Oncothermia paradigm

Objective

Oncothermia is a new type of cancer treatment targeting the malignant cells at nano-range, at the membrane and exciting basic cell-recall signaling pathways. [1]. The main achievements explaining the molecular differences between malignant and healthy cells were well recognized in this century, but unfortunately these were not used for selection in practical applications. Our objective is to show how oncothermia uses these insights and already proven results.

Method

Oncothermia exploits many signaling pathways by excising field and high temperature gradient at the cellular membranes. The exactions of the cells are based on those strong discovering: high glucose metabolism of malignant cells discovered by Warburg [2]. The exsce of metabolic conditions around the malignant cells is in comparision to their healthy counterparts. Defined selective deficiencies of the malignant cells (gaps) and normal (katabatic) cells discovered by the Nobel laureate A. Szent-Györgyi [3]. This idea is extended by the late-dissection selection. [4] and effectively used for membrane engineering. The structural differences (distinguish by the pathological pattern) can be described with fractals and their dynamics by fractals in time. This called Fractal Physiology [5] which distinguishes between the tissues, recognizing the individual, automic cells from the collected, correlated ones.

Results

In consequence of the effects multiple changes are recognized in the outer cell membrane:
- Inducing specific signals
- Forming membrane-GFP
- Higher permeability
- Higher mobility of domains
- Damages on membrane
- Reactivation and demodulation
- Derivative of the cytoplasms
- Higher pressure developed
- Activated apoptosis pathways
- Activated death receptor
- The effects and their actions in the oncothermia treatment process can be measured in vitro and in vivo as well.

Conclusion

Oncothermia uses cellular nano-effects for targeting and eliminating the malignant cells. It is a feasible and well proven method for natural cell-killing and for immune activation as well.

References


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