

STUDYING THE EFFECT OF CV247 COMPONENT IN HUMAN ESTABLISHED CANCER CELL LINES BECOMING FROM PROSTATE AND BREAST CARCINOMAS.



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INTRODUCTION

CV247 is a combination of already known substances such as gluconate manganese, gluconate copper, sodium salicylate as well as ascorbic acid (vitamin C). The scientific community has proven its great impact to many types of malignancies, as it reduces the proliferation rate of cancer cells and as a result the tumor mass. Additionally, it has been proven that it has improved the standard of living of many patients with advanced stage of prostate cancer. Having in mind the synergistic effect of its components as well as the properties of its substance separately, this study *aims* to prove the hypothesis that CV247 agent inhibits and / or inactivates the molecular pathways of cancer development.

MATERIALS

Human established cancer cell lines which were obtained from the European Collection of Cell Cultures (ECACC), were used in order to prove the effect of CV247. The human cancer cell lines represented breast carcinomas (MDA-MB 231, MFM-223 and T47D) as well as prostate carcinomas (PC3, 22Rv1 and LNCaP).

METHODS

The panel of the experiments includes assays which are based on the quantification analysis of living cells by using indirect parameters (chemosensitivity – colorimetric assays) such as MTT (methyl tetrazolium dye), SRB (Sulforhodamine B assay) and CVE (Crystal Violet dye) in different incubation periods (0h, 24h & 48h) and concentrations of the drug (1/100 & 1/200)

CONCLUSION

This is one of the most significant studies that proves the cytotoxic / cytostatic impact of CV247 agent primarily in breast than in prostate carcinomas

RESULTS

The results indicate that CV247 has a greater effect in breast tumors as it reduces the number of living breast cancer cells more than the prostate cancer cells. The figures below indicate the CV247's action in MDA-MB 231 cell line.

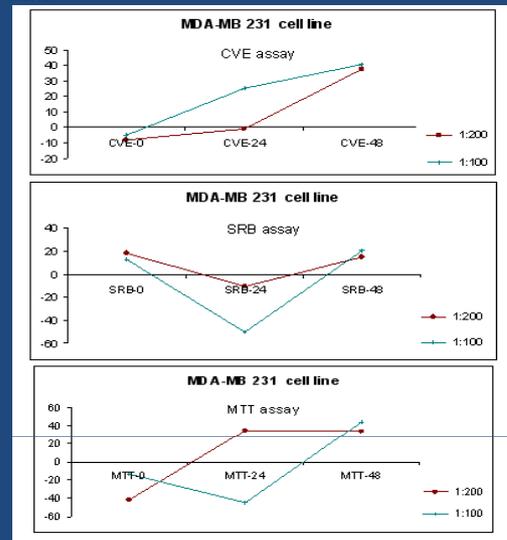


Figure 1. Results of the cytotoxic / cytostatic effect of CV247 in MDA-MB 231 human established cell line in different incubation times and concentrations of the agent.

MDA-MB 231 cell line

CVE	FOLD DECREASE		SRB	FOLD DECREASE	
	1/100	1/200		1/100	1/200
0h	-5.2	-8.2	0h	12.6	18.4
24h	25.2	-0.9	24h	-50.6	-10.5
48h	40.7	37.8	48h	20.7	15.2

MTT	FOLD DECREASE	
	1/100	1/200
0h	-13.9	-41.8
24h	-44.9	34.7
48h	44.0	34.0

Table 1. Decrease fold of the cells which were incubated with CV247 when compared with untreated cells. The percentage is almost 50%.

References

- Mosmann T. Rapid colorimetric assay for cellular growth and survival: application to proliferation and cytotoxicity assays. *J Immunol Methods* 1983;65(1-2):55-63
- Skehan P, Storeng R, Scudiero D, Monks A, McMahon J, Vistica D, et al. New colorimetric cytotoxicity assay for anticancer-drug screening. *J Natl Cancer Inst.* 1990; 82(13):1107-12.
- www.ivymedical.com/history-product.html