The BIORESONANCE

by Jean-Marie DANZE (1)

Foreword : *The aim of this document spreading is not at all to create any controversy among established scientific sphere, but to bring a new light to subjects correlated to biology and particularly to molecular biology.*
From many decades, advanced searchers like Georges Lakhovsky, Ferdinando Cazzamalli, Gustav Stromberg, Harold Saxton Burr, William Ross Adey, Cyril W. Smith, Alexander Gurwitsch, Herbert Fröhlich, Fritz Albert Popp, Philip Callahan,, C.A.L. Bassett, Arthur Pilla, Robert O. Becker, Franz Morell, Michael Galle, have mentioned by the mean of personal semantics, phenomenon related either to molecular resonance essentially of physico-chemical nature, either to the bioresonance concerning living systems. Some among these searchers were Nobel prizewinners like Erwin Schrödinger, Albert Von Szent Georgyi, Ilya Prigogine. Others ones have in early times based their assumption about the ***bioresonance*** *postulate to draw up devices designed to therapeutic purposes, proving by the way of treatments effectiveness, the well grounding of their concept. This was Georges Lakhovsky's way as early as 1928 with his Multiple Waves Oscillator clinically tested in Paris hospitals (e.g. Pitié-Salpétrière).*
Today, at the Massachussets Institute of Technology, a young physicist called Jeremy England formulates an hypothesis which a research team tries to demonstrate with the help of varied computer models followed with laboratory experiments, about the makeup of molecules with complex structures from smaller molecules, as the result among other factors to exposure of these latter to electromagnetic fields.
Bioresonance has sometimes given rise to violent reactions from biologists and conventional medical doctors. We think that these reactions result simply from a lack of knowledge and scientific interdisciplinarity. Uncommon are biologists who understand the physical laws of electromagnetic waves spreading and of electromagnetic resonances as they are applied in radio and television transmissions.

The electromagnetic resonance

To be able to clearly explain the information broadcast by electromagnetic waves systems, it is in a first stage necessary to refer oneself to nowadays widely used technics, but scarcely understood by general public. This concerns the radio sending and receiving involving electromagnetic resonances.

Radio (formerly called Wireless Telegraphy) uses oscillating circuits. Shortly explained, these circuits include a capacitor (electric capacitor), a self-induction coil (self), a direct current power supply with possibility to switch this power supply on or out. The damping of emitted waves depends on the internal resistance value of the circuit. An oscilloscope eventually connected to the circuit allows the visualization of the functioning.

When the oscillating circuit is connected to the power supply, there appears in it an electric current constantly changing of direction (= alternative current), according to a certain frequency (rhythm). This frequency depends both of the self-induction value of the coil and of the capacitor value. The internal resistance of the circuit will influence the damping of oscillations along the time.
Now, an electric circuit in which an alternative current flows, emits an electromagnetic field of the same frequency.

---

(1) We pry the reader to consult the book "*Le Système MORA ou le Rationnel en Médecine Energétique*" 4th Edition, by J.M. Danze, Ed. Pietteur, Liège (Belgium) 2010 (in French language)..

What is important is the fact that when the self-induction coil value, the capacitor and the resistance values are fast, the circuit holds constantly the same frequency which is called "own frequency" of the circuit.

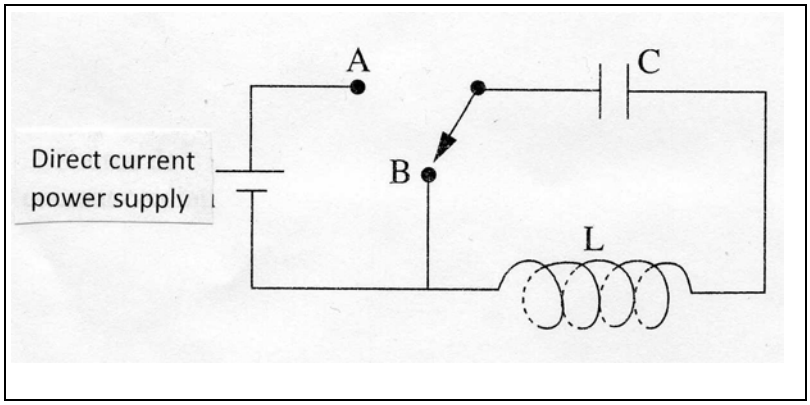

Fig. 1 : Scheme of an oscillating circuit : the position of the switch in A loads the capacitor C. The position of the switch in B starts the electric current oscillation in the C-L circuit.

If we submit simultaneously this oscillating circuit to several surrounding electromagnetic waves, it will begin to resonate with one of these frequencies, this one is the same as its own frequency. The circuit will then increase its own radiation strength, thanks to the phenomenon called "electromagnetic resonance".
It will also begin to resonate with frequencies closely to its own frequency but with a much more weaker amplitude (lower signal strength).
It is according to this basic principle that radio and television transmissions function.

- A broadcasting transmitter including an oscillating circuit is tuned to a fast frequency (corresponding to a fast wavelength too).
- A radio receiver (for instance a little transistors radio set) contains oscillating circuits from which the user can select the frequency to be captured, either on changing the variable capacitor position, either on modifying a self-induction coil.

When one acts on the movable cursor knob travelling on the selection frame of the radio receiver, one changes in the same time the value of a variable capacitor inserted in the capture circuit. This variation modifies the frequency selection and leads to the tuning frequency.
On the whole, on the place where the little receiver transistor set is situated, are present in the surroundings, innumerable waves emitted by different electromagnetic senders (even very far from this place).
As the variable capacitor is set on a selecting position in such a way that the circuit begins to resonate with the selected transmitter frequency, the receiver set captures only this transmitter with the exclusion of other transmitters.

When one selects on the receiver another self-induction coil, one tunes on another wavelength band (long waves, middle waves, short waves, ultra short waves, a.s.o.). Once again, in this selected wavelength band, one can select a transmitter by moving the corresponding variable capacitor, by the way of the cursor on the selection frame.

The electromagnetic fields strengths at work in these electromagnetic resonances phenomenon could be extremely weak, mainly when the coherence (time coincidence of alternations in the spreading or phases concordances) is arising. We know that space probes travelling at many

thousands kilometres from Earth are able to send us radio waves of very low strength (for the power supply of these waves is far away), and the capture of them is possible thanks to suitable relays and antennae. So, what must be underlined, is the fact that these waves are drowned in an electromagnetic noise (electro smog) hardly imaginable…and however they come down to us and are understandable thanks to the electromagnetic resonance phenomenon between the probe sender and the receivers on Earth.
The waves trains transmitted by the sender and captured by the receiver whose frequency is fixed, is a wave defined as "carrier frequency".
Upon these carrier frequencies, one can carry information (images, music, reports, a.s.o.). These information will be encoded on the carrier frequency thanks to the modulation (either amplitude modulation, either frequency modulation) : they will then be called "electromagnetic signals".
Let us incidentally notice that the transmission of infrared frequencies and of light frequencies is carrying on according to other principles.

Electromagnetic resonances and biology
From these thirty last years, classical biologists begin to admit that living beings are "open systems". The discoveries of the "dissipatives structures" by I. Progogine (Nobel prizewinner) corroborate what was only at the outset an hypothesis formulated by a minority of searchers often taken as marginal [1]. In opposition to what was classically admitted, living beings do not only take in their surrounding the feeding (in a form more or less organized – proteins, lipids, glucides, trace-elements) but also information carried by electromagnetic waves (light, Schumann waves, extremely low frequencies waves, microwaves, infrared radiations a.s.o.).

As Prof. Ferdinando Cazzamalli demonstrated it, the human brain itself, in patients psychically disturbed, emits in the near surrounding, in a Faraday's screening enclosure, frequencies between 60 MHz and 400 MHz [2].
Prof. Cyril W. Smith mentions in his book "*Electromagnetic man*" [3] that the calculated intensity of electromagnetic field emitted by brain cellular membranes allows the capture of human brain waves at several thousands of kilometres.
Life appeared on Earth within a certain electromagnetic environment and modelled itself according to dissipative structures. That is what Jeremy England, a searcher at the Massachussets Technology Institute (USA) is trying to demonstrate [4].

The living cell, the intercellular medium
The living cell includes a lot of structures which hardly begin to be discovered. Certains among these structures are complex entities which biologists call "organelles" or "organites", just because of their organization which incite to consider them as organs at the cellular scale of the living being in its whole.
The nucleus , the mitochondries (tiny electric power supplies), the lysosomae, the centrosoma the endoplasmic reticulum, the Golgi apparatus, are as many cellular elements.
Let us remind that in a normal human cell two millions of chemical reactions take place in one minute. Of course in these reactions take place all the membrane mechanisms which allow the exchanges between the cell and the intercellular medium. These membranes exchanges take place in accordance to the polarity + or – and to the electric potential of the membrane (Fig. 2).
It is striking to record that in chemistry, everything can be explained according to electric phenomenon. Proteins have a stability determined by an electric potential. The isoelectric point is the expression of this fact. Everybody agrees today with the concept that the nervous influx travelling through neurones is made of electric impulses; the Medicine Nobel prize winners 1991 (B. Sakmann and E Neher) established the discovery of electric systems of cellular

membranes opening and closing to particular ions (these ions are themselves carriers particles of electric charges).
We must not forget that every variable electric impulse within a conductor gives rise to a variable magnetic and electric fields of same rhythm around this conductor. Many biochemists and medical doctors do not accept this paradigm, although it is evident.
To stop oneself to the only ionic exchange at the level of neuronal synaptic connexions do not allow to explain the celerity of the nervous influx response.
Biologists often forget that every chemical reaction is related to fundamental rules imposed by the chemical reaction kinetics, it is to say to the speed of chemical reactions. A nervous influx travels through the body on its whole length within some thousandths of second. Now, this speed is related on the one hand to the excitation level of molecules which have to react, and on the second hand to the probabilities of collisions between these molecules designed for reacting together (with help of neuromediators and neurotransmitters).

The receptors theory
The receptors theory was proposed by Paul Ehrlich (Nobel prize winner 1908). This theory learns us that on a certain instant, a cell or a group of cells will secrete a substance that one calls "messenger substance".
This messenger substance has a definite molecular structure. She will turn itself towards a place in the body where a site which, according to its own structure, is able to accept (space arrangement) the messenger substance and so give rise to a chemical reaction.
But, what one forgets to explain us in the receptor theory is:

1. how the messenger substance will travel by itself to the receptor site (sometimes by crossing through organs walls or capillary vessels walls)? Biochimists call this phenomenon "chimiotactism". But what is the chimiotactism ? One does not explain things by covering them with a word.
2. in how much time complementary molecules will meet together in the organism (even if the site is fixed and even if it concerns only a single cell), if one admit only the luck of molecular shocks in a medium overcrowded with molecules of structures sometimes very similar to these addressed.? It would be really illusive to believe that molecules owning an appropriate excitation stage could selectively react with their target when other molecules with nearby structures and having a similar excitation state exist in the medium.

The laws of chemical kinetics make shaky the classical biochemistry assumptions, for these reactions take sometimes place within the time of some fractions of a second.
Besides Prof. Lehninger (Nobel prize winner) has initiated comparative experiments. He studied reactions kinetics of some molecular groups *in vitro* and compared them with reactions kinetics of the same groups in the cellular medium. The reaction speed *in vitro* was far more slower (10 times) than the speed of the same reaction *in vivo*. And nevertheless the law of mass action was playing (between more concentrate substances *in vitro*), because the experiments took place in media where molecules not concerned with the experiments were rare and even not present.
However the receptor theory is valid but there is a lacking part in it : this one concerns the guiding of the messenger substances to their targets : the receptors.
This guiding can only be explained by an electromagnetic resonance process between the messenger substances and the receptor sites. Then, the word "chimiotactism" takes its whole understanding. It is the "***bioresonance***" concept which completes it.

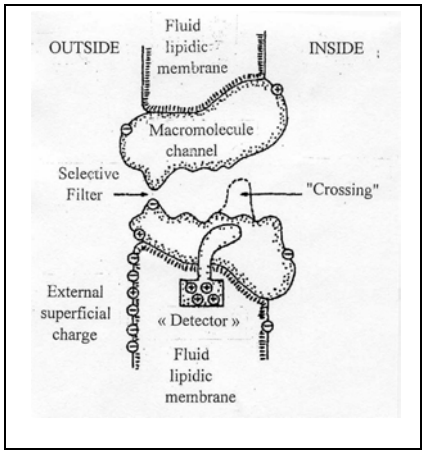

Fig.2 : Ions crossing channel through a cellular membrane. This crossing is controlled by the electric tension (voltage) applied to the cellular membrane (ions flow control to cells inside or outside such as a transistor work)
(Ref: Catterall, 1992).

F.A. Popp says "*Without taking this factor into account, biochemistry reduces itself to a catalogue of chemical reactions*" [5]. And nothing explains the course of the reactions sequences during the time, better on a accurate instant perfectly dictated by the necessity.
Within an organism, the single fact of raising a molecule from a rest stage to an excited stage to get it ready to initiate a reaction is quantum physics phenomenon which can be triggered by a flux of surroundings waves with an accurate frequency.
Some electrons of the molecule will so raise from their fundamental level to an excited level by capturing a quantum of electromagnetic energy.
We know today that electromagnetic radiations frequencies (even very low) are able to excite molecules in accordance to the ability of these latter to go into resonance with a received radiation.
It comes from this understanding that we can agree with the concept of living systems opened to electromagnetic surroundings and there are the keys of the chronobiology.

The living cells are resonators
F.A. Popp and his research teams showed in their noteworthy works, that all living cells constantly capture and emit light [6, 7, 8]. One could expect that this phenomenon would be limited to skin cells and however, even liver cells, lungs cells, kidneys cells, pancreas cells, have this strange property.
F.A. Popp has also shown that this cellular luminescence is not related to chemical reactions photoluminescent fortuitous phenomenon. The cellular growth is correlated with these light emissions. When the cells die, this emission vanishes quickly.

But what is remarkable, is that cellular colonies, grown in a suitable medium, answer to a poisoning or to a harmful radiation (ionising one, for instance), with a sudden, explosive light emission just before they die. The cells don't die the ones after the others, but all together.

F.A. Popp showed that it exists between similar cells (of the same group), a cooperative organization which can be obtained thanks to an "intercellular language". He proved with indisputable manner, that the cellular light is coherent (it is to say of laser type), even if its strength is extremely low, and that the D.N.A. (desoxyribonucleic acid) is the centre of these luminous phenomenon. The D.N.A., don't let us forget it, is the heredity base, this means that

it holds the fundamental patrimony of living being : its reproduction according to a definite pattern.
William Ross Adey, ex-Prof. of Neurology at the Loma Linda University (California) and ex-President of the Radiation Protection Committee (depending from E.P.A.)(- deceased-) wrote in many documents (some among them were published in the *Microwave News* journal edited by Dr. Louis Slessin) : *"our cells whisper together thanks to extremely low frequencies electromagnetic waves processes and so exchange information"*.
These phenomenon can only be explained by electromagnetic resonances.
Let us notice that if we look to the D.N.A. with the eyes and the knowledge of an electronics specialist, we find in the D.N.A. antenna structure in which all segments are in line with particular angles and with very well definite lengths. This antenna is electrically conductive, so perfectly suitable to capture and emit certain electromagnetic frequencies different from light frequencies. On another hand, at the level of the cellular membrane, one can postulate that electromagnetic resonances are working there too. They would allow information captured in the surrounding medium to reach the cell inside (transduction phenomenon) (Fig. 3).
So if the A.D.N. stability is ensured by the luminous and ultraviolet photonic exchanges, says F.A. Popp, it exists within the organism, very lower electromagnetic frequencies (from the extremely low frequencies – ELF- up to the infrared spectrum) which carry the greatest part of the information managing intercellular and interorganic relations.

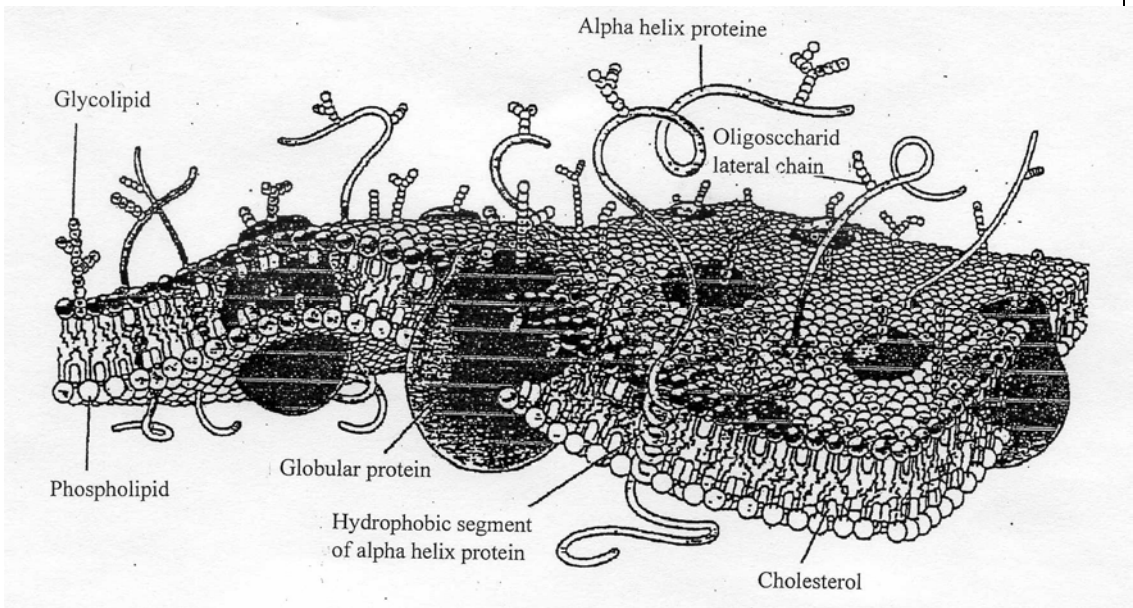

Fig. 3: Cellular membrane (scheme according to Catterall, 1992) showing the helicoidal alpha proteins forks structures (receivers) of the electromagnetic signals transduction system; So the signals are amplified between 100000 and 1000000 times.

Let us remind that the animal and human organisms are very well adapted to carry in their inside, electromagnetic frequencies of these types.

An INSERM team (Unity 29) at the Port Royal Hospital showed in 1990 (Bulletin n° 29) that a short high frequency electric stimulation of a neuronal entirety initiates an almost permanent potentialization of the synaptic effect, running on many months. The searchers identify this mechanism with a memorization process. And we can categorically state that in undulatory

physics, every memorization of a process is based on a mechanism using one or many resonators.
The electroencephalograph which is a rather coarse device, shows the existence of certain particular rhythms which are travelling in the organism by the way of these privileged "conductor cables" called neuronal axons. These rhythms are included between 1 and 30 Hz (waves similar to the Earth natural Schumann waves [9]).
One particular 7.8 Hz wave among these Schumann waves was recently used by Prof. Luc Montagnier and his research team to carry on experiments of reconstitution of virus by way of structure information transferring by water (see later).
Prof. Ferdinando Cazzamalli showed electromagnetic frequencies situated between 60 MHz and 400 MHz emitted by human brain of heavy psychically disturbed subjects,.
The sound frequencies transmitted to the brain by the way of conversion into electromagnetic waves in semicircular channels of the internal ear are situated between 15 Hz and 15000 Hz.
The works of the American team of University of Los Angeles, conducted by V. Hunt showed that the electrodes of an electromyography device, adapted for this use, were capturing on some particular zones of human body (chakras), electromagnetic waves situated between 1 Hz and 1500 Hz. The waves modulations (signals) modified themselves according to the stress and to manipulations submitted by the subject.
Two Russian searchers : S.P. Sitko and V.V. Gizhko published papers in which they show that living systems answer to electromagnetic stimuli situated in the electromagnetic band of gigahertz (microwaves). These stimuli have nothing to do with thermal effects of microwaves but induce resonances phenomenon (bioresonance) [11].

Prof. J.E.H. Niboyet (University of Montpellier 1938 - 1963) has also showed that acupuncture vessels are particular systems which despite of the fact that they actually don't let see any own objective structure, are able to carry such electromagnetic information. All these findings are only possible if it exists in the organism, resonators systems adapted to these wave types. Indeed, an electromagnetic wave can only be captured and emitted thanks to oscillating circuits. The light radiations have as resonators the D.N.A. structures, the infrared radiations have as resonators some organic molecules (the infrared absorption spectrography is nothing else as the technical application of this property).The microwaves have as resonators the cellular membranes and some cells organites whose sizes correspond to the wavelength of the signal captured or emitted.
The biologist Ph. Callahan shows that many insects antennae, thanks to their accurate shapes and sizes, capture frequencies situated in a limit band between microwaves and infrared radiation. More of this, he proved experimentally what he discovered on drawing selected nocturnal butterflies with synthetically built electromagnetic waves [12, 13].
The magnetic spectrometric system called SQUID (Quantic Interference Spectrometer) [14, 15] allows to measure the magnetic component of some electromagnetic radiations emitted by healthy or disordered organs. Diagnosis can so be much more accurate than these ones obtained by electroencephalography or by electrocardiography. The measurable magnetic impulses obtained with the SQUID are 100 millions times weaker than these ones produced by Earth magnetic impulsed field.

Once again, let us remind in other words that a resonator is a system able to memorize (to stock under any form) one or more oscillations. It will release this or these oscillations during a definite time. The "number" of these resonators in work will give indications about this duration. F.A. Popp demonstrated that healthy cells photonic resonators are of excellent quality for the duration of the photons stocking can be held on a very long time. The introducing of nutritive, medicinal or toxic substances in the intercellular medium surrounding the cells,

changes totally the photons stocking duration. Cells react all together on emitting a synchronous radiation (coherent one) whose appearing instant is in accordance to the introduced product and of course to the own nature of the cells. The comparison with reference cell cultures will allow the quantification of the observed phenomenon with a view to apply it to therapeutic purposes.

These works open an extraordinary perspective in cancer research and in the quality control of natural foods (meat, vegetables, eggs, fruits a.s.o;) without any help of animal testing [4]. If only our society based on financial profit, would it integrate these concepts.

It is remarkable to see that these biological resonators systems are so sensitive that they allow the perception of signals even when these ones are drown in the electromagnetic surrounding noise (electro smog). Prof. Cyril W. Smith of Salford University (G.B.) demonstrated this with experiments about allergy patients [16, 17]. More of this, we know today that the cetaceans, for instance, are able to perceive electrical impulses in the order of one millionth Volt per meter; what is far under the surrounding natural noise limit (perhaps is this the cause of the presence of stranded cetaceans on our beaches, due to the jamming by artificial low frequencies electromagnetic waves – submerged submarines).

Magnetic fields of frequencies in the order of 10 Hz travel in the organism with a strength value of 10^{-8} Gauss (1/100000 Milligauss). Our brain captures and interprets them. The energy corresponding to these fields is around 10^{14} times under the surrounding magnetic noise limit. Therefore living cells are resonators with exceptional qualities.

Biological systems in their electromagnetic waves perception mechanisms have a sensitivity 10^{10} times higher than all physical methods at our disposal today. At this stage of acquired knowledge, although it is scarcely spread in general public, to deny that live mechanisms could be governed by electromagnetic waves and interact the ones with the others with codes operating thanks to electromagnetic waves would be a refusal of the evidence.

An application of the bioresonance in medicine : the pulsed magnetic fields

It clearly appears, when one understands the notion of "cellular memory", that interfering rhythms of manmade electromagnetic oscillations can, because of momentary frequencies tunings, completely disturb the nervous system and the inner clock related to the pineal gland or epiphysis.

In early 1977, following the first conclusive research at the Columbia New York University, R.O. Becker, C.A.L. Bassett and A. Pilla, initiated treatments of bones fractures without consolidation (pseudarthrosis) and resistant to all classical therapies. They obtained indisputable results thanks to local application of pulsed magnetic fields of selected frequencies [18, 19, 20]. The hypothesis formulated at the outset by C. Bassett and A. Pilla consisted in taking as true that the two parts of the broken bone could have lost their "intercellular language". This language could allow a cooperative action between the cells of the separate marrow parts to restore the lacking or wounded bone tissue. Thanks to comparative methods (trials an errors), the searchers ended at selecting magnetic pulsed fields frequencies able to restore this language. From this time many applications of pulsed magnetic fields were studied in many universities centres and permitted to heal without other medications, various pathological problems. These frequencies take generally place under 10 kHz. Numerous scientific papers devoted to this subject are continuously published in the whole World.

Here again, this concerns too applications of biological resonances phenomenon (or bioresonances). In the pseudarthosis cases, the pulsed magnetic field of a given frequency begin to resonate with the osteoblasts (cells which rebuild the bone tissue).to enhance the cells growing. process.

Prof. Luc Montagnier's actual experiments

Prof. Luc Montagnier (Nobel prize winner) and his team just succeeded in surprising experiments, showing that water is also a system able to enter in electromagnetic resonance, and in an definite case to "memorize" a viral structure and to reproduce it. This phenomenon can be obtained thanks to a box shielded against surrounding electromagnetic fields, in which one spread a 7,8 Hz "carrier" magnetic field (induction coil).

The water sample put in this shielded box nearby another tube containing the virus will after some hours of exposure be able to reconstitute .by itself the virus with an extremely low error percentage. Of course it will be necessary to add to this water all basic molecules of the virus : nucleotides, phosphates, initiators and polymerase. We emphasize here the fact that without this water activation by the vicinity of the virus (through the tube) and without the carrying field of 7,8 Hz, this synthesis does not occur.

More of this, Prof. Montagnier's team showed also that the "living" field emitted by the virus can be numerized and then transmitted at a distance by a telephonic line and so recreate at this distance the virus molecule with only 2 % of transcribing error.

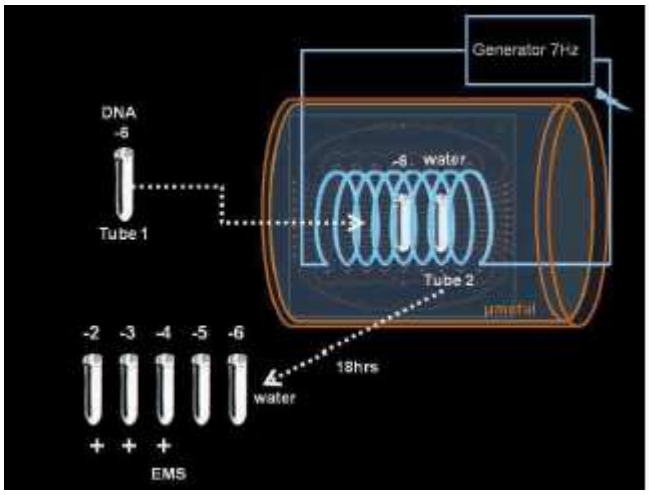

Fig.4: Scheme of the signals capture system by water, conceived by Prof. L. Montagnier's team following J. Benveniste discoveries

Application in medicine and in biology

By the light of what is disclosed by numerous books and scientific papers, it goes without saying that engineers, suiting their knowledge in electronics to the clearly formulated hypothesis by some avant-garde medical doctors and biologists have made up their mind to build devices allowing the treatments of various physiological dysfunctions either in human, either in animals or in plants.

These devices aimed first to reconstitute the electromagnetic environment of the living body on bringing to it electromagnetic fields designed for "correcting" the organic and even cellular dysfunctions. These processes take place thanks to the electromagnetic resonances accurate frequencies effect, it is to say on applying biological resonances called ***bioresonances***.

Two types of approach are to be considered :

- **the amplification of normal extremely low frequencies electromagnetic signals (between 1 Hz an 30 kHz) of exchanges** between organic functions or between organs : for

instance between liver and gall bladder, between kidneys and heart, between gall bladder and intestines, a.s.o.

- **the reducing and even the suppression of extremely low frequencies electromagnetic aberrant signals (between 1 and 30 KHz)** between organic functions or between organs, with the help of phases oppositions of these signals beforehand sorted thanks to technical biophysical processes (molecular resonances filters).

Treatment devices called "energetic", are today on the World market, although despised or even disparaged by academic authorities still turned to the paradigm of "queen chemistry or biochemistry" and wanting to be unaware about energetic medicine (acupuncture, homeopathy, isotherapy, a.s.o.).

We can mention the first electroacupuncture devices marketed in Germany, from more than 40 years according to Dr. R. Voll (D) and to engineer A. Konnen (L) : the *ORGANOMETER* (manufactured by Pitterling), according to Dr. Reckeweg (D) : the *VEGA-Test*. These devices measure in a reproducible manner, the acupuncture points conductance. When introducing into the measurement circuit, substances diluted according to homeopathic dilutions, one can state that when these ones are suitable for the measured case, they correct the measurements revealing organs energetic anomalies.

Came then the MORA System from Dr. F. Morell and Engineer E. Rasche, a very complete device allowing the diagnosis of energetic disturbances and the treatment by energetic rebalancing (with help of phases reverses), allergens detection and personalized homeopathic medications (*MORA III*, *MORA IV*, *MORA-Combi*, and *MORA-Super Plus* with two treatments channels) [22, 23], then the *Bio-Kat Systeme* by Engineer A. Rasche, giving the same measurements and treatments possibilities, but with improved processes in measurements : we notice the Bio-Kat M III, the Bio-Kat MV (with two treatments channels).

The recent discoveries of J. Cumps and M. Roberfroid (University of Louvain le Neuve – B), of Professors F.A.C. Wiegant and R. Van Wijk (University of Utrecht – NL), of Prof. C.W. Smith (University of Salford – GB), of P.C. Endler, W. Pongratz, J. Schulte, Senekowitsch (University of Gratz – A), of Prof. J. Benveniste (CNRS U 2000 – F), of Prof. M. Bastide (University of Montpellier – F), of M. Citro (I), of Dr. Franz Morell (D), of Prof. L. Montagnier – Nobel prize winner – F), among others, showed that homeopathy can be considered as the physical action of electromagnetic fields able to be detected although very tenuous, related to "water memory", by accurate frequencies bioresonances phenomenon. Each substance, in its selected potentialization has an accurate favourable action, on a well definite patient's state. The use of homeopathy in veterinary medicine on breeding animals proves this without any doubt.

Let us remind that today Switzerland recognizes the validity of homeopathy and introduced it in recognized medical practices. More, the Swiss experts demonstrate in an opuscule published under the authority of Federal Public Health Ministry [23] that the most of the world studies denying the homeopathy efficiency had been perverted (voluntarily ?) from the researches methodological planning so that they could only lead to negative results. The critical report of this historical global study has been written in the brochure mentioned here before : "*Homeopathy in Healthcare – Effectiveness, Appropriateness, Safety, Costs*".

Biology, Quantum medicine

One often hear today speaking about biology and quantum medicine. Biology and quantum medicine can be described as the interaction of electromagnetic definite waves (fields) and living systems able to capture these waves. In other words,

- every living cells group, every organic function emits electromagnetic waves in particular frequency (or frequencies) and of specific characteristics (modulation),
- electromagnetic waves of accurate frequencies and characteristics induce (even on a very low intensity level) effects on the function of living cells groups or on one particular organ or on an organic function.

The bioresonance phenomenon enter then into the frame of what we call with a general concept as quantic models applied to biology.

Conclusion

By the light of the past 80 years knowledge early acquired by searchers whose seeing overpassed their contemporaries' one, we can consider that it exists in all living beings internal organization mechanisms of biochemical reactions based on electromagnetic resonances. The engineer Georges Lakhovsky specialist among other matters, of radio broadcasting, wrote in 1926 in his book "*The life origin*" (L'origine de la vie) that it would be good to reconsider the biology under the light of the involvement of electromagnetic transmissions exchanges in living cells. Far before the A.D.N. and R.N.A. discoveries he wrote:

- *life is born from radiation*
- *life is maintained by radiation*
- *life is destroyed by every oscillatory imbalance.*

Many modern physicists including F.A.Popp wrote that without this fundamental hypothesis, formulated by G. Lakhovsky, they never thought to carry on research involving the basic electromagnetic mechanisms of life.

The wish we could formulate today is that at last searchers : biochemists, biologists, medical doctors welcome in their official laboratories, as possible independent from pharmaceutical industry, without any sectarian or mercantile aim, biophysicists specialized in quantum physics, with a view to conceive the future medicine. Indeed, these ones will have to leave some today paradigms regarded as a dogma, but they will take other ones up according to the multidisciplinary research evolution. Russia, in the frame of the space conquest had already followed this way but the economic crisis slowed the process down.

Some bibliographic references

[1] Prigogine I. et Stengers I. "*La nouvelle Alliance*", Ed. Gallimard, Paris (1979)

[2] *"Le Cerveau émetteur"* par le Prof . Ferdinando Cazzamalli, Ed. Pietteur, Liège.

[3] S. Best & C.W. Smith *"Electromagnetic man"*, 1st Edition. Editor Dent, London (1990).

[4] England Jeremy, *"A new thermodynamics theory of the origin of Life"* , Quanta Magazine.org/20140122-a-new-physics-theory-of-life, janv. 2014.

[5]F.A. Popp *« Biologie de la Lumière »*, Ed. Pietteur, Liège (1989).

[6] Popp F.A.,K.H. Li, Q. Gu : *"Recent advances in Biophoton research and its applications"*, Ed. World Scientific Singapore, Hong Kong, 1992.

[7] Bischof Marco, "*Biophotonnen, Das licht in unseren Zellen*", Ed.Zweitausendeins, 1995.

[8] *Biophotonics and coherent systems, Proceedings of the 2d Alexander Gurwitsch Conference and additional contributions*, Ed. Moscow University Press, 2000.

[9] Schumann W.O., Rohrer L, König H.L. "Naturwissenschaften", 11,79 (1966).

[10] Hunt V., Massey W., Weinberg R, Bruyère R., Hahn P.M., "*A study of structural integration from neuromuscular energy field and emotional approaches*", 1977.

[11] Sitko S.P. Gizhko V.V. "*Towards a quantum physics in the living state*", Journal of Biolog. Physics, 18: pp. 1-10 (1991).

[12] Callahan Ph. S., "*Tuning in to Nature*", The Devin Adair Comp., Old Greenwich, Connecticut, (1975).
[13] Callahan Ph. S., Physical Chemistry and Physics, 12, p. 31 (1980).
[14] Anastasiadis P. "*Biomagnetic measurements in normal and malignant breast tissues using SQUID,*" Matrix Forschung in der Präventivmedizin, G. Fischer Verlag, (1989).
[15] Anninos, P.A. "*Biomagnetic measurements using the biomagnetometer SQUID*", Matrix Forschung in der Präventivmedizin, G. Fischer Verlag (1989).
[16] Smith C.W., Choy R.V., Monro J.A. "*Electrical sensitivities in allergy patients*", Clinical ecology, Vol IV, n° 3 p. 93 (1985).
[17] Smith C.W. "*Human sensitivity to low level electromagnetic fields*", Engineering Science and Educational Journal, 3.12.1991.
[18] Bassett C.A.L., Becker R.O., Pilla A. "*A non operative salvage of surgically resistant pseudarthroses and non union by pulsing electromagnetic fields : A preliminary report*", Clin. Orthoped. and Rel. Research, 124, pp. 128-143 (1977).
[19] Bassett C.A.L., Becker R.O., Pilla A. "*Treatment of therapeutically resistant non unions with bone grafts and pulsing electromagnetic fields*", Journal of Bone Joint surg. 64(8), pp 1214-1220 (1982).
[20] Bassett C.A.L. "*The development and application of pulsed electromagnetic fields for ununited fractures and arthrodeses*", Ciin. Plast. Surg. 12, (2) pp. 259-277 (1985).
[21] Herrmann E., Galle M. "*Retrospective surgery study of the therapeutic effectiveness of MORA bioresonance therapy with conventional therapy resistant patients suffering from allergies, pain and infection diseases*" European Journal of Integrative Medicine 3 pp.237–244 (2011).
[22] Pihtili A., Galle M., Cuhadaroglu C., Kilicaslan Z., Halim Z, Issever Z., Erkan F., Cagatay T. Gulbaran Z."*Evidence for the Efficacy of a Bioresonance Method in Smoking Cessation: A Pilot Study"*: Forsch Komplementmed 2014;21:000–000 Published online: August 5, 2014
DOI: 10.1159/000365742.
[23] Bornhöft Mattiessen "*Homeopathy in Healthcare – Effectiveness, Appropriateness, Safety, Costs*", Springer Verlag 2011, ISBN 978-3-642-20637-5.

Document written on January 20th. 2015

****