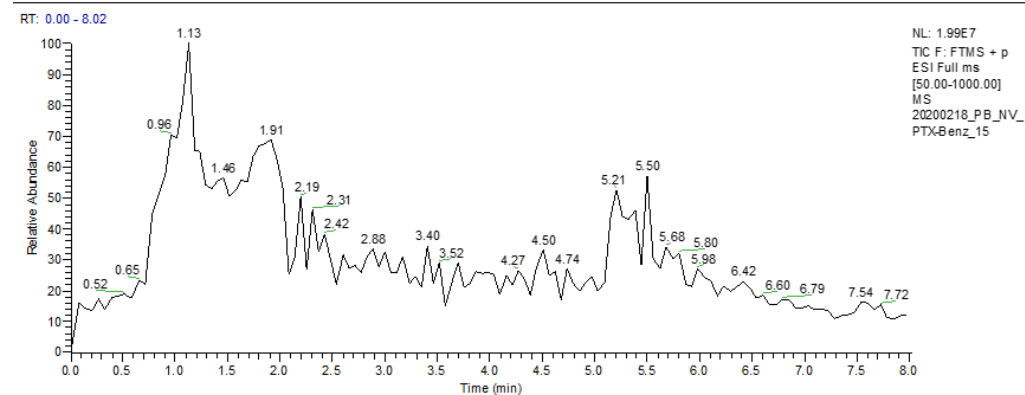
**Figure S4** – LC-MS chromatogram of the supernatant obtained from the MCF-7 cells treated only with Paclitaxel, at the IC<sub>50</sub> concentration, during 48h. The base peak is vestigial, m/z is 853.



**Figure S5** - LC-MS chromatogram of the supernatant obtained from the MCF-7 cells treated with Bzotropine, at the IC<sub>50</sub> concentration, during 48h. The base peak is low, m/z is 308.20.

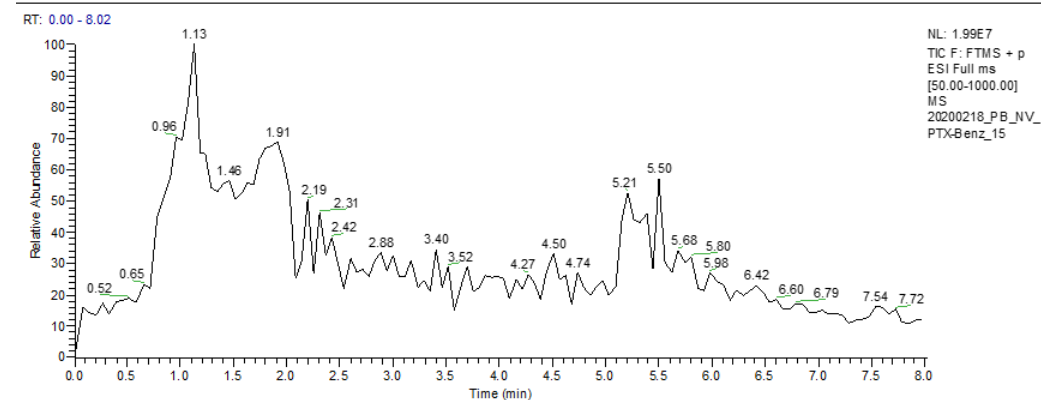
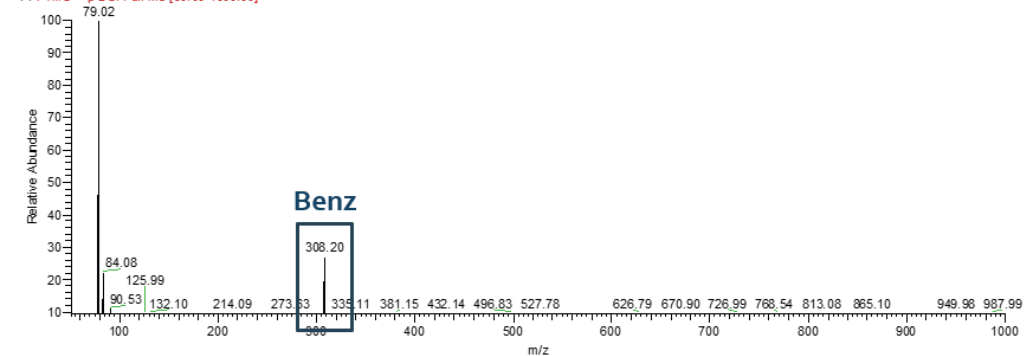


**Figure S6** - LC-MS chromatogram of the supernatant obtained from the MCF-7 cells treated with Benztropine at the highest concentration 100  $\mu$ M, during 48h. The base peak is low, m/z is 308.20.



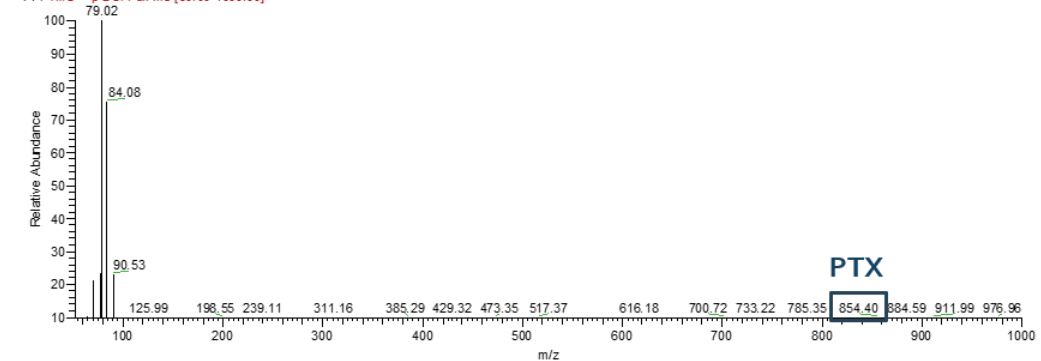
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F: FTMS + p ESI Full ms [50.00-1000.00]



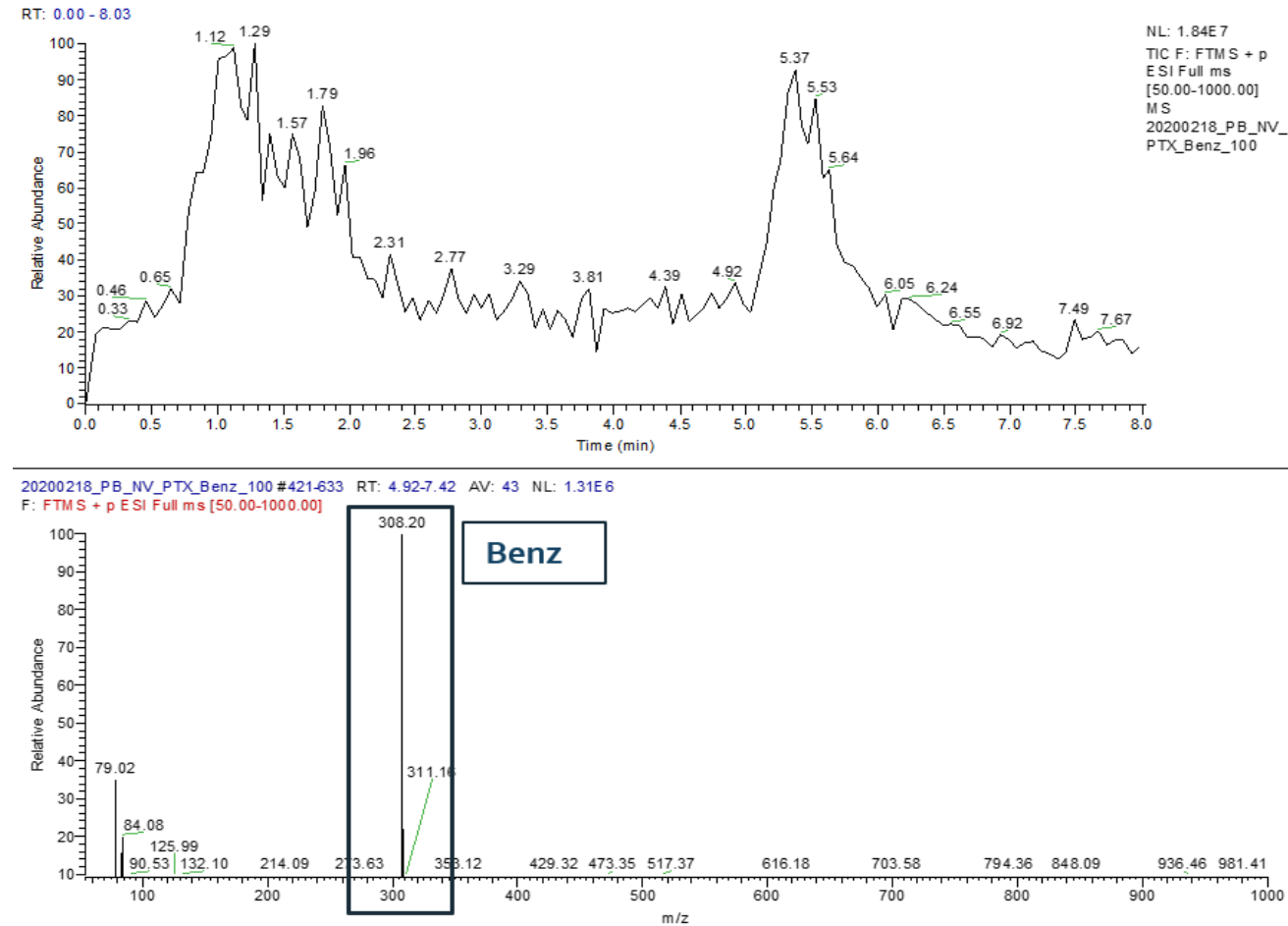
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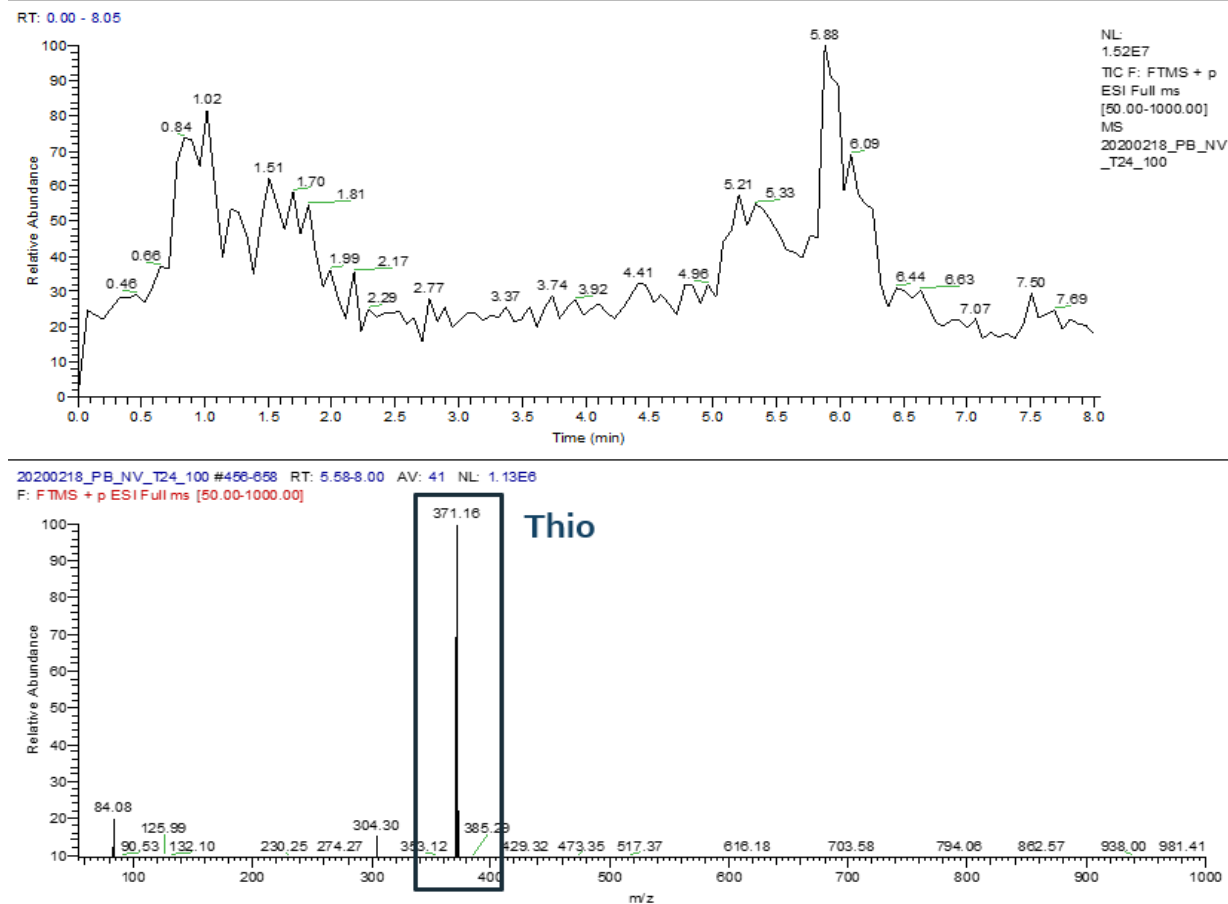


**Figure S7** - LC-MS chromatogram of the supernatant obtained from the MCF-7 cells treated with the combination of Benztropine and Paclitaxel, at the IC<sub>50</sub> concentration. The m/z is 308.20 for Benztropine (left) and 854.40 for Paclitaxel (right).

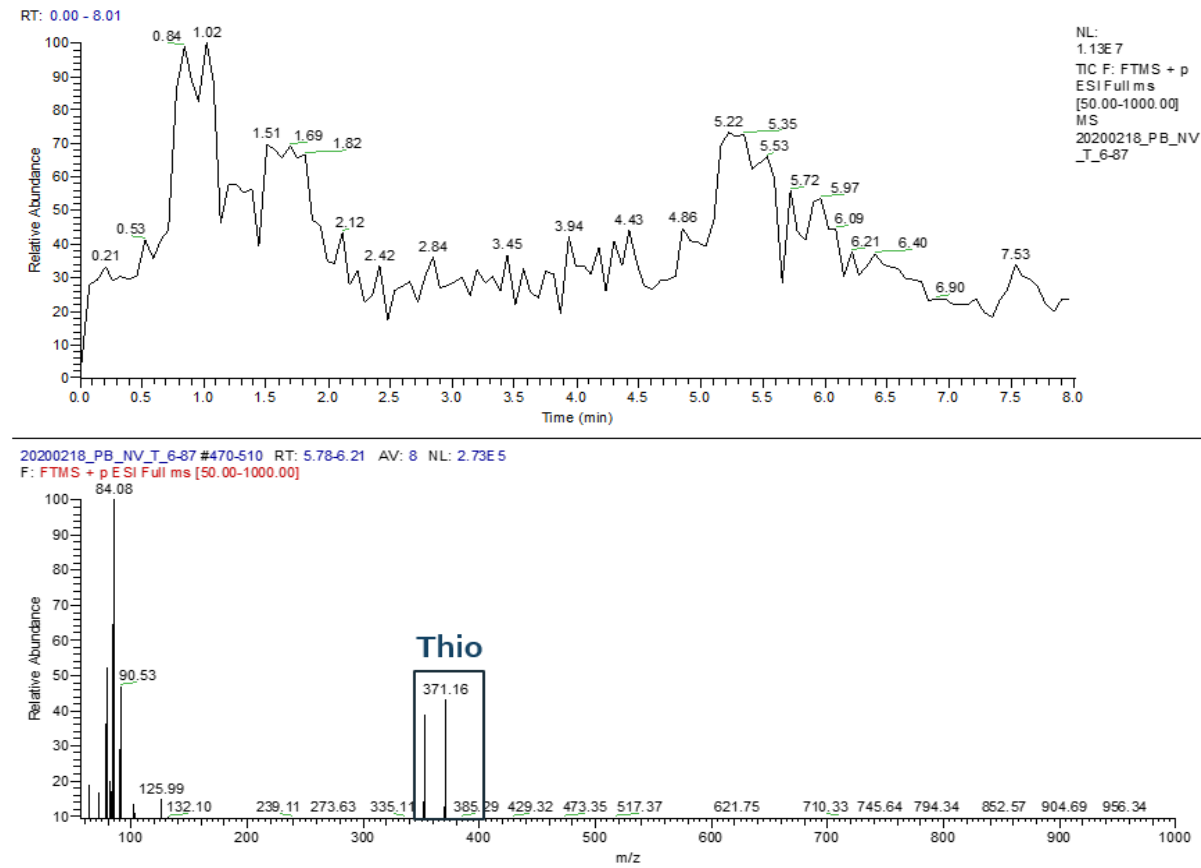




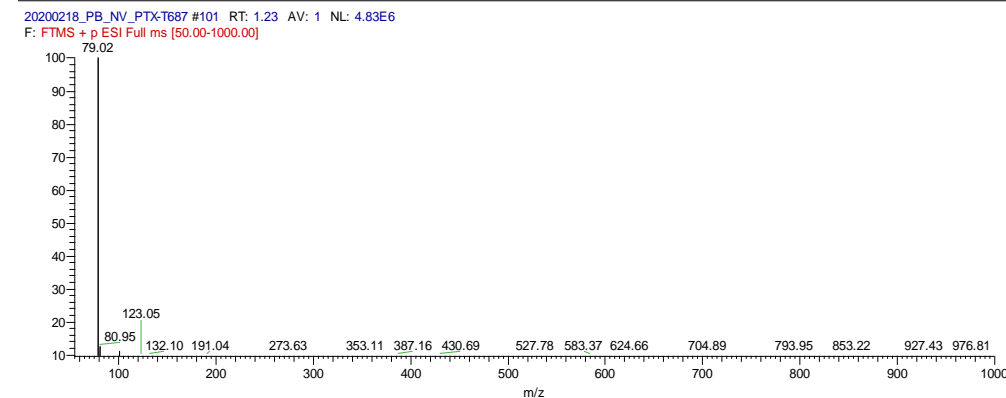
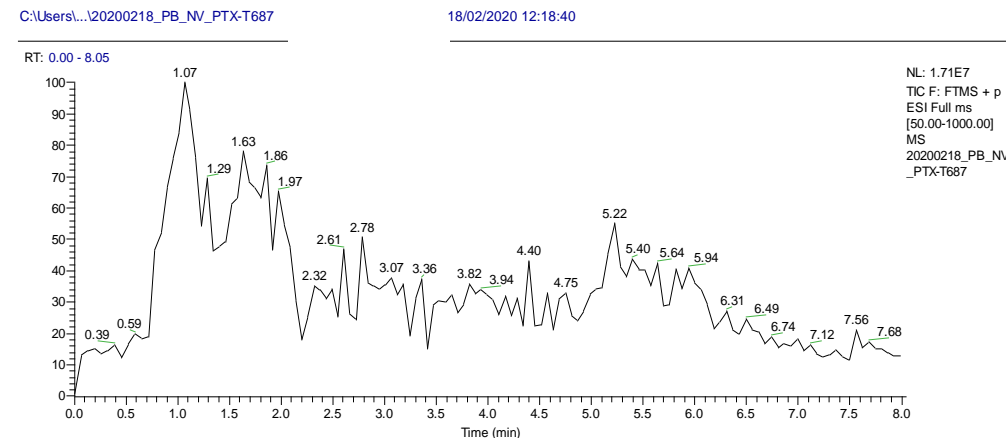
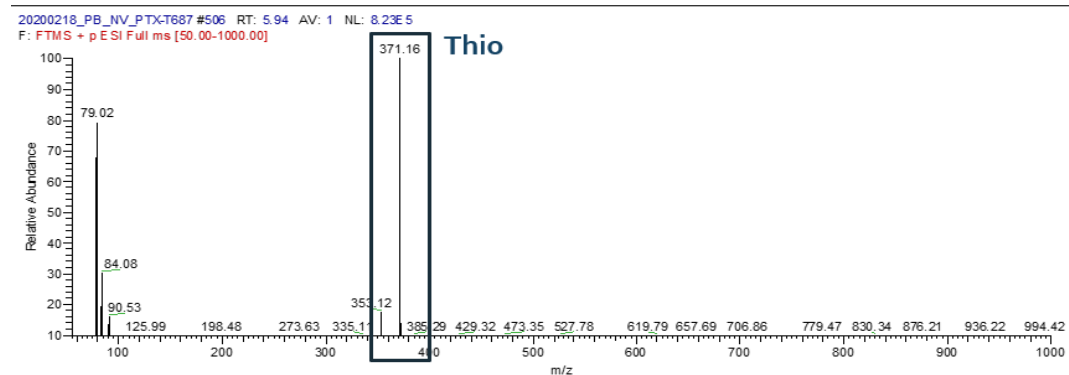
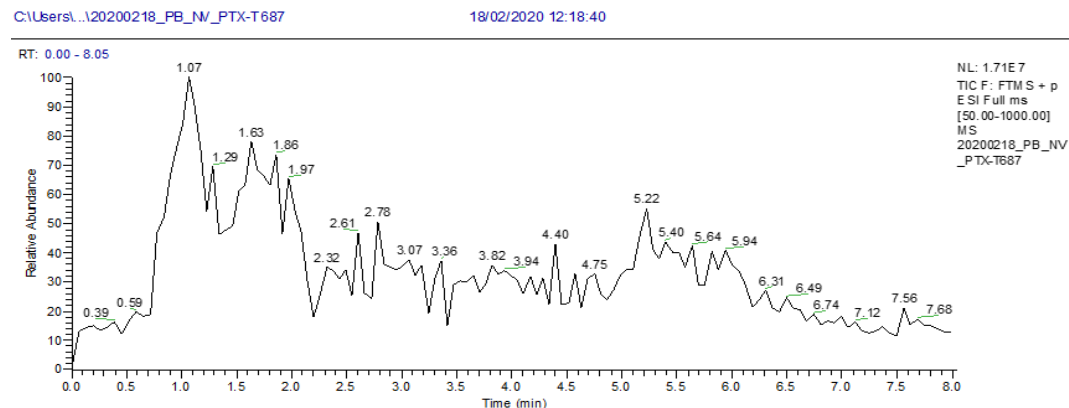
**Figure S8** - LC-MS chromatogram of the supernatant obtained from the MCF-7 cells treated with the combination of Benztropine, at the highest concentration 100  $\mu$ M, and Paclitaxel at its IC50 concentration, during 48h. The base peak is low, m/z is 308.20.



**Figure S9** - LC-MS chromatogram of the supernatant obtained from the MCF-7 cells treated with Thioridazine, after 24h of treatment. At the IC<sub>50</sub> concentration. The m/z is 371.16.



**Figure S10** - LC-MS chromatogram of the supernatant obtained from the MCF-7 cells treated with Thioridazine, at the IC<sub>50</sub> concentration. The m/z is 371.16.



**Figure S11** - LC-MS chromatogram of the supernatant obtained from the MCF-7 cells treated with the combination of Thioridazine and Paclitaxel, at the IC50 concentration, during 48h. The m/z is 371.11 for Thioridazine (left) and 854.40 for Paclitaxel (right).