

Poster Presentation

Frequency - a Unifying Parameter in Leukaemia Studies

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Summary

Frequency in this context relates to the rate of a periodic variation of some parameter in living systems. This may be the frequency of a circadian rhythm, an electric field, a magnetic field, chemical hydrogen-bonding to vicinal water, or a quantum-mechanical wave function. There is interaction between the endogenous frequencies in living systems and exogenous sources of frequencies which may originate from the natural or man-made environment.

Endogenous frequencies seem to be generally present in living systems from simple cells to humans. Exogenous frequencies can entrain, synchronise, re-programme a living system thereby introducing erroneous bio-information.

In the present context, the 50 Hz power supply has been blamed for leukaemias and frequency measurements of a slide prepared from a myeloid leukaemia blood showed the presence of 50 Hz.

Major environmental sources of electromagnetic frequency exposure are overhead power lines and transmitters. The conditions under which they might imprint their frequencies into water and living systems are considered.

Frequency measurements on microscope slides prepared from blood specimens.

Table 1 shows the frequencies measured for archived microscope slides of blood with the only information about them as on the labels, these being the only material available to the writer. They contained enough residual water even after the slide preparation and storage for their frequencies to be retained and to be measurable. They had all been stained with Leishmann's stain. Their frequency patterns are generally similar but only the 'normal blood' slide does not contain the frequency 50.00 Hz.

The writer was told that homoeopathic sulphur in low potencies might be considered for leukaemia therapy. This potency of sulphur contains frequencies closely matching those in the myeloid leukaemia slide but with opposite phase activity i.e. hyper-versus hypo-.

When the myeloid leukaemia slide was measured in contact with a vial of sulphur 30C. The result was a single frequency and one generally therapeutic which would stimulate the heart meridian and chakra. The 50.00 Hz and other frequencies were replaced by 7.992 Hz. The nominal heart meridian and chakra frequency is 7.8 Hz. Thus, sulphur 30C should at least be able to reduce impact of environmental 50 Hz. The heart meridian¹ is considered to control not only the function of the heart but also the circulation and brain especially consciousness and feelings associated with the heart

Table 1

Microscope slides		↑ = hyperactive	Frequencies in Hz	↓ = hypoactive	
Blood – normal		$\uparrow 3.525 \times 10^{-1}$	$\downarrow 9.252 \times 10^{+1}$	$\uparrow 6.70 \times 10^{+5}$	
Blood - unspecified		$\uparrow 2.673 \times 10^{-1}$	$\downarrow 5.000 \times 10^{+1}$	$\uparrow 1.76 \times 10^{+5}$	
Blood – high white count		$\uparrow 1.331 \times 10^{-1}$	$\downarrow 5.000 \times 10^{+1}$	$\uparrow 1.40 \times 10^{+5}$	
Blood - myeloid leukaemia		$\uparrow 3.022 \times 10^{-1}$	$\downarrow 5.000 \times 10^{+1}$	$\uparrow 1.88 \times 10^{+5}$	
Sulphur 30C	$\uparrow 1.317 \times 10^{-2}$	$\downarrow 2.903 \times 10^{-1}$	$\uparrow 5.000 \times 10^{+1}$	$\downarrow 1.78 \times 10^{+5}$	$\uparrow 3.30 \times 10^{+5}$
Sulphur 30C + myeloid leukaemia blood			$\uparrow 7.992 \times 10^0$		

Frequencies measured from archived microscope slides originally prepared from specimens of bloods as listed. Frequencies are given for sulphur 30C alone and also when in contact with a slide of myeloid leukaemia blood to show its effect on the 50.00Hz imprint.

Conditions for Overhead Power Lines to Imprint Frequencies

Having found 50.00 Hz imprints in slides of abnormal blood and being mindful of reports of the involvement of chronic exposures to 50 Hz in certain leukaemias, it was necessary to examine the conditions under which overhead power lines might imprint frequencies into water and consequently into living systems.

A frequency can be imprinted into water by the application of an alternating magnetic vector potential at that frequency and a magnetic field at a frequency equal to or less than the one being imprinted².

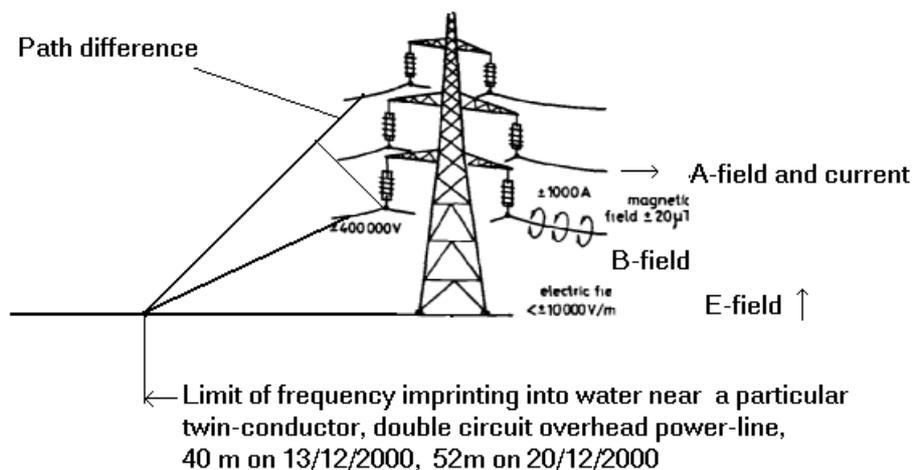
Referring to Figure 1, the magnetic field (**B**) and the magnetic vector potential (**A**) are shown relative to the current in a long straight wire and to which they are both proportional.

When a person is far enough away from a set of (balanced and symmetrical) 3-phase conductors so that each conductor can be regarded as at the same distance, the vector sum of the 3-phase currents and of **B** and **A** is zero.

Directly beneath the centre of the conductors of a typical 400 kV line, there can be a 40% difference between the distance from the lower conductor and the mean distance of the two upper ones, sufficient conditions for **B** and **A** to imprint water.

The measured frequencies imprinted from overhead power lines into water within the limits shown in Figure 1 were: 50 Hz, 150 Hz, 16.66 Hz and 3 Hz. These represent the power supply frequency, the third and one-third harmonics and 3 Hz which is probably a fluctuation in the load current. The water imprint was of the type found after water has been heated $>90^{\circ}\text{C}$. It can be detected with a Caduceus coil. However, the body is able to convert it to the usual imprint form using the 7.8 Hz or 384 MHz of the heart chakra or heart acupuncture meridian.

Figure 1



Fields and currents near an overhead power line³

Distance Related Effects near Radio and Television Transmitters

A report on the "Cancer Incidence near Radio and Television Transmitters in Great Britain II. All High Power Transmitters"⁴ studied the '...findings for adult leukaemias, skin melanoma, and bladder cancer near the 20 other high power radio and TV transmitters in Great Britain...', *other* excluding the Sutton Coldfield transmitter which had previously been studied. It concluded that, "...while there is evidence of a decline in leukaemia risk with distance from transmitters, the pattern

and magnitude of risk associated with residence near the Sutton Coldfield transmitter do not appear to be replicated around other transmitters....". This was 'at odds' with the 'gut-feelings' of local residents as communicated to the writer who attempted an alternative estimation⁵.

The *Dolk Study* used cancer registration data post-coded to the address at diagnosis for years 1974-1986 (1974-1984 in Wales, 1975-1986 in Scotland). The writer's calculation takes the expected incidence of all leukaemias based on an average population density of 539/sq.km and compares this to the *Dolk Study's* observed cases as a function of the same annular distance bands from the transmitters. *Dolk Study* covered 20 transmitters from different parts of the UK so, any effects related to geographical or topographical features and antenna design should average out leaving only physics of propagation of EM radiation in which to seek a mechanism.

The total expected number of cases in each annular band for a leukaemia incidence of 5/100,000 per year (for 12 years = 60/100,000) including all 20 transmitter locations was calculated. The ratio of *Dolk's* observed cases to these expected numbers of cases showed a definite peak at ~5km as shown in Figure 2 whereas, the *Dolk Study's* conclusions were that any peak in the observed/expected ratio was minimal.

A simple experiment involving a toroid and solenoid connected in series showed if A and B field vectors were in opposite directions (180° phase difference), the frequency of the current was imprinted into water. When the A and B fields were parallel (zero phase difference), this frequency imprint was erased.

The E- and B-fields from a transmitter will propagate at the velocity of light in air. The magnetic vector potential (A-field) either does not interact with matter and propagates at the vacuum velocity of light or, it interacts with a large domain of coherence and travels very slowly. The magnetic vector potential has only a quantum effect in that it alters the phase of the wave-function.

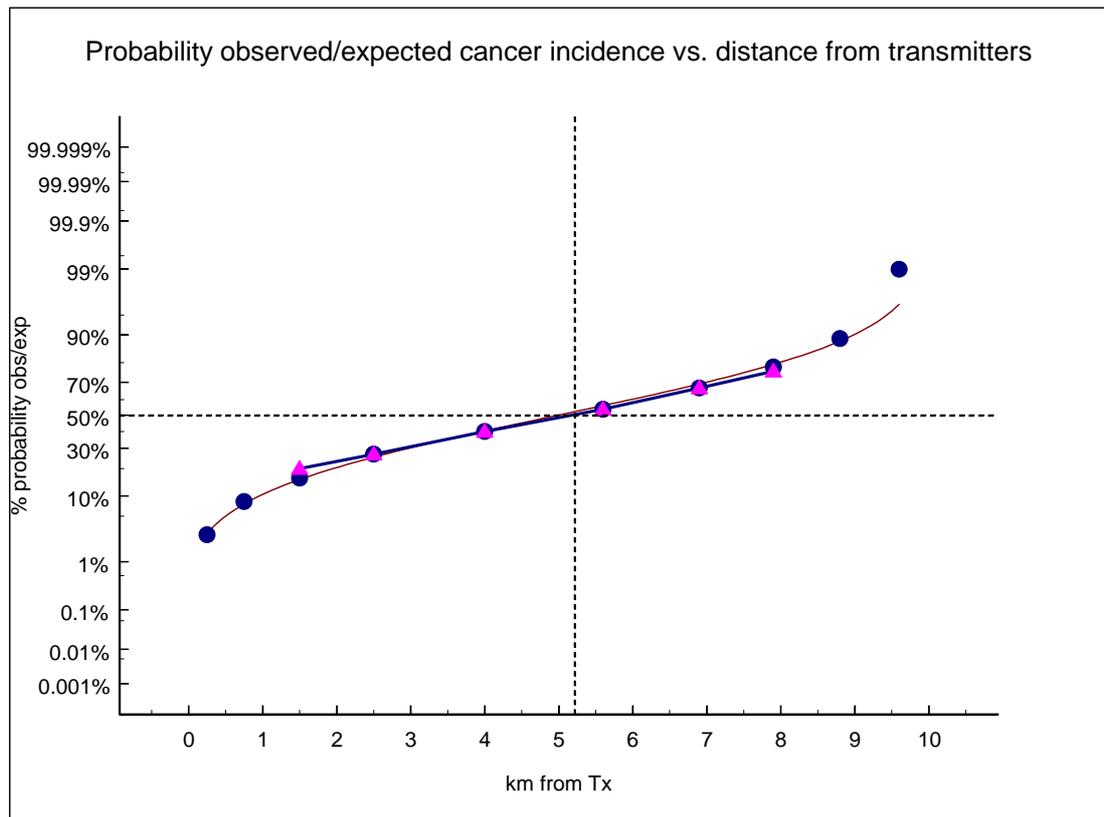
At 5 km distance from a transmitter, transit time difference between the A and B fields would be 5 ns. At 100 MHz this represents a 180° phase difference, the condition for that frequency to be imprinted into any water or living tissues present. The FM radio frequency band 70MHz-130MHz would nicely cover the standard deviation shown in Figure 2.

Italy threatened to cut off electricity supplies to the Vatican Radio transmitters near Anguillara Sabazia (North of Rome - 12.19E/41.54N) over a dispute involving radiation hazards. Subsequently, it was planned to reduce the power of its 300/600 kW medium-wave transmissions on 1530 kHz. The leukaemia clusters in Cesano and Formello are at distances from the transmitters consistent with Figure 2. This suggests that its FM transmissions at 93.3/103.8/105.0 MHz together with their modulation frequencies should be investigated rather than the higher power medium-wave transmissions.

In addition to possible chemical and genetic factors, there is likely to be more than a single switching frequency for triggering the transition from normal to leukaemia state and, 50 Hz may be just one of these.

However, blaming leukaemias on power levels does keep the paradigm within "classical physics" where there can be no quantum effects on water and living systems and little chance of finding out anything of significance.

Figure 2



The coloured **straight line fit** between 1.5 km and 8 km represents a Gaussian probability distribution with the peak at 5 km from the transmitters.

References

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