Changes in the Peripheral T-Lymphocyte Cell Cycle Induced by Chemical and Electrical Challenges and Frequency Re-Programming of Connective Tissue

B.B. Griffiths and W. J. Rea, Environmental Health Center, Dallas, Texas, and
C. W. Smith, University of Salford, England.

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This work is a result of collaboration at the Environmental Health Center, Dallas, Texas, where one of the ongoing research programs is concerned with the development of a laboratory technique to correlate the clinical diagnoses of organo-chemical toxication in patients with the progress and outcome of the treatment programs for these environmentally induced illnesses.

In this work, the pattern of occcupancy of the various phases of the normal cell cycle for peripheral T-lymphocytes is determined through flow-cytometry measurements. The effect on this pattern of challenge with common organo-chemicals is to interrupt the ordered and orderly progression of the cell cycle by entrainment of cell frequencies from their normal pattern of fluctuation and synchronizing them to coherent electrical or chemical signature frequencies.

This developmental technique uses *in vitro* cultured peripheral T-lymphocytes from blood taken by vena puncture from the patients. The cell cycles are observed using a flow cytometer. The normal cell cycle profile is compared with that obtained following incubation in the presence of one of the organo-chemicals under investigation usually at a concentration of 400 ppm or in the presence of water imprinted with the frequency spectrum of a corresponding chemical.

6.1 Normal Frequency Activity of T-lymphocytes

Table 6.1 shows the way the typical frequency pattern of the normal T-lymphocytes varies with time. These cells were separated from the blood of a healthy person and cultured according to the protocol described above. The quasi-periodic variations in the frequencies seen here are typical of a normal healthy living system, whether a single cell such as *Acetabularia*, or the human cell complex.

6.2 Frequency Characteristics of some Environmental Organo-Chemicals

Table 6.2 shows the frequency signatures measured for some common environmental chemicals which were investigated for these tests on the T-lymphocyte cultures. Table 6.3 lists the frequencies measured for the *in vitro* cultures of T-lymphocytes challenged with the organo-chemicals by incubation at the concentrations shown. The cell profiles were subsequently measured by flow-cytometry.

6.3 Frequency Entrainment by Environmental Organo-Chemicals

Comparison of Tables 6.2 and 6.3 shows that certain frequencies in the patterns for these challenged T-lymphocytes which are no longer free to fluctuate have become entrained by some of the frequencies of the corresponding to the challenging chemical. These frequencies are shown underlined in Table 6.3. This entrainment restricts the typical normal frequency fluctuation pattern as shown in Table 6.1 This is also the effect that a "depressing" electrical frequency has on a living system and it represents a biological stress. The number of degrees of freedom available to the living system to react to its environment are correspondingly reduced.

In respect of the Trichloroethylene challenge, two separate T-lymphocyte cultures taken from different patients were available. From these, the entrainment effect is very clearly demonstrated where the underlined frequencies for each culture are exactly those found for trichloroethylene while the other frequencies show the expected biological variability.

All the organo-chemicals tested were found to modify the normal cell cycle profile of T-lymphocytes. Therefore, it must be concluded that these incitants which are capable of interrupting the ordered and orderly progression of the cell cycle are futhermore capable of:

1. The destruction of specific proteins (cyclines) and enzymes (CDK's)

2. The prevention of apoptosis from taking place with the result that wrong translations are made from the DNA and wrong signals are sent for the control of cell progression.

3. The compromise of the immune system leading to multiple manifestations including cancer.

Table 6.1 Control T-Cells

Normal variation of frequencies with time

Time (hours)	**0.0**	**2.5**	**3.0**	**4.0**	**4.5**
Frequency (Hz)	0.63	1.4	6.4	0.44	3.5
	0.84	4.4	15	1.3	6.6
	9.5	9.5	93	74	250
	76	650	900	660	6.6k
	93k	550k	5.2M	2.7M	480k

Table 6.2 Frequencies of some Common Environmental Chemicals (frequencies in Hz)

Toluene **Mallinckrodt Spect. AR**	**Xylene** **Mallinckrodt**	**Phenol** **Spectrum Chem. Co.**
570	92	2.5
86k	7.5k	57
550k	69k	540
	1.2M	
	2.7M	

Methyl ethyl ketone **Mallinckrodt**	**Ethanol** **USI Chem. Co.**	**Pyrethrin** **Natural Guard 1%**
290	85	9.8
7.7k	3.0k	25
78k	35k	86
	89k	860
	660k	1.4M
	3.4M	

1,2,4-Trimethylbenzene **Aldrich 98%**	**1,1,1-Trichlorethane** **EM Sci. (Merck) 98%**
54	38
260	290
68k	290k

Trichloroethylene **Mallinckrodt AR 98%**	**1,5-Diaminopentane** **Aldrich**
340	85
3.8k	1.4k
86k	1.6M

Table 6.3

Frequencies for T-cell cultures challenged with some common environmental chemicals

The T-cells were challenged with the concentrations of the chemicals as shown. Certain of the cell frequencies were entrained by nearby frequencies of the chemicals which are listed in Table 1. These frequencies are underlined. All frequencies in Hz (k =×1000, M=×1,000,000).

TLV-TWA = Threshold Limit Values, Time Weighted Average Concentration for a normal 8-hour work-day and 40-hour work-week, to which nearly all workers may be repeatedly exposed, day after day, without adverse effect.

Toluene **Conc. 400 ppm** **(TLV-TWA 100 ppm)**	**Xylene** **Conc. 400 ppm** **(TLV-TWA 100 ppm)**	**Phenol** **Conc. 400 ppm** **(TLV-TWA 5ppm)**
9.4	8.2	0.46
57	92	2.5
570	69k	57
4.8k	1.2M	540
86k	3.3M	76k
550K		
4.8M		

Methyl ethyl ketone **Conc. 400 ppm** **(TLV-TWA 200 ppm)**	**Ethanol** **Conc. 4000 ppm** **(TLV-TWA 1000 ppm)**	**Pyrethrin** **Conc. 400 ppm** **(TLV-TWA 5 ppm)**
6.8	45	9.4
290	85	25
7.7k	3.0k	86
78k	89k	860
1.6M	3.4M	35k
		640k
		4.8M

Sodium hypochlorite
Conc. 400 ppm

92k

1,2,4-Trimethylbenzene Conc. 400 ppm (TLV-TWA 25 ppm)	**1,1,1-Trichloroethane Conc. 400 ppm (TLV-TWA 100 ppm)**
9.4	9.4
14	38
54	290
260	5.7k
1.4k	290k
68k	950k
4.8M	4.8M

Trichloroethylene Conc. 400 ppm (TLV-TWA 50 ppm)		**1,5-Diaminopentane Conc. 400 ppm (TLV-TWA 0.02 ppm)**
9.4	5.6	3.4
44		85
340	340	6.5k
3.8k	3.8k	480k
86k	86k	1.6M
830k	680k	
4.8M		

6.4 Frequency Entrainment Persisting in Re-Programmed Daughter Cells

Pischinger's work (see: Heine, 1991) demonstrates the importance of connective tissue in the body's regulatory systems. Measurement of the coherent frequency pattern of samples of connective tissue taken from healthy regions of breast tissue excised for biopsy following surgery showed a pattern of frequencies akin to the brain-wave spectrum. An example is shown in Column 1 of Table 6.4. This specimen was then tested by placing in a steel box to shield it from the geomagnetic field which would erase any frequencies imprinted into the water but, not frequencies due to a chemical constituent (the 'chemical signature'). Column 2 shows that only frequencies from 250 Hz to 15 kHz in this connective tissue could have been due to structural chemicals. The remaining frequencies endogenously imprinted in the cell water were erased as indicated by 'x'.

A binary sequence of frequencies was then imprinted into this erased connective tissue, a pattern most unlikely to occur naturally. The result is shown in Column 3. These frequency imprinted cells were then cultured and by the following week, the daughter cells had picked up all the imprinted frequencies. The other frequencies representing chemical activity had changed somewhat but, were clearly distinct from the imprinted frequencies all of which were present in the daughter cells. This demonstrates how frequency imprinted water, the equivalent of a homoeopathic potency, is capable of permanently modifying a pattern of coherent frequencies in an *in vitro* connective tissue culture so as to persist into the next generation.

Table 6.4

Frequencies for Connective Tissue (from right breast)

Date & Time			
17Aug 95 1200-1700	17-18 Aug 95 1700-0900	18 Aug 95 0915	25 Aug 95
Original Tissue	Hypomagnetic Erasure	New Frequency Pattern Imprinted	Cultured Daughter Cells
All frequencies in Hz			
0.11	x	0.1	0.1
0.19	x	0.2	0.2
2.8	x	0.4	0.4
6.5	x	0.8	0.8
			1.05
7.2	x	1.6	1.6
8.6	x	3.2	3.2
9.7	x	6.4	6.4
18	x	12.8	12.8
24	x	25.6	25.5
45	x	51.2	51
58	x	102.4	102
66	x		
76	x		
98	x		
250	250		
380	380		350
650	650		530
950	950		1,500
15,000	6,700	15,000	15,000

Reference

Heine H (1991) *Matrix and matrix regulation: Basis for a holistic theory in medicine*. Medicina Biologica. ISBN 2-80434-000-7 (In German, Heidelberg: Haug-Verlag 1998).