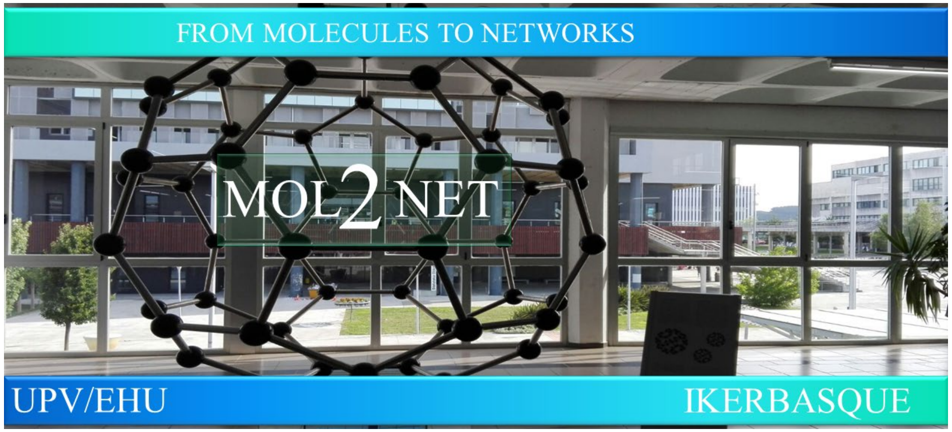

Profile of the expression of genes and the proteins encoded by them related to the phenomenon of loss of an adequate response to treatment in endometrial cancer

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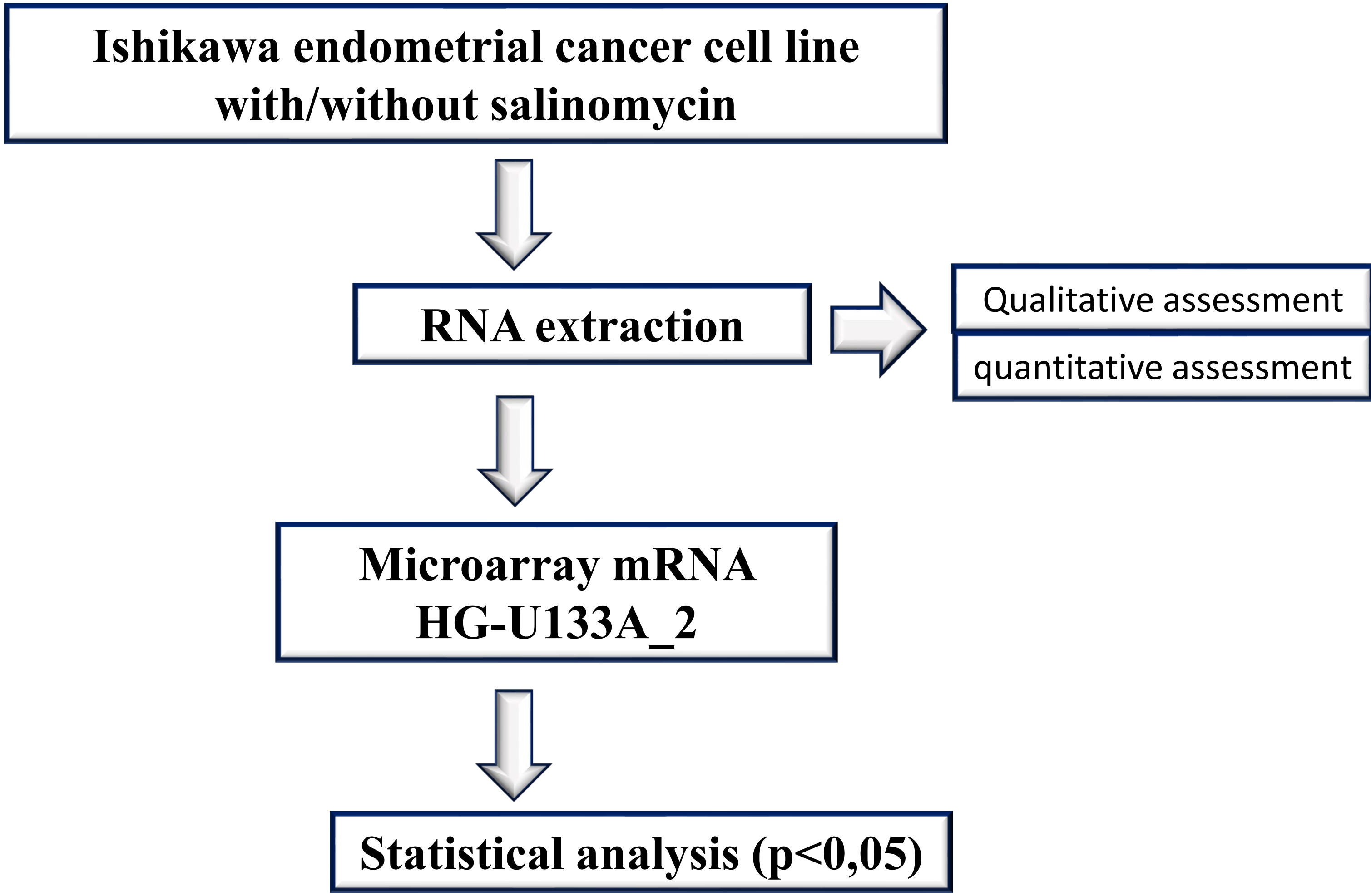
Introduction

The occurrence of the phenomenon, where loss of an adequate response to anti-cancer treatment is observed, or drug resistance, is connected with, among other things: the occurrence of new DNA mutations; metabolic changes in cancer cells; drug inactivation; inhibition of cancer cell apoptosis; the epithelial-mesenchymal transition (EMT); heterogeneity of the cells constituting the tumor mass; the influence of epigenetic factors; as well as any combination of the listed factors.

Aim

The main aim of this study was to determine the expression profile of mRNAs related with the drug resistance phenomenon in Ishikawa line endometrial cancer cells treated with salinomycin compared to the control culture.

Material and methods



Ishikawa endometrial cancer cell line with/without salinomycin

RNA extraction

Qualitative assessment

quantitative assessment

Microarray mRNA HG-U133A_2

Statistical analysis ($p<0,05$)

Results

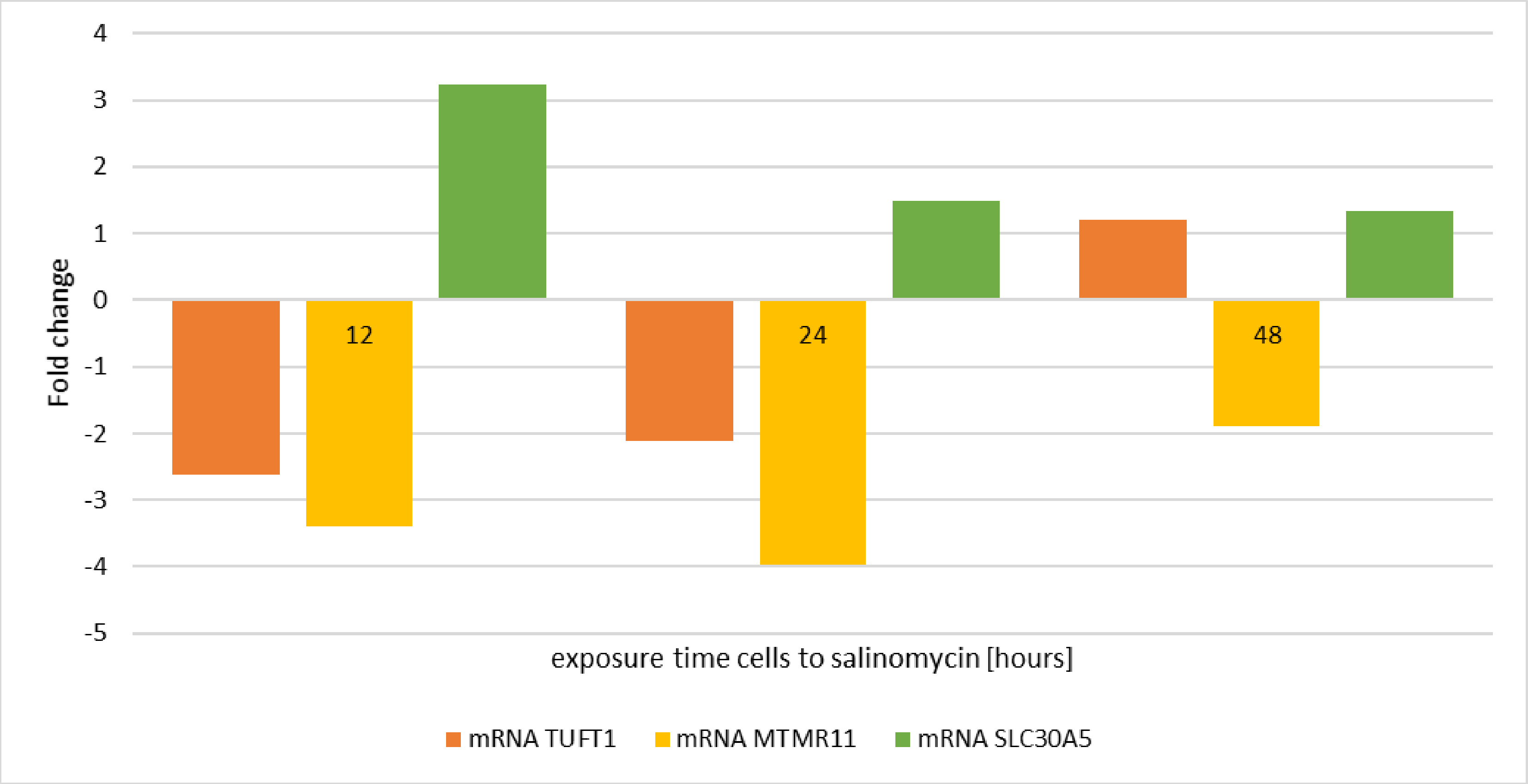


Figure 1. Expression of TUFT1, MTMR11 and SLC30A5 depending on the exposure time of the Ishikawa cell line to salinomycin.

Conclusion

Based on the conducted research as part of this study, it was confirmed that salinomycin added to the Ishikawa line endometrial cancer cell culture indices changes in the mRNA transcriptome related to the drug resistance phenomenon and caspase pathway. Furthermore, we observed that salinomycin induces apoptosis in endometrial cancer cells, mainly through the mitochondrial pathway.