

BIOLOGICAL ELECTRIC FIELDS

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Abstract: They presented recent research highlighting the " electrical functioning " of living organisms .

Key words: electric, biological, organisms..

INTRODUCTION

The most extensive studies have been made by dr. Fritz-Albert Popp and began with the study of two substances: benzoapiren, and benzoepiren carcinogenic nature, non-carcinogenic substances that differ only by a single bond benzol. It was found that two molecules differ in fundamental optical properties:

-benzoapirenul not permeable to UV radiation; UV wavelength $\lambda \sim 380\text{Nm}$ is absorbed, modified and then issued; called energy level degeneracy respectively. (Popular, falsifying benzoapirenul UV radiation.)

-benzoepirenul is transparent to UV radiation.

It discovered a new phenomenon FOTOREPARARE

Cells or groups of cells are illuminated with UV radiation, high intensity $\lambda \sim 380\text{Nm}$. DNA breakage occurs in a proportion of (97-98)%.

Later, the same group of cells is irradiated with UV radiation of the same wavelength, but with very low intensity; to remedy any damage found within just one day. The phenomenon is common to all living biophysics is explained by analogy with an orchestra: each cell is treated as a musical

forms, from unicellular organisms up to man. If fotorepararea fails, cancer is reached.

Prof. Dr. Popp has built a device for the detection sensitivity of 10-17w biophotonics.

The first measurements (1975) were made vegetable seeds; biophotonics exixtența found in intervalul wavelengths (200-800) nm.

In 1973, the Russians had already reached the conclusion that living cells communicate information via biophotonics.

In 1979, dr. Popp introduced the idea of consistency of biophotonics, which is more than synchronicity. Consistency overlaps with the concept of synergy towards cooperation. Consistency means that the electromagnetic radiation emitted by cell form an interconnected system working as a synchronous electromagnetic field. This means a high degree of internal order, identical to laser radiation properties.

American journalist Lynne Mc Tagg published in 2001 a book called "The Field". Here conceptual coherence of

It can thus make a good approximation of the values populating cell biophotonics

instrument that issue their own notes (biophotons), so the "orchestra" as a whole to produce a harmonic symphony. Observation / research abiofotonilor state of coherence is done using a technique called "induced emission". The sample of organic material is subjected to a flash of light. It thus induce the emission of biophotons (delayed luminescence), a signal whose graphic form is a characteristic hyperbole-state consistency. In 1984 dr. Popp et all., Concluded that DNA Biophotons emitted by a laser system working as exciplex / excimer. It collects photons and emit them as COHERENCE radiation. It simply ceselectează DNA works like a tuning fork and then emits a specific radiation. In the field of biophotonics emission phenomenon there are two different schools of thought: The first award as a secondary phenomenon biophoton emission type biochemical redox reactions of molecules. The second school of thought encompasses the biochemical reactions, but interpret the whole body as a system integrator appearance macrocuantic year / holistic (symphony) poatefi not reduced to interpreting the behavior of a single cell, as synergistic aspect is lost. This approach was continued by Ruppert Sheldrake, under which interconnects all living morphogenetic fields in the universe. The paper aims at exposing a theoretical argument in support of the existence of biophotonics, and for this it is necessary exposure previously introduced concepts: -biofotoni, $\lambda \sim (200-800)$ nm; -coerența biophotonics; -fotoreparare; -emisie induced, delayed luminescence; -function of "tuning fork" resonant - oscilator the AND. According to [3] cell, including the nucleus may be considered resonant cavity for electromagnetic Biophotons generated.

frequency and amplitude estimate eledtrice fields involved.

If L is the characteristic size of the cavity to resonate with pulsation ω and having dielectric constant ϵ , there is the relationship:

(1)

For a cell and a core of medium size, with Lcelulă 10-5 and 10-6 M Lnucleu (2) it is estimated:

Infrared and optical cell nucleus (3) and estimates of associated electrical fields E1 photon is a photon obtained using the formula:

(4)

of which,

$$E = (5)$$

Considering that

$$1 \text{ Gauss} = 299.792458 \text{ V} / \text{m} (6)$$

is obtained:

$$E_{\text{celulă}}^{1 \text{ foton}} = 3.5 \cdot 10^{-2} \text{ Gauss} \sim 1 \frac{\text{kV}}{\text{m}}$$

(7)

$$E_{\text{nucleu}}^{1 \text{ foton}} \sim 350 \text{ Gauss} \sim 0.1 \left(\frac{\text{megavolt}}{\text{m}} \right)$$

(8)

CONCLUSION

As discussed above , it outlines that living organisms can be cured if they are subjected to UV radiation intensity iraderi very small , in the range of wave length $\lambda \sim (200-800)$ nm , which is also reflected in research scientist Georges Lakhowsky , [4], [5] , the early twentieth century

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