a "small" antenna "above ground." Such antenna use the ground (earth as the other half of the capacitor plate (Fig. 6).

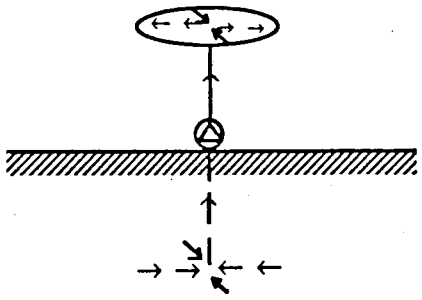

Figure 6 Above ground top-hat antenna

The ground serves as the other reflector plate. In the case of the viral antenna the lipid membrane (Fig. 5) would be the ground plate with the obvious difference that the rod antenna PG41 is embedded in the ground lipid membrane, whereas the capacitor reflector GP120 is above ground level.

Fortunately there is a simple formula that tells us the power radiated or received by such a capacitor-plate configuration,[14] top-hat-loaded antenna. It is:

average power radiated
↓

$$P_{rad} = I^2 \frac{\Delta Z}{\lambda} 40\pi^2$$

where I is current; ΔZ impedence (electrical resistance) space between plate and ground; λ wavelength, and π 3.142.

This formula is, or course, for two plates so that radiative resistance (input power to output) would be:[14]

resistance

↓

$$R = 80\pi^2 \left(\frac{\Delta Z}{\lambda}\right) = 800 \left(\frac{\Delta Z}{\lambda}\right)^2$$

this gives the input resistance of a short antenna or any other linear (rod) antenna.

We may note that in order to apply such formula we must know the difference between the dielectric constant of the rod (GP-41) and the ground in which it is imbedded the lipid (fatty) membrane. If they are only slightly different then we most certainly have a waveguide antenna for there is what is called a "boundary discontinuity" which reflects the radiation down the rod GP41 and prevents it from escaping into the surrounding lipid membrane medium. The lipid is like the opaque covering of your dentist's fiber optic light and the rod GP41 like the clear plastic light waveguide in the center.

Wavelength and Frequency

We must also know the frequency of operation of the dielectric glycoprotein (sugar electret) antenna. Without very accurate measurements of the dielectric constant of the viral GP41 and GP120 sugars it is of course impossible to calculate the exact frequency of resonance but using 2.5 to 3 as an almost certain "ball park" dielectric range we can come close. It is known that for such rods there is an optimum length for maximum gain (amplification) for a given cross sectional dimension. Taking the rod (GP41), from published drawings, to be:

1/14th of the total diameter of 1000Å virus then;

1000/14 = 71.42Å rod length

the diameter of the rod is 2/10 of the length according to published drawings:

$$2/10 \cdot X\ 71.4 = 10X = 142.8$$
$$X = 14.3$$

In other words we have a dielectric 71.42Å long and 14.3Å in diameter (Fig. 5, GP41).

Kiely[6] is demonstrated experimentally that for:

or:

$\frac{L}{\lambda} < 2$ that is for

a length (L) over wavelength (λ) smaller (<) than 2, the diameter has little effect on side lobe amplitude. In a radio system side lobes are lobes that go out in directions other than the main beam. Since this rod is, however, embedded in another medium, the lipid (fatty) membrane we need not consider side lobes since the main lobe is lined up with the rod whereas the side lobes would be trapped by the fatty surrounding membrane. Tapering a rod antenna reduces the side lobes in free space but is not necessary in a contained embedded rod so these rods are not tapered for they are not in free space. We may assume then that the length of the antenna is less than 2 wavelengths long and is one wavelength or a 71Å long wave antenna. 71Å is of course in the 100Å or 0.01μm portion of the ultraviolet spectrum.

Is there any experimental evidence that virus work in the UV portion of the spectrum. Indeed there is!

In 1979 the Russian V.P. Kaznocheev and his colleagues[15] placed identical cell cultures from monkies, one healthy and the other infected with a cell virus and sealed them in glass flasks (Fig. 7) separated by a UV passing quartz window. In other words

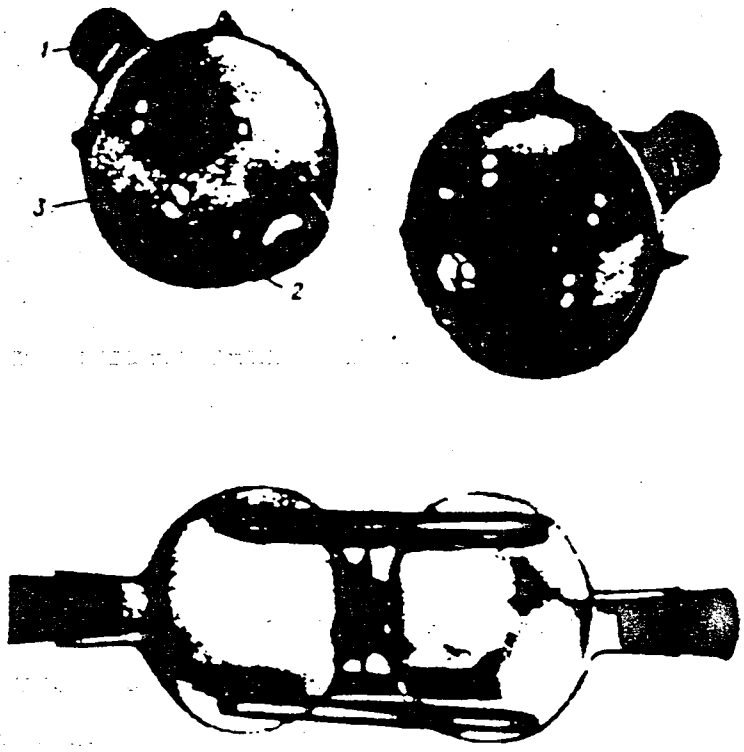

Figure 7 The Kaznocheev Experiment

the only thing that could pass between those glass flasks was μV light (if such there was) generated by the sick cells. Within a short period of time the healthy cell cultures showed the same symptoms of disease, although there were no virus present. In other words the disease was instigated by a frequency without the presence of the cell. It had, so to speak, been turned on by a resonant frequency. The point to be made is that it could be turned off by the exact same method–a jamming frequency.

The Cure

Is my antenna design reasoning valid for small virus? Experiments with large models of the virus demonstrate that it is. Just as it is valid to make a small flying

model of a 747 before building the real thing, it is valid to make a large model of a virus and utilize cm long wavelengths to test it. The results of my experiments will follow in another shorter paper, Part II. This paper serves as an introduction to a new field called optical Biophysics, or what I called in 1967 molecular bio-electronics based on my infrared insect antenna work.

Practical biologists and biophysicists will immediately see the problem of seeking a radiation cure in the high energy UV portion of the spectrum. UV radiation, in the 100Å region of the spectrum, is of a very high energy content of over 100 electron volts (ℰV). One electron volt is in the near infrared; visible is about 1.2 ℰV.

100ℰV is strong ionizing radiation, as anyone who has received a bad UV sun burn must realize. One problem then is to get the energy down to a level equal to or only slightly higher than the UV being emitted by the virus to disrupt the white blood cells–lymphocytes.

An even more difficult problem is to generate the correct frequency 71Å, or thereabout, with coherence. Coherence means all the UV photons must go out in unison, as from a laser, this is so because most antenna-waveguides work efficiently only with coherent radiation, but also because you do not want to resonate with organic systems other than the GP41-120 rod antenna. In drug related cures the healing is without a doubt caused by one or two proper frequencies from the drug oscillator-antenna resonating with the target cell, eg. cancer or bacteria, and side effects no doubt from numerous other frequencies from the drug (all drugs are multiple frequency generators) stimulating dangerous side effects in other cells.

With a one frequency UV generator focused on the target circulating blood plasma, and contained HTLV-III virus, only the energy from the resonant GP41-120

unit would be jammed, and like an aircraft without its omni range signal, miss the lymphocyte landing strip. Since HTLV-III virus needs the lymphocytes to reproduce they would soon die out.

In a following paper I will present the experimental proofs for my model of healing AIDS with a resonant coherent system and elucidate the place of the GP41 viral plate as a modulation and tuning mechanism in the viral shell. Find God in little things.

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