medium-sized malignant tumors (approximately 12 cm^3 size) within the first 10 days after inoculation.

Smooth muscle cells (SMC) were also isolated from the aorta of Wistar rats and subcultured by the methods described above.

Equipments used: Radio - frequency measurements and static electromagnetic field exposure of cells were performed by a device called MULTI CHANNEL DYNAMIC EXITER 100 V1 (MCDE) invented by K. Havelas and collaborators. The MCDE has been certified by the International Committee of Atomic Energy (E.K.E.F.E DEMOKRITOS, Athens Greece) for its safe use in humans and animals. This device consists of two basic parts: a) a diagnostic part with an EPR spectrometer's characteristics and b) an electromagnetic field generator of various intensities(from 1,1 to 1,11 +/-0.01 V/m for the electric field and 0.0027 to 0.0029+/-0.00005 A/m for the magnetic field) and radio – frequencies (from 1kHz to 1MHz) conducted by a sophisticated software. To use this software, first it is necessary to record the biological target system's frequencies and then, by using a specific algorithm , to calculate the appropriate electromagnetic frequencies that are needed , for the exposure of living target systems or cells (submitted for patent) .

Estimation of Malignant(MC) and Smooth Muscle Cells (SMC) electromagnetic radio - frequencies. A measurement of the MC and SMC biofrequencies was taken by the device described above, before their exposure to EMF. Electromagnetic radio frequency measurements were also taken from the survived MCs after their exposure to EMF for two consecutive days ..

Method of sarcoma cell exposure to EMF. Twelve Petri dishes with 10 ml growth medium each were seeded with the same number($1x10^5$) of sarcoma cells (time zero). The cells cultures were incubated in 37° C at 95% O_2 + 5% CO_2 for 48 hours and then the medium was changed. At 72 hours from time zero, six cell cultures (EMF cells) were placed into a Faraday apparatus at room temperature (RT) and exposed to electromagnetic radiofrequencies from 10 KHz to 120 KHz and intensities from 1,1 to 1,11 +/-0.01 V/m for the electric field and 0.0027 to 0.0029+/-0.00005 A/m for the magnetic field, for 45 minutes. The other six cell cultures (control cells) remained at RT for the same time as EMF cells without being exposed to EMF. The control and EMF cells were incubated once again at the same conditions as before for about seven hours. At 79h from zero time, the cells of each culture were counted, subcultured suspended at about $1x10^5$ cells per plate and incubated at the same as above conditions. The same procedure was repeated again as it is described above at 96hours from zero time. At 120hours the EMF cells were re-exposed again to the electromagnetic field as before and 24 hours after this exposure, both EMF and control cells in each plate were counted and examined microscopically. Then, to examine their proliferation rate in relation to time, both groups (EMF and control cells) were subcultured and incubated in order to estimate the time until confluence. The cells were then preserved in liquid nitrogen .

Sarcoma cell cycle determination. The preserved in liquid nitrogen EMF and control cells were defrost and subcultured until confluence. Twelve plates were then seeded with the same number of these sarcoma cells and incubated for 24 hours. The EMF cells were exposed to EMFs as before, after 24 h and 48 hours respectively. Six hours after the last session, samples from each plate were taken for testing in a