

Biological Effects of Christos Drossinakis on Model Bio Systems with Cancer Cells

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Submitted: 31 Mar 2019; **Accepted:** 10 Apr 2019; **Published:** 17 May 2019**Introduction**

The research is co-written with Prof. Reneta Toshkova, Ass. Prof. Elissaveta Zvetkova и Ass. Prof. Georgi Gluhchev.

In over 80 institutes and centers in Europe has been proved the strong bio-influence of Drossinakis via the application of the methods biophotons (Popp), thermovision (Schlebusch), spectrum analysis of water (Antonov, Ignatov), color coronal spectral analysis (Ignatov), gas discharge visualization (Korotkov), synchronizing of brain electromagnetic waves (Li Gendinovich) etc. Drossinakis has achieved the following results according the norm –biophoton emission (Popp) (~900 biophotons 1 cm²/ 1s), (norm~85 photons, 1 cm²/1s); increasing of the temperature after bioinfluence (Schlebusch) (1.6-1.8 °C) (norm 0.1°C); average energy of hydrogen bonds among water molecules according control sample (Antonov, Ignatov) (±8.2meV) (±1.1 meV)etc.

In the current study was followed the effect of influence with Infrared thermal field (ITF) and electromagnetic fields (e.m. fields) of Christos Drossinakis over experimental myeloid tumor of Graffi, implanted in hamsters. The study was conducted by a team under the authority of Reneta Toshkova.

The working hypothesis (concept) of Drossinakis for treatment of tumors includes several facts – redistribution of the energy in the ill and healthy zones of the body, change of ion balance at molecular level and improved interchange in the cell membranes.

The author's team of Reneta Toshkova, Ignat Ignatov, Elissaveta Zvetkova and Georgi Gluhchev together with Christos Drossinakis, has conducted experimental research in model systems.

Methods of research**1. In vivo research of therapeutical effect in hamsters with experimental myeloid tumor of Graffi (Toshkova, Drossinakis, 2018).**

Two types of trials were conducted for bio-influence of experimental myeloid tumor in hamsters with ITF and e.m. fields.

In the first set of trials the bio-influence was applied over a tumor with size around 10 mm in diameter. In the second set of trials the influence was carried out together with the transplantation of the tumour. The results were compared with two control groups –

hamsters with untreated transplanted tumors and healthy animals. As indicators for assessment of the therapeutical effect under the influence of ITF and e.m. fields were reported parameters such as – tumor appearance, tumor growth, lethality, survival rate and average survival rate.

- 2. Research of 1% solution of blood serum of hamsters with tumors using the spectral methods NES and DNES. (Ignatov, Drossinakis, 2018).**
- 3. Analysis of the biological effects in peripheral blood of hamsters with tumors after the influence (Zvetkova, Drossinakis, 2018).**
- 4. Examination of physiological saline solution (Gluhchev, Drossinakis, 2018).**

Results

1. In both experiments for bio-influence over hamsters-tumor carriers were observed the following results.

- The average survival rate of hamsters with bioinfluence is 43.6±5.8 days, for control group-without bioinfluence – 31.75±6.8 days, i.e. the survival rate in the first group is prolonged with around 12 days.
- The average survival time (AST) of hamsters with ITF and e.m. waves has been established compared to the control group untreated animals. The hamsters from group with bioinfluence survive 49.0±6.63 days, and from control group - 33.25±6.29 days, which is around 16 days in favor of hamsters with ITF and e.m. waves.
As a conclusion, it is observed slowed tumor growth resulting in – prolonged survivability in the second set experimental set.

2. In the spectrum analysis with method NES conducted by Ignatov were achieved substantial results from the influence with ITF and e.m. waves compared to the control group of hamsters with tumor and healthy hamsters. In the spectrum analysis was measured the energy of the hydrogen bonds H...O among water molecules. Under the influence of ITF and e.m. fields, the result was E=-0.1285 eV for blood serum of hamsters with tumor. In the control group of hamsters with tumor it was E=-0.1214 eV, and in healthy hamsters it was E=-0.1250 eV. The spectrum DNES was achieved using the formula

$$\Delta f(E) = f(\text{sample}) - f(\text{control sample}).$$

The result against control group of cancer hamsters was $\Delta E = -0.0071 \pm 0.0011$ eV, and against the control group of healthy hamsters was $\Delta E = -0.0035 \pm 0.0011$ eV. Substantial results were achieved in the analysis of local extremums in the water spectrum. For $E = -0.1212$ eV ($\lambda = 10.23$ μm ; 978 cm^{-1}) the result is indicative for anti-inflammatory effects. For $E = -0.1387$ eV ($\lambda = 8.95$ μm ; 1117 cm^{-1}) the result is connected to suppression of the development of tumor cells in size and number.

3. Conclusions deduced by Zvetkova. When studying the swabs of peripheral blood of the experimental hamsters was established a tendency for positive influence over the erythropoiesis and the anemic syndrome accompanying tumor development.
4. During examination of physiological saline of NaCl from Gluhchev was observed five-fold increase of hydrogen ions and change of conductivity. It is a proof for recovery of the ion balance. In healthy cells the potential for transmission of hydrogen ions H^+ through the membrane is (-140 mV), and in cancer cells it is (-70 mV) (Alberts et al.). The tendency is that under the influence of ITF and e.m. waves the potential can be recovered.

Conclusion

The achieved results of hamsters from experimental bio-influence of Christos Drossinakis reveal their biological efficiency and can be subject of future studies. Extending the life of the hamsters is an indicator of improving immune status. The results obtained with recent data in the medical scientific literature on the positive effect of the near infrared irradiation on the structure and function of erythrocyte membrane in normal and pathological conditions. The mitochondrial polarity in cancer cells was found to be lower than that of normal cells. Drossinakis is increasing the mitochondrial polarity.

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