# A New Way of Therapy based on Water Memory-Information: the Quantum Biophysical Approach

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## Abstract

This work firstly introduces some of the priors of Quantum Biophysical Semeiotics (QBS), necessary to grasp the meaning and significance of deterministic chaos and quantum behavior in biological systems.

Secondly, some experimental clinical evidences of Water Memory-Information are presented and explained through QBS tools, which are able to state if there is activity improvement of well defined bio-systems under quantum energized water action.

QBS diagnosis allows an effective preventive therapy of pre-metabolic syndromes through quantum – water feedbacks, directly acting on the genetic causes of the most serious potential diseases such as, i.e., cancer, T2DM, brain disorders and CAD.

***He that believe in me, as the scripture said,***
***out of his belly shall flow rivers of living water.***
***John 7:38***

## Introduction

**Quantum Biophysical Semeiotics: priors**

"'Quantum Biophysical Semeiotics' – QBS - is an extension of classical semeiotics, an original medical science which purports to interpret the body signals for diagnostic purposes (Stagnaro et al. 2004a). The key of this new discipline is the awareness that human bodies are a continuum of biological systems whose dynamics follow the laws of deterministic chaos (Lorenz 1963, Ruelle 1991, Cramer 1994, Stagnaro et al. 1996), which can be measured by means of nonlinear statistical invariants. Furthermore, there is the recent discovery that energy information and communication between DNA and bio-systems are strictly linked with quantum behavior.

QBS was developed in accordance with a multidisciplinary approach that combines chemistry and biology, genetics and neuroscience, chaos theory and quantum physics. It is based on the auscultatory percussion, through which, by means of the common stethoscope, it is possible to listen to the messages that the body gives us when appropriately stimulated. This technique is used to induce consistent behaviors - typical of dissipative systems that are far from equilibrium as defined by Prigogine, and comparable to the behavior of plasmas studied by Bohm - in precise and well defined biological systems of the human body, thus giving local qualitative information on the state of health or disease of the subject (even if a disease is developing but not yet evident through usual clinical trials, effective, or even in chronic phases).

QBS provides a very detailed case study based on the latency time, intensity, and duration, and of the reflexes, which are the central elements of all diagnostics. On this basis it is possible to say that the presence of deterministic chaos, as measured by the fractal dimension, is an indicator of the physiological state of the biological system investigated, and this is always accompanied by a non-local reality that is

simultaneous and synchronic (as demonstrated in relation to the sub-quantum by Aspect), parallel to the local one, where there is of course waste of energy in space-time. However, if the equilibrium of the kind 'chaotic or strange attractor' gives way to equilibrium of the kind 'limit cycle' (periodic) or 'fixed point', this is a sign, respectively, of potential pathology and the tendency to develop a disease, or a chronic state. The quantum aspect is reinforced by the fact that the reflexes are not implemented in a continuous way, but are quantized and discontinuous, showing constant feedback between implicit and explicit order, as suggested by Bohm.

We have to highlight that QBS can be used to detect at birth the potential existence of well defined diseases such as cancer (Stagnaro, 2004a), type 2 diabetes mellitus (Stagnaro 2002, Caramel 2010c), atherosclerosis, hypertension, brain disorders (Stagnaro 1986, Caramel et al. 2011d) and ischemic heart disease (Stagnaro et al., 1997), which is likely to be present only if maternal mitochondrial DNA is altered (Gadaleta et al., 1986), which in turn leads to a particular mitochondrial cytopathy (painful condition of the cell) called CAEMH (Stagnaro 1985, Caramel et al., 2010a). In the case that cytopathy is intense, from birth it gives rise to specific QBS constitutions (Stagnaro et al. 2004c, 2007a), which could bring about their respective congenital Real Risks - RR.

**Quantum Biophysical Semeiotics: chaotic aspects**

QBS main assumption is that genome affects both parenchyma and microvessels, therefore to understand the physiological or pathological behavior of parenchyma, an indirect analysis through the investigation of microvessels is necessary. Microvessels' non-linear fluctuations provide important qualitative and quantitative information about microcirculation dynamics under the structural and functional points of view.

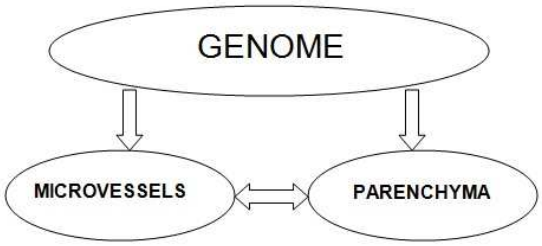


*Figure 1. Genome affects both micro-vessels and parenchyma*

In Figure 1 it is shown how genome affects both micro-vessels and parenchyma, according to Angiobiopathy theory (Stagnaro, 2009b-c).

The failure of microcirculation is a symptom of a disease, or potential pathology of the related parenchyma, and this is due to genetic alterations of mit-DNA mostly from the mother's side (Rosing et al. 1985, Wallace et al. 1985), that generally occur from the moment of birth and lead to the onset of a well-defined mitochondrial cytopathy called CAEMH.

CAEMH is the source of different QBS constitutions (Stagnaro, 2007a) and their congenital real risks (Stagnaro, 2009a), situations where the disease is still potential, and/or grey area or pre-metabolic syndrome (i.e., pre-clinical stages of the disease), can be identified during various phases.

These pre-clinical stages are not detectable through usual clinical tests, therefore new approaches have to be explored, such as those introduced by QBS (Stagnaro, 2007b), which is able to assess the existence of the pre-metabolic syndrome[i], that can last for years or decades, pre-clinical stages of the disease still potential or evolving to pathology, pre-morbid state or grey area (Stagnaro et al., 1998), so allowing an effective primary prevention (Figure 2).

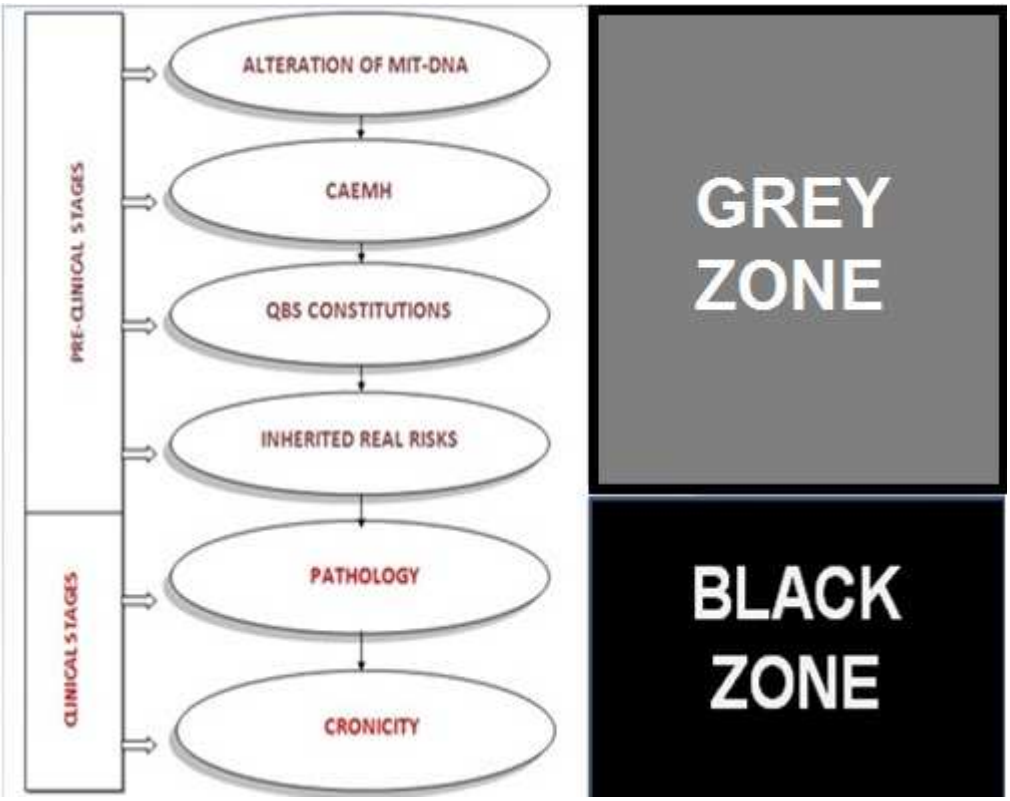


*Figure 2*

In the case of either active or potential disease, this is due to a state of distress of the parenchymal and microvascular tissue cells, and is evidenced by the reduced level of tissue oxygenation and the consequent production of histangic acidosis, as well as by structural imperfections due to pathological Endoarteriolar Blocking Devices (EBD), kind of dam regulating blood flow in microvessels directed to the parenchyma (tissue, substance of a body) by opening or closing themselves (Bucciante 1949, Hammersen 1968, Curri 1986, Stagnaro et al. 1989, Pratesi 1990, Stagnaro 2007b-d).

Fluctuations in microvessels (Figure 3) are physiologically characterized by complex dynamics, identified by a Microcirculatory Functional Reserve (MFR) which lasts from 3 to 4 seconds, indicating the microcirculatory activation, type I, associated, and coincides with the value of the fractal dimension, fD, 3,81, marker of deterministic chaotic equilibrium (Cavalcanti et al. 1995, Stagnaro et al., 1994), geometrically represented by a strange or chaotic attractor (Appendix A).

In the case of either an existing or potential disease, MFR (measured in seconds corresponding to the pause between two successive reflexes) increases due to the microcirculatory remodeling necessary to compensate for the reduced blood flow due to the functional and structural alterations described above, while the fractal dimension (Mandelbrot 1967, 1982) decreases as well as the complexity of the system (limited cycles, fixed points).

In fact, the fD in biology is measured as the ratio between the maximum microvascular fluctuations (high spikes) and the lowest ones in unit time, of vasomotion and vasomotility in the urethral reflexes.

Consequently, when these fluctuations are low of complexity, for example, they tend to limit cycles or fixed points and fD decreases, indicating respectively potential or effective pathologies and chronic diseases.

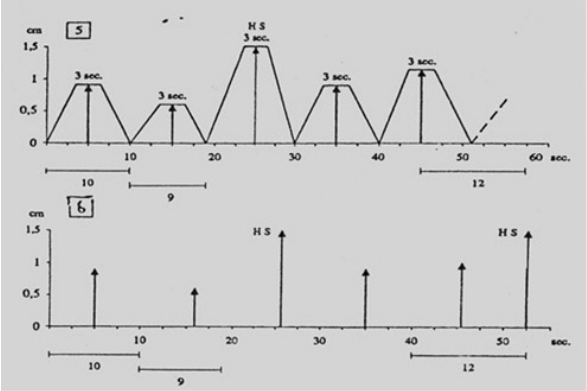


*Figure 3. Vasomotility, Vasomotion and highest spikes*

In summary, the microvessels behave as dissipative systems far from equilibrium, and, if properly stimulated, they lead to consistent local behaviors that give important qualitative and quantitative information about structural and functional state of health, and indirectly provide information about their relative parenchyma. In physiological conditions there is the co-presence of local and non-local reality, supported by equilibriums of the kind 'chaotic attractor', which diminish to equilibrium such as limit cycles in case of illness, or even fixed points in case of chronic states.

**Quantum Biophysical Semeiotics: quantum aspects**

In 1975, David Bohm and Basil Hiley showed how, in the causal interpretation of the quantum theory introduced by Bohm in 1952, according with de Broglie formulation in terms of the pilot wave approach, the concept of a *quantum potential* leads to the notion of an "unbroken wholeness of the entire universe", proposing that the fundamental new quality introduced by quantum physics is non-locality. For this aim, the Schrödinger equation, in its quantum potential formulation has been re-written as:

$$i\hbar\frac{\partial\psi}{\partial t} = \left(-\frac{\hbar^2}{2m}\nabla^2 + V - Q\right)\psi \quad (1)$$

where *Q* is the *quantum potential*, defined as

$$Q = -\frac{\hbar^2}{2m}\frac{\nabla^2 R}{R} \quad (2)$$

The quantum potential or information potential acts to guide the movement of the hidden variable particles of the theory. According with this new way of interpreting quantum theory, we can observe in Schrödinger's equation the existence both of a Quantum Potential and of a Classical Potential, instead of just the Classical one as in classical interpretation.

Sub-quantum behaviors and biological systems dynamics are usually considered as separated and different worlds, but there are some interesting works as well as recent findings of large scale quantum coherent effects associated with photosynthesis (Collini et al., 2010), and 'Lory's Experiment' (Appendix B) that open new perspectives about the presence of non-local reality in biological systems.

Furthermore, since life systems are based on the communication system, DNA (both mit-DNA and n-DNA) in its functioning can not only be seen as a storage of genetic information. We can consider DNA/RNA as a dynamic system that is an Information Energy – EI – catalyst (Manzelli, 2007) able to transmit and receive bio-physical quantum signals to and from the proteins in the living cells. So DNA can be thought of as an "antenna" transmitting nonlocal information through 'gene quantum signals'.

All events in nature belong to a particular form of different codified energy transmissions, so that the total energy cannot be created or destroyed. According with Bohm - de Broglie approach, Manzelli

argues that information is a kind of virtual energy as well as a pure qualitative entity, and EI is a part of the total energy–matter transformation.

Information Energy (EI) is similar to Quantum Potential at sub-quantum level, and Vibration Energy (EV) to Classical Potential.

The variation of the sum of all the transformations of energy, Vibration Energy (EV) codified Energy like Matter (EM) and Information Energy (EI) must always be equal to zero at any time.

- (EM + EV + EI) = K
- Δ (EM + EV + EI) = 0

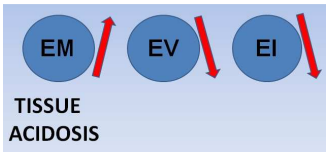


*Figure 4 - EM and tissue acidosis*

For example, if there is tissue acidosis, we can observe that EM increases, parallel to a decrease of EV, and consequently of EI, in the same proportion (Figure 4).

Tissue acidosis is a signal of potential pathology (pre-metabolic syndrome) or of disease, so it needs to act to diminish the pH, i.e., improving tissue oxygenation and mitochondrial respiration. In the figure, we can see that if we improve tissue oxygenation EV grows up, together with EI, parallel to the decrease of EM, i.e., lowering tissue acidosis (Figure 5).

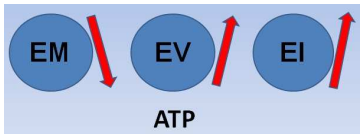


*Figure 5. ATP and mitochondria*

Information Energy – EI - plays an important role: it is a thin and catalytic energy, dense with information, that directs and facilitates, locally and globally, all biological processes and their networking systems. EI then catalyzes and rules the cognitive process that links the conservative autopoietic (Appendix C) scheme of organization (Varela et al. 1974, Eigen 1979, Capra 1997, Davia 2006) to the dissipative structures (Prigogine 1967, 1997) which constantly are created and renewed.

## New way of therapy: the quantum biophysical approach

QBS tools are not only useful for diagnostic purposes, but also for therapeutic advices, because they are able to measure the microcirculatory activity before and after each preventive therapy's treatment, in order to understand the effectiveness of remedies.

'Quantum Biophysical Semeiotics' allows an accurate and direct study of condition and functioning of microvessels and only indirectly of the related parenchyma[ii]. If the way of being and functioning of the microcirculation improves, it does mean that also the way of being and functioning of its parenchyma has improved.

Treatment and prevention, according to QBS, must be geared to EV and EI's increase, restoring or bringing it to a sufficiently high level in order to ensure a lasting non-local reality and the presence of deterministic chaos, by means of improving and normalizing tissue oxygenation and mitochondrial's respiration through a 'Type A Preventive Therapy' (or green therapy) as evidenced in Table 1 (i.e., conjugated-melatonin, LLLT) and an appropriate lifestyle (i.e., etymologically speaking diet, sport activities, walks, yoga, meditation, prayer).

These therapies stimulate the activity of mitochondria by acting on the vehicles that transmit EI: metabolism (chemical processes), peptides' net (electric-electronic processes), but also improving, normalizing tissue oxygenation, expression of the normal operation of mitochondrial oxidative

phosphorylation. Indeed, the mitochondrial functional cytopathy (CAEMH) is the *conditio sine qua non* of the more frequent and severe human diseases.

| **Preventive Therapy – type A (Green therapy)** | | **Preventive Therapy – type B (Blue therapy)** | |
|---|---|---|---|
| **NON-QUANTUM** | **QUANTUM** | **NON-QUANTUM** | **QUANTUM** |
| Conjugated-Melatonin | NIR-LED (Near Infrared Light emitting Diode) | Hot Spring (Thermal) Water | Quantum Device working with customized frequencies (Figure 8) |
| Bioflavonoids | LLLT (Low Level Laser Therapy) | | |
| Anti-oxidants | LLIT (Low Level Infrared Therapy) | | |
| Tissue-protectors | …… | | |
| CQ10 | | | |
| …….. | | | |

*Table 1. The Quantum biophysical therapy*

In pre-pathological stages (Figure2, grey zone), an altered mit-DNA provokes CAEMH, and then 'QBS Constitutions' and Inherited Real Risk – IRR - of the disease. In this last phase, generally, the 'Latency time' of the reflex, Lt, is ≤ of NN (Normal value in physiological situations) while the fractal Dimension, fD ≤ 3 (NN is 3 sec. < fD < 4 sec.)and MFR ≥ 4 seconds (Figure 6).

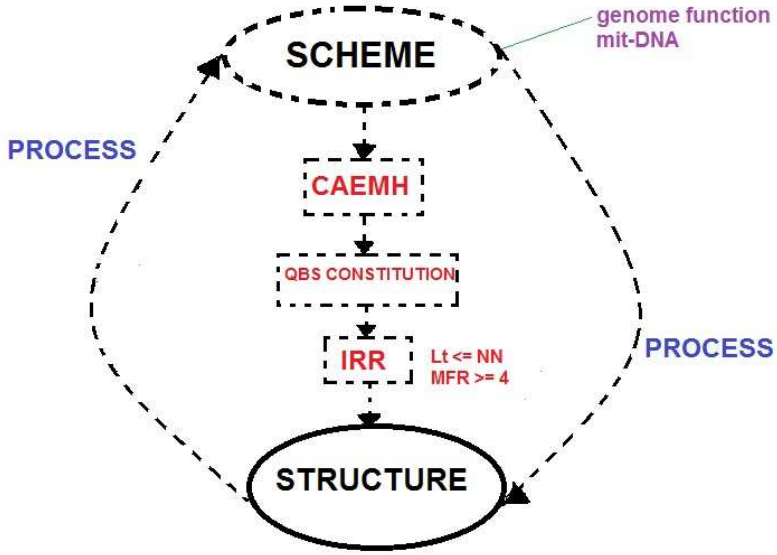


Figure 6

In this case the patient is at Real Risk of the disease. If he/she does not begin a proper preventive therapy, the pathology can occur. In case of disease we observe a lower fractal Dimension, fD < 2, and the inversely correlated MFR > 5 seconds, which corresponds to the disappearing time between one reflex and the next one, more than normal because microcirculatory activation needs more rest in suffering states (tissue acidosis). Lt is surely < NN.

Under 'Type A Preventive Therapy' (or green therapy) treatments on cells and tissues in order to improve tissue oxygenation and mitochondrial respiration, we can observe that Lt turns to Normal values (NN), and MFR is more than 3 and less than 4, time range of physiological states. This means that IRR, 'QBS

Constitutions' and CAEMH are still present, but the Real Risk of disease is just "residual", i.e., there is no risk of disease, provided there is a continuous prevention (Figure 7).

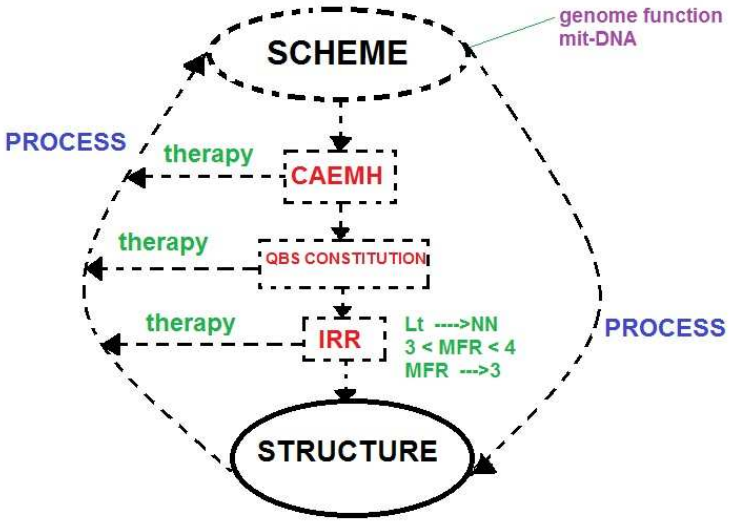


Figure 7

Recent experiments (Caramel et al., 2011c) have shown that 'Type B Preventive Therapy' (Table 1) is able to act and feed back to higher levels, directly on the causes of the diseases, such as healing the alteration of maternal mit-DNA and 'QBS Constitutions', in accordance with the Principle of Recursive Genome Function - PRGF (Pellionisz 2008, Appendix D).

QBS clinical and experimental evidences have been analyzed and related to PRGF, in order to understand if the genetic alterations of mit-DNA could be reversed, due to the recursive energy, information and communication feedback between DNA, RNA and downstream structures such as tissues, cells, mitochondria and proteins. These evidences (Caramel et al., 2011d) are consistent with and fully confirm the above mentioned Principle.

We can argue that the genetic alteration of the mit-DNA is reversible, because we can intervene holistically on the whole, thanks to a 'login password' which enters into the whole system, so that a proper and customized release of 'information' gives resonance to a virtuous feedback mechanism between DNA, RNA and downstream structures (tissues, cells, proteins, mitochondria,..) and vice versa, restoring physiological DNA dynamics.

'Type B Preventive Therapy' (blue therapy) seems to act more on Information Energy (EI) rather than on Vibration Energy (EV), being a Quality Information Energy which is similar to the Quantum Potential (QP) as described by David Bohm with the metaphor of the ship[1].

[1] The form of QP can dominate behavior: information contained within QP will determine the outcome of a quantum process. There is an active information, a form having very little energy enters into and directs a much greater energy. There is an energy form acting to inform. There is an active information in the form having very little energy which enters into and directs a much greater energy: there is an energy form acting to inform, and even distant features of the environment can effect this movement in a deep way. By way of an illustration, think of a ship that sails on automatic pilot, guided by radio waves. The overall effect of the radio waves is independent of their strength and depends only on their form. The essential point is that the ship moves with its own energy but that the information within the radio waves is taken up and used to direct the much greater energy of the ship. If the ship had a pilot, but moving in the fog, it could never reach the port without the help of the radar signals, a small energy but full of information, which drives the largest one of its engines. Who knows, maybe we are the ship and the port is the definitive health, without wandering continuously on the sea of the life (Table 1 - Type A therapy).

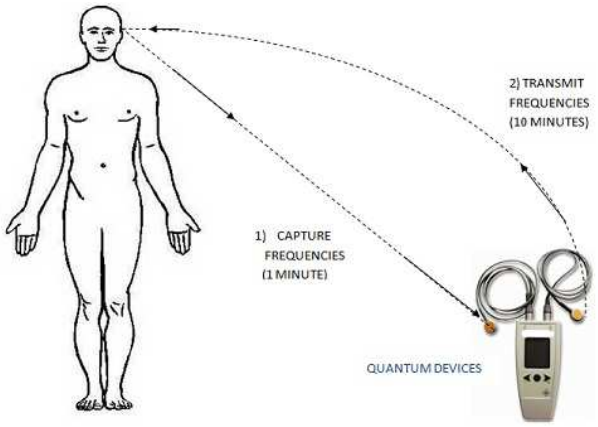


*Figure 8*

In summary, the green therapy is able just to make "residual" the Real Risk of the disease, but the genetic alteration of mit-DNA and QBS Constitutions still persist: a continuative type A preventive therapy is necessary.

On the contrary, the blue therapy acts more in deep and is able to feed back directly and definitively on the genetic cause of the potential pathology: according with the ongoing experiments, a minimal type B preventive therapy is sufficient for this purpose (Figure 9, Table 2).

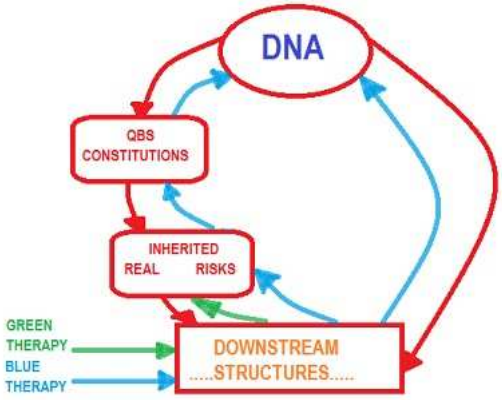


*Figure 9*

| **SYNDROME** | **PREVENTIVE THERAPY**<br><br>**PRE-CLINICAL STAGES** | **Type A Therapy (green therapy)** | **Type B Therapy (blue therapy)** |
|---|---|---|---|
| GREY ZONE (PRE-METABOLIC) | GENETIC ALTERATION OF MIT-DNA | PRESENT | ABSENT |
| GREY ZONE (PRE-METABOLIC) | CAEMH | PRESENT | ABSENT |
| GREY ZONE (PRE-METABOLIC) | QBS CONSTITUTIONS | PRESENT | ABSENT |
| GREY ZONE (PRE-METABOLIC) | INHERITED REAL RISKS | RESIDUAL | ABSENT |

*Table 2*

With regards to metabolic syndrome (clinical stages), sensitive improvements have been observed through blue therapy treatments(Table 3).

| **SYNDROME** | **THERAPY**<br>**CLINICAL STAGES** | | **Type B preventive therapy (blue therapy)** |
|---|---|---|---|
| BLACK ZONE (METABOLIC S.) | PATHOLOGIES & CHRONICITIES | ---------- | IMPROVEMENTS |

*Table 3*

## Water Memory-Information and the quantum-water therapy

Argument of large discussion, water memory has been always considered just a conjecture. In fact, nobody has ever proved that water is able of retaining a 'memory – information' of substances dissolved in it once to arbitrary dilution. The concept was notoriously proposed by Jacques Benveniste (Davenas et al. 1988) to explain the *purported* therapeutic powers of homeopathic remedies, which are prepared by diluting solutions to such a high degree that not even a single molecule of the original substance remains in final preparations.

This topic has fascinated scientists for decades (Boulanger et al. 1998, Zhadin et al. 1998). A part from the thoughts of Computer scientists, who have tried to understand how water can act in a manner similar to computer chips, such a controversial topic can be solved especially in a clinical way, refined, reliable and easily reproducible.

All living cells, composed of between 70 and 90% water, emit bio-photons which cannot be seen by the naked eye but can be either measured by special equipments, or evaluated as modifications brought about in biological system functions.

Cells communicate admittedly via bursts of energy in the ultraviolet electromagnetic bands above the visible light spectrum, as well as via neuro-peptides, present in every part of the body. These energy emissions control vital bodily processes. For instance, healthy and cancerous cells emit quite different photons of energy, paralleling their different microcirculatory and microcirculation patterns, which we can now gather and retransmit through quantum devices.

According to previous clinical researches on mit-DNA and n-DNA antenna, in biological systems, molecules, like neuro-peptides, including those functioning as neurotransmitters, and hormones, act by means of Energy-Information at least in the first of two phases (Stagnaro et al., 2007a).

In order to understand the meaning of Water 'Memory-Information' it is helpful to take each one of these 2 concepts and then merge them together:

1) **Memory** (the water acts as a receptor, is able to receive wave's frequencies and to store them)
2) **Information** (the water acts as a transmitter, transmitting the stored waves' frequencies)

These biophysical, chemical and electro-magnetic characteristics of water are evidenced by some parallel independent experiments, which confirm the contribute of Benveniste.

A recent work on DNA, waves and water (Montagnier *et al.,* 2011) describes experiments which show a new property of DNA and the induction of electromagnetic waves – EMS - in water dilutions. The authors remark that there is a transmission of DNA sequence and genetic information into water through electromagnetic waves. It has been clearly shown that the water nanostructures and their electromagnetic

resonance can faithfully reproduce DNA information. This is another confirmation of water's properties to receive, store (memorize information) and transmit low frequency waves.

Recent experiments (Germanov et al., 2011) show very interesting results: chemical substances of organic and non-organic nature as well as biological objects emit waves whose frequencies are individual for each substance and biological object and complex organic compounds emit a spectrum of frequencies that matches with the frequencies of substances that they contain. Furthermore, human biological fluids (blood, urine, etc.) emit signals that characterize the state of the body. The waves frequency matches with electromagnetic oscillation frequency, and resonance may be created, radiation (emission), containing frequency characteristics of an object can be remotely transferred together with electromagnetic signal.

We note in the above mentioned experiments that great properties of hot spring water have been evidenced. This fact is confirmed by recent QBS tests showing that thermal water is efficacious in term of type B or blue therapy as defined in the previous chapter.

According to the experimental evidences, provided by some scientists' researches, water is able of receiving, retaining and transmitting waves' frequencies ('memory-information') of substances dissolved in it once to arbitrary dilution, or absorbed, i.e., by quantum frequencies transmission from a quantum device, or by music waves from a radio.

In the following chapters we present some experiments aimed at clinically verifying the existence of water 'memory-information' in the light of QBS measurements from a biological point of view.

## Water Memory-Information: experiment n.1

Quantum Biophysical Semeiotics facilitates CFS (Chronic Fatigue Syndrome) diagnosis, as illustrated here after **(**Stagnaro, 2011b)**.**

The hypothesis 0 to falsify is as follows. In CFS, skeletal muscles, a part from the possible causes of such a disorder, are altered under a structural and functional view-point: structure and function are two poles of the same equation! If this hypothesis is true, then the energy frequency gathered from skeletal muscles, i.e., biceps and quadriceps, is altered, too, so that after modifying it properly with the quantum device above mentioned (type B – blue therapy), and retransmitting it to a glass of mineral water that patients swallow, physicians can ameliorate and finally normalize their muscle structure and function, especially regarding local mitochondrial respiratory activity, altered in CFS.

As a matter of fact, such a 'quantum energized' water, thanks to the quantum device, should contain **Information** on the muscle's physiological structure and should conserve it as a **Memory** for enough time to prove that the results are still present.

| **QBS visit** | **Basal value** | **Quantum Device Experiment (Q.D.E.) – blue therapy** | **Latency time after Q.D.E.** | **Latency time during Q.D.E. -> W.M.I. Experiment (length 14 hours)** | **Latency time after 17 hours Q.D.E. -> W.M.-I. Experiment (14+ 3 hours decreasing)** |
|---|---|---|---|---|---|
| Skeletal muscle biceps & quadriceps G.A.R.(intense digital pressure on them →gastric aspecific reflex) | Lt =9 sec.<br>(NN=10)<br>D = 7 sec.<br>(3<NN<4) | Quantum device & C.F.S.<br>Type B therapy | Lt = 20 sec.<br>(NN = 10)<br>D = 3 sec.<br>(3<NN<4)<br><br>3<MFR<4 | Lt = 20 sec.<br>(NN = 10)<br>D = 3 sec.<br>(3<NN<4)<br><br>3<MFR<4 | Lt = 12 sec.<br>(NN = 10)<br>D = 3 sec.<br>(3<NN<4)<br><br>MFR = 4 = fD |

*Table 4. Legend: Lt = Latency time, NN = Normal physiological value; D = duration of reflex; W.M.-I. = Water Memory-Information; Q.D.E. = Quantum Device Experiment*

Table 4 resumes the CFS experiment. The patient suffers of CFS, as proved by the QBS assessment done through the skeletal gastric and gastric aspecific reflex which has on this case a Latency time (basal value) of 9 seconds (in physiological state the same reflex lasts for 10 seconds; NN=10). The duration of the reflex is very high (7 seconds) comparing with the NN values ($3 < NN < 4$) , perfectly identical to fractal Dimension of local micro-vessels fluctuation.

At this point a quantum device application (blue therapy) is done: for 1 minute the frequencies are captured from 2 skeletal muscles, a biceps and a quadriceps, which are genetic altered as proved by the basal examination. After that, the device is applied on the same muscles for 10 minutes, before a second QBS evaluation is done. As shown in the fourth column, the latency time is physiological (Lt = 20) doubling the basal NN value, and this is a signal that something new and good is happened. In fact, in QBS preconditioning a doubling basal value is observed, so in case of pathology, like in this case, the latency time should be less than 18 (Lt ≤ 18). Furthermore, the duration of the reflex is physiological too (D = 3 seconds, showing a perfect muscle vessels Microcirculatory Functional Reserve), i.e., it is in the range of normal values (3<NN<4). After removing the crystals from the body, the reflex values turn pathological.

Later on, this experiment is replaced under the same conditions, so capturing the same skeletal frequencies for one minute, but instead of applying the device's crystals on the altered articulation, they have been applied at the base of a glass of water for at least 10 minutes.

After that, the patient drinks the energized water, and a third QBS evaluation is done, showing the same physiological parametric values emerging after direct quantum devices application: Benveniste was right!

Interestingly, the above illustrated positive results lasted exactly for 14 hours; then all parameters values slowly decreased in the three subsequent hours until the latency time of skeletal muscle reflex decreased to 12 sec. (NN = 10 sec.); reflex duration lowered to 3 sec. (NN >3 sec.< 4 sec. indicating a perfect Microcirculatory Functional Reserve); finally, reflex disappearing time was 4 sec., showing that fractal Dimension of local microvessels' oscillations was at highest value. After two days all parameters showed normal values.

## Experiment n.1: Comments

The significant data of this QBS experiment, aiming to treat Chronic Fatigue Syndrome, illustrated in details from the technical view-point, , allows to state that a "possible", really efficacious therapy of CFS has been discovered, if it will be corroborated on a large scale.

Water energized by quantum devices:

1) has normalized the altered frequencies coming from 2 skeletal muscles;
2) has re-structured, after about a week, the local parenchyma by means of a complex work, revealed by the maximal Microcirculatory Activation in the same muscles.

Really, this work of re-structuring lasted for about one week and after this time the muscle-gastric-aspecific reflexes and the upper and lower ureteral reflexes show parametrical basal values better than normal: Lt = 12 (NN=10), Du = 3 seconds (3<NN<4), duration of local microcirculatory oscillation (AL+PL+DL) is 7 seconds. There is a lower Microcirculatory Activation (Lt=12 instead of Lt=20), anyway better than the physiological one, which is interpreted as the time needed for the re-structuring work of the local parenchyma, and the Duration of the reflex (3 seconds) confirms perfect muscle vessels Microcirculatory Functional Reserve.

| CFS | Basal Value | NN | Green Therapy | Blue Therapy with device | Blue Therapy with spring water | After Blue Therapies |
|---|---|---|---|---|---|---|
| Latency Time | 9 | 10 | 12 | 20 | 24 | 12 |

*Table 5*

In Table 5 different Latency Time (Lt) parameters correlated with vasomotility and microcirculatory activity are compared. In case of a patient with light-moderate CFS the basal value Lt is 9 seconds, instead of 10 seconds, the physiological one. Under type A treatments (green therapy) tissue oxygenation and mitochondrial activity improve and Lt lasts for 12 seconds. Downstream structures are working better, but the genetic alteration still remains. The patient needs to receive a continuative 'green' treatment to maintain a sufficient high amount of EV and EI in mitochondria.

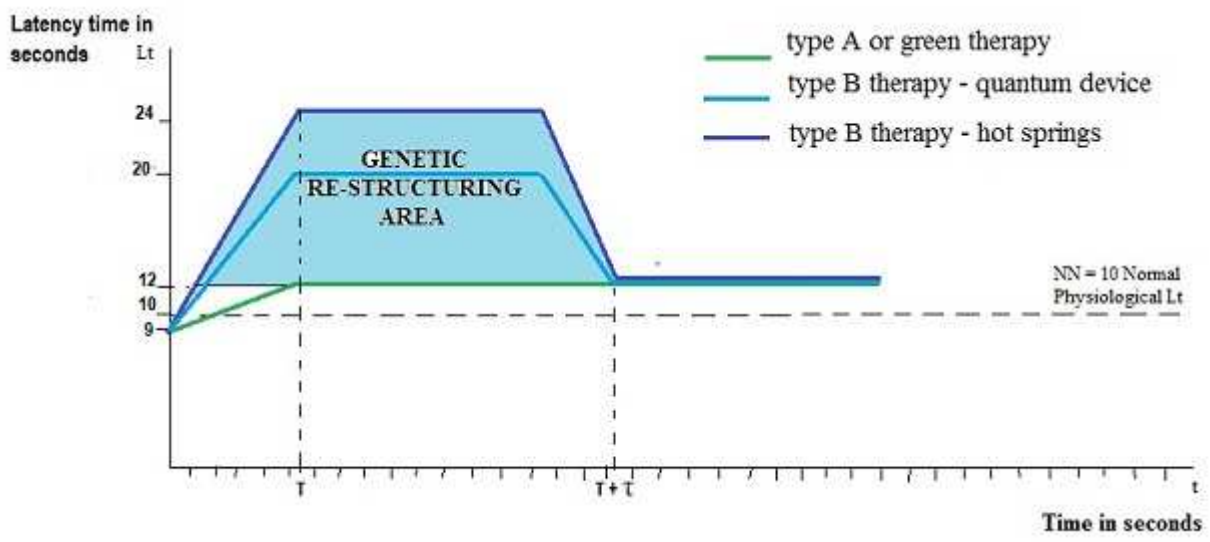


*Figure 10*

Under type B treatment (blue therapy), done through a quantum device capturing and then retransmitting customized frequencies at time T, Lt rises to 20 seconds: a re-structuration of the local parenchyma starts up (Figure 10). **Information** Energy (EI) captured and re-transmitted is a high **quality** input which favors a sensitive improvement of microcirculatory activity, never observed before even with a high and continuative quantity of green therapy (EV). At time T+τ (τ is for one week) the very high microcirculatory activity slows down to better than physiological values (Lt is 12 seconds instead of physiological NN = 10): the genetic re-structuration has been done. One more blue therapy is spring water, which shows even better parameters than those provided by quantum treatment (Lt = 24).

The water energized by the quantum device (Figure 11) shows the same values just above mentioned: this is one more experimental evidence of blue therapy and Water Memory-Information.

| **fractal Dimension** | **Therapy: type A**<br>**Green Therapy** | **Therapy: type B**<br>**Blue Therapy** | |
|---|---|---|---|
| **fD** | **CP (EV)** | **QP (EI)** | **Effects** |
| 3.81 < fD ≤ 4 | No | Yes | PRGF – reversing mit-DNA genetic altered |
| 3 ≤ fD ≤ 3.81 | Yes | No | tissue oxygenation, mitochondrial respiration and tissue protection improve |
| 2 ≤ fD < 3 | Yes | No | tissue oxygenation, mitochondrial respiration and tissue protection improve |
| 1 ≤ fD <2 | Yes | No | tissue oxygenation, mitochondrial respiration and tissue protection improve |

*Table 6*

All QBS parameters confirm each other: this is a strong evidence of the internal and external coherence and consistency of QBS both under theoretical and practical points of view.

As seen in the previous chapter, fractal Dimension is a parameter of paramount diagnostic value. In presence of Type A therapy the maximal value observed is 3.81, which is the physiological one. Only by means of 'Type B Therapy' fD is more than physiological reaching the maximum of 4. Through green therapy, the experimental evidences suggest us that EV (Vibration Energy) contribute is 'stronger'[1] than EI

[1] Before quantum therapy experiments, we thought that EI was contained in EV and that the two kind of energy go hand in hand (if EV increases, then EI proportionally rises). At the matter of fact, we had never

(Information Energy): the quantity of energy EV (similar to Classical Potential - CP - at sub-quantum level) improves tissue oxygenation and mitochondrial respiration, and protects the tissues, but is not able to improve the total amount of energy from a quality-information point of view. This is provided from blue therapy in which the contribute of EI (Information Energy) seems to be stronger than that of EV. The quality-informative inputs allow to improve sensitively the total amount of flowing energy (very high microcirculation activity never observed before), so the information plays a key role in re-structuring the genetic altered mit-DNA (Table 6).

A recent work (Rapoport, 2010) evidences the 'Klein-Bottle' (KB) topology of the genetic code, in which KB-logical gates and bio-photons establish quantum coherence; these gates appear to codify the Genetic Code. This approach is consistent with our interpretation of the Principle or Recursive Genome Function (Pellionisz, 2008), because we argue that in some way EI (Energy Information) is a quality input that allows to start up a virtuous feedback between DNA, RNA and downstream structures (proteins, mitochondria, cells,..). This quality input is something similar to a login password given, i.e., to a protein, in order to access the KB-gates above mentioned. For further research we suggest to investigate the topological structures of genetic altered mit-DNA and mit-genome, before and after green and/or blue therapy.

Quantum-biophysical therapy approach is running very well in the case above mentioned of light-moderate CFS (metabolic syndrome), but in case of patients with more severe CFS the genetic re-structuring is possibly not allowed[1]. QBS diagnostic is oriented mainly to primary prevention so in the following example we will see a case of pre-metabolic syndrome.

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observed genetic restructuring by means of green therapy (cancellation of CAEMH and QBS constitutions), and for any combination of type A therapy which acts by increasing the EV, EI never exceeded a certain threshold (fD and QBS parameters was never beyond a certain physiological value). What does this mean? It means that EI is not primarily strictly depend on the amount of EV we enter, there are maybe somehow related to each other, but there is not an evident proportional or non-linear dependence. It is not true a priori that EI = f (EV) or vice versa.

Secondly, EV is more a quantitative energy (comparable to the Classical Potential, the energy of the ship's engines according to Bohm's metaphor, or ATP, the mitochondria energy), while EI, is a qualitative energy (it is the ship's radar in the metaphor above mentioned, without whose information we could never reach the port, despite the power of the ship's engines and the fuel that we enter). We can think of ourselves as the ship and the sea as our own life, the sea of life, while the port is the definitive health (the absence of CAEMH and QBS constitutions): we may never access it without a sufficient EI which allows us to join the port (the re-structured DNA): without a sufficient EI we wander out to the sea of life sustained only by an EV that makes our Real Risk of disease "residual" (but we would need for a continuative (green) therapy to support the ship's engines, otherwise we would go adrift (pathology, chronicity), sooner or later sink, at the mercy of the waves.

This example demonstrates intuitively the independence EI - EV: there could be a high level of EV and a little one of EI, or vice versa. The ship's radar (or the device related to blue therapy) needs of a small amount of electricity or battery (minimal EV), but the contribution of EI is significantly and remarkably higher (i.e., the quantum-level impact of EV that the device above mentioned transmits to QBS trigger point is ridiculous, almost it does not feel, being released with a very low frequency potential). This is the explanation why we say that the contribution of EV in green therapy is greater (stronger) than that given by EI (in fact there is not a quality of information fed to engage the mechanisms of genetic restructuring), and vice versa, in blue therapy, intake of EI is greater than that given by EV, although it is difficult to quantify and compare something quantitative with something qualitative (Bohm, did it, this is why we do it as well).

[1] The blue therapy is oriented to pre-metabolic syndrome, while the efficacious of green and/or blue therapy for metabolic syndrome depends on the severity of the disease

**Water Memory-Information: experiment n.2**

We follow the same procedure as in experiment n. 1. Quantum Biophysical Semeiotics is able to detect the presence of Oncological Terrain (OT) in any subject from the moment of birth. We consider as before, among the several diagnostic parameters provided from QBS, the Latency time (Lt) of the SST-TH-gastric aspecific Reflex. In this case the physiological Lt is 8 seconds (NN = 8). If the basal value is less than 8 seconds, then there is Oncological Terrain and Inherited Real Risk of cancer (Table 7).

| OT | Basal Value | NN | Green Therapy – mel. | Blue T. Quantum-device | Blue T. Spring Water | After Blue T. |
|---|---|---|---|---|---|---|
| Gastric aspecific Reflex - Latency Time | < 8 | 8 | 12 | 16 | 20 | 12 |

*Table 7*

Under a continuative type A preventive or green therapy (conjugated-melatonin) the Lt rises to 12 seconds, so that the Real Risk of cancer becomes residual. By this way tissue oxygenation and mitochondrial activity are improved, mitochondria are running well, but it remains the genetic alteration of mit-DNA (CAEMH and Oncological Terrain are still positive). The news is given by type B therapy.

As in experiment n. 1, we capture the 'SST-RH (OT trigger points) frequencies for one minute, then we apply the crystals on the same trigger points for 10 minutes. We repeat the same experiment with a glass of quantum energized water (Figure 11). In both cases we observe a very high microcirculatory activity type I associated, denoted by a Lt of 16 seconds.

After a re-structuring period of time (hours to few days) the Lt slows down to 12 seconds (more than physiological time). All QBS parameters from the beginning of the application, till the time-out of genetic re-structuring time, and all QBS diagnosis after weeks or months confirm the negativity of Oncological Terrain.

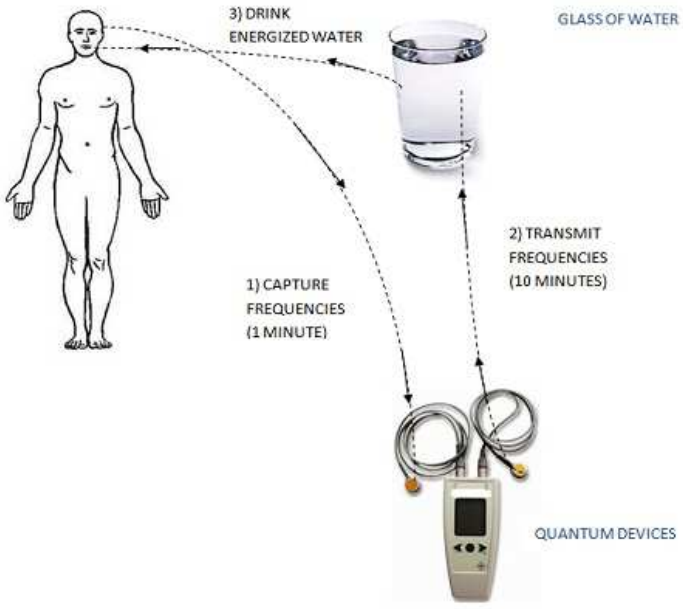


*Figure 11: the experiment n.2*

Furthermore, we discover that hot springs have great therapeutic properties: by the same way the Oncological Terrain disappears drinking sulfuric thermal water, and the QBS parametrical values are even

better than quantum treatment: Lt during the genetic re-structuring length of time rises to 20 seconds, before normalizing to 12 seconds (Table 7).

## Water-Memory-Information: other QBS experimental evidences

There are several QBS experimental evidences of Water Memory-Information.

A gastro-entero-colitis (Stagnaro 20011a) was successfully treated by means of quantum energized water, following the procedure explained in the experiment n. 2 (Figure 11).

The principle of Water Memory-Information(Stagnaro, 2011e) has been applied to treat an arthrosis-dependent backache:, the water was powered by a common anti-rheumatic, non-steroidal, anti-inflammatory drug NSAD. Immediately after, the frequencies in the energized water has been captured by a quantum device, and finally re-transmitted successfully to patient lumbar muscle.

As a matter of fact, such energized water contains information to improve, as far as to ameliorate more than the normal level, the muscle physiological structure and function, conserving it as memory for two days after the beginning of the experiment, when patient was feeling significantly better. However, every parameter value returned slowly to normal range. The maneuver has been successfully repeated the day after with just a few drug's powder, providing the same QBS parametric results (Stagnaro, 2011c).

Furthermore, according with Masaru Emoto works about music and water, Caramel QBS experiment demonstrates that music energized water. In fact, there is microcirculatory activation type I associated both if we drink a glass of water powered by music frequencies, or if we sit close to the same glass of energized water (Stagnaro, 2011f).

The validity of the above mentioned experiments is tested by QBS tools evaluating the microcirculatory dynamics behavior according with Clinical Microangiology (Stagnaro, 20011f), i.e., by measure of Latency time and duration of Upper Urethral Reflexes before and after the treatments.

The QBS evaluation of glycocalix plays also a central role to test the existence of W.M.-I (Stagnaro, 20011d). Table 8 summarizes some of quantum-water treatments, a quantum water therapy based on 'Water Memory-Information' (W.M.-I.) related both to type A and type B therapy as explained in the previous chapter.

The terms 'quantum' and 'non quantum' refers to the way in which we assume the powered water. Generally speaking, on the whole we can consider that water therapy based on W.M.-I. is anyway a quantum therapy. In fact, there is always a 'quantum' transmission of frequencies coming from a device or from any other waves emitter. If we put any drug (the quantity is not important) under a cup of transparent glass of water there is a transmitter (the drug) which transmits frequencies to a receiver (the water). The water can act both as receiver, memorizer and transmitter, therefore we can even absorb the frequencies of the powered water, without drinking it, as shown in Caramel's experiment.

| Preventive Therapy – type A (Green therapy) | | Preventive Therapy – type B (Blue therapy) | |
|---|---|---|---|
| **NON-QUANTUM*** | **QUANTUM** | **NON-QUANTUM*** | **QUANTUM** |
| Drinking Water energized by Conjugated-Melatonin | Absorbing waves coming from water energized by Conjugated-Melatonin | Drinking pure Water energized by Hot Spring Water | Drinking pure Water energized by Quantum Device working with customized frequencies |
| Drinking Water energized by Bioflavonoids | Absorbing waves coming from water energized by Bioflavonoids | | |
| Drinking Water energized by Anti-oxidants | Absorbing waves coming from water energized by Anti-oxidants | | |
| Drinking Water energized by Tissue-protectors | Absorbing waves coming from water energized by Tissue-protectors | | |
| Drinking Water energized by CQ10 | Absorbing waves coming from water energized by CQ10 | | |
| Drinking Water energized by any useful drug | Absorbing waves coming from water energized by NIR-LED | | |
| Drinking Water energized by any useful music | Absorbing waves coming from water energized by LLLT | | |
| | Absorbing waves coming from water energized by LLIT | | |
| | Absorbing waves coming from water energized by any useful drug | | |
| | Absorbing waves coming from water energized by harmonic music | | |

*Table 8. The Quantum Water Therapy based on W.M.-I. *the water is quantum-energized*

# Conclusions

The original diagnosis offered by Quantum Biophysical Semiotics – QBS - allows to suggest appropriate preventive therapies for the benefit of all patients with pre-metabolic syndrome, thus putting in place an effective primary prevention.

The treatments recommended in recent years (green therapy) have proven to be useful to make "residual" the 'Inherited Real Risks' of well-defined diseases, but they have never been able to address the root causes of the same at the genetic level, i.e., feeding back on the altered mit -DNA, with the exception of Manuel's story, i.e., the first case of Oncological Terrain Pre-Primary Prevention (Caramel et al., 2011c).

Recent experiments with a quantum device, however, have opened new ways for therapy (blue therapy), since QBS measurements have demonstrated its efficacy feeding back at genetic level upstream, i.e., healing completely CAEMH and QBS Constitutions.

Furthermore, treatments with thermal water made possible the same results. The successes of quantum therapies have also led us to test the therapeutic potential of water, thus enabling us to evaluate its properties as receptor, store and transmitter of information: the 'water-memory-information'.

QBS evidences give biophysical support to the quantum water therapy, following the path opened by Benveniste and in parallel and harmony with other contemporary researches.

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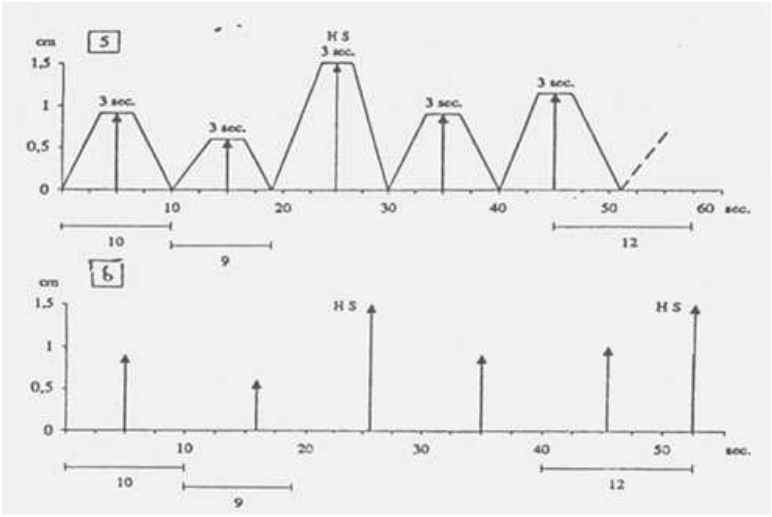
# APPENDIX A – QBS: microvessels chaotic dynamics and fractal Dimension

*The **chaotic dynamics** of microvessels are well known, but is not so evident how to measure their oscillations and to get consistent qualitative information from their behavior for diagnostic purposes.*

*The fractal correspondences of genome and the **chaotic behavior** of microvessels' fluctuations are well known, but there is the open question about how to get qualitative information from their behavior, therefore we should take some statistic measures of chaos theory for this purpose.*

*Deterministic chaos has been defined as the 'stochastic or probabilistic behavior occurring in a deterministic system' and its main characteristics are the uncertainty and unpredictability, but is possible to detect and investigate it and to get qualitative information through invariant statistic measures such as LCE, fractal dimension and entropy.*

*While LCE and entropy are very difficult to detect in biological systems, is possible to determine the fractal dimension of microvessel dynamics, i.e., of the microcircle, through a well defined and refined QBS technique, such as, i.e., considering the vasomotility and vasomotion diagram, and particularly taking the ratio between the highest spikes – HS (maximum points of the oscillation) and the minimal points of microvessels' fluctuation (Scheme I).*




*Scheme I*

*In fractal geometry, the fractal dimension, D, is a statistical quantity that gives an indication of how completely a fractal appears to fill space, as one zooms down to finer and finer scales. There are many specific definitions of fractal dimension. We are considering in this paper the Hausdorff dimension defined as follow:*

$$D = \lim_{\epsilon \to 0} \frac{\log N(\epsilon)}{\log \frac{1}{\epsilon}} \qquad (0)$$

*where N(ε) is the number of self-similar structures of linear size ε needed to cover the whole structure.*
*It is possible to calculate, in several ways the QBS fractal dimension (fD) of a deterministic chaotic biological system, such as the microvascular one, of any organ, tissue or viscera. Among the many procedures at the bedside easily achievable, the following is suggested: four High Spikes are emerging in a time interval of 120 seconds, dividing the space into four segments; each segment in turn, is further divided into 3 sections by two more "normal" fluctuations. Therefore, it is easy to calculate the fD of the oscillation in Scheme 6,, i.e., the degree of chaos, entropy, or complexity of the figure, which roughly indicates the space occupied by the fluctuation and is a measure of its complexity:*

*(1) fD= [Ln(4) / Ln (3)] "f"*

*where "f", fractal factor, is the ratio maximal oscillation (HS) / minimal oscillation.*
*In healthy "f" = 3, as previously reported, because the maximal oscillation corresponds to an intensity of the reflex of cm 1.5, while the minimal oscillation corresponds to an intensity of cm 0.5, so:*

*(2) "f" = HS/minimal oscillation = 1.5/0.5 = 3*

*It follows that, physiologically, the fractal dimension is $3 < fD < 4$:*

(3) $fD = 3\ [1.27] = 3.81$

*In patients where a biological system evolves towards any chronic disease there is a lower fractal dimension, i.e., $1 < fD < 3$, and, finally, in the chronic situations, i.e., the endocrine pancreas in diabetes, fD is equal to 1, topological dimension.*
*QBS is able to provide through the auscultatory percussion of the stomach and by mean of chaos theory tools very useful study cases about several diseases or potential pathologies as, i.e. in the following example about Oncological Terrain and inherited real risk of cancer.*

| ***Fractal Dimension*** | ***Equilibrium*** | ***State of health*** |
|---|---|---|
| *fD = 1* | *fix point* | *chronicity – chronic and acute pathology* |
| *1 < fD < 1.9* | *limit cycle tending to fix point* | *pathology – tendency to chronicity - State of variable severity of disease evolution* |
| *1.9 ≤ fD < 3* | *limit cycle* | *initial implementation of the tendency to disease /potential pathology- i.e. Oncological Terrain (TO) – initial evolution to disease* |
| *3 ≤ fD < 3.81* | *limit cycle tending to strange attractor* | *tendency to physiologic conditi (only potential phase)* |
| *fD ≥ 3.81* | *strange or chaotic attractor* | *Physiologic condition – healthy state* |

*Table I*

*Legend: the fractal dimension (fD) is calculated as simply as the time of the disappearance of gastric aspecific reflex, before the appearance of the next. Important is that the fD is directly related to (d) or inversely (INV) related with:*
*A) (d) the local microcirculatory functional reserve - (vasomotility and vasomotion) and then*
*B) (d) with the presence, or not, of the local congenital Real Risk;*
*C) (d) with the latency time of gastric aspecific reflex and then with tissue pH;*
*D) (INV) with the duration of the gastric aspecific reflex*
*The fractal dimension (Table I) is an universal measure, independent of the investigated parenchyma, informing the physician about the health condition of the visited patient.*

## APPENDIX B - Lory's experiment: biological and quantum-chaotic aspects

*Lory's experiment supports the existence of non-local reality in biological systems, legitimizing the extension of some of the properties of quantum physics to biolog). Lory's experiment is based on the fact that "all" subatomic components, both atomic and molecular, structured to form a cell and the whole cell or parenchyma, are correlated between themselves and with "all" the other branches of the same embryo in the non-local reality in a higher-dimensional space (i.e., four dimensional space), as well as are just "plotted" (entangled) two electrons observed by Aspect in his experiment. The effect of' entanglement[iii] means that the information takes on a "non-local" dimension.*

*Lory's experiment is as follows: if digital pressure is applied over a parotid gland, or a salivary gland sublingual, of a "single ovular" twin sister, simultaneously a microcirculatory activation, type I, associated, in the pancreas of the other twin sister is observed (Figure I), - regardless of the distance which separates them in meters or kilometers.*

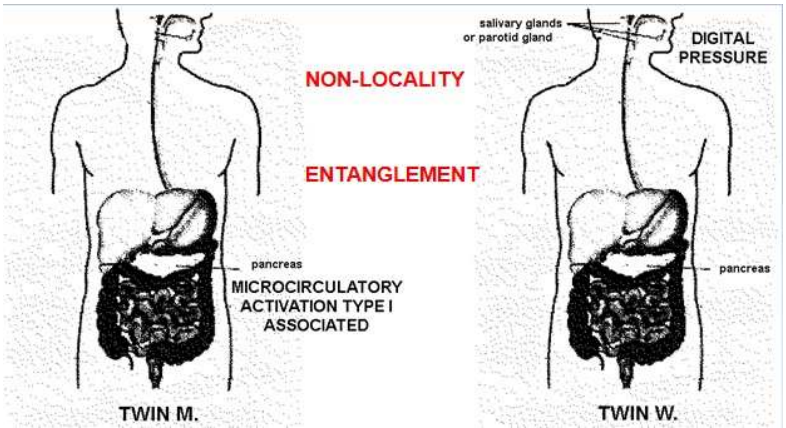



***Figure I.*** *Lory's experiment*

*Lory's experiment provides strong evidence of non-locality in biological systems, extending what is already known in quantum physics which is that a quantum event at one location can affect an event at another location without any obvious mechanism for communication between the two locations. To understand in deep the Lory's experiment from a biological point of view we firstly need to investigate the meaning of 'microcirculatory activation'.*

*The normal microcirculation at rest can become physiologically active when the parenchyma starts to work, i.e., if we stimulate pancreas trigger points (salivary gland or parotid gland) of one of the twins like in the experiment we are considering. The important set of microvascular dynamic events, related to microcirculatory activation - M.A., can be subdivided in three types:*

- *type I or "associated", "physiological", in which both the vasomotility and vasomotion result increased and consequently blood-flow in nutritional capillaries and post-capillary-venules is augmented (Figure II), due also to right AVA reaction; (i.e., during parenchymal work);*
- *type II or "dissociated", "pathological", in which the vasomotility shows increasing of both intensity and oscillation duration, while the vasomotion shows a highly differentiated behaviour, in relation to the presence of microcirculatory "compensation" or "decompensation" (failure), as we will say later on. (i.e., during pathological conditions);*
- *type III or "intermediate", when vasomotility is activated, while vasomotion shows basal activity, and hemoderivative structures are not activated. The transition from type I to type II goes through numerous intermediate stages, which from the compensation reach the total irreversible decompensation of microcirculation, showing a large variety of different and significant forms.*

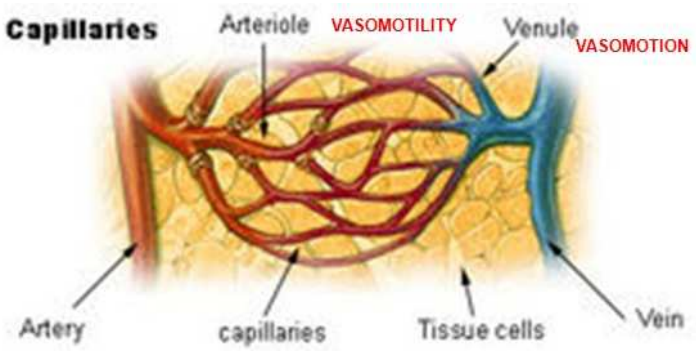


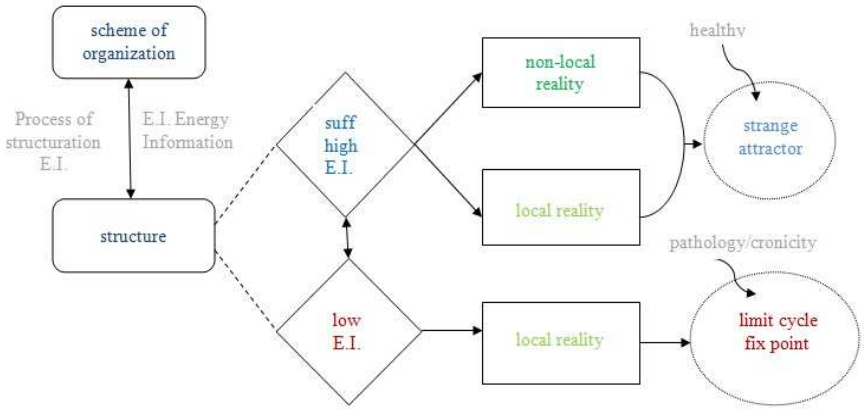

*Figure II*

*In practice, if it is done a digital pressure applied over a parotid gland, or a salivary gland sublingual, of a "single ovular" twin sister, simultaneously it is observed microcirculatory activation, type I, associated, in the pancreas of the other twin sister, which means that her pancreas physiologically dilates. Similarly to auscultation of the stomach, the physician through auscultatory percussion of the pancreas of twin M., in this specific case, and the simultaneous 'intense' stimulation of the trigger point, i.e., the parotid gland of twin W., has got 3 main signs to analyze: the latency time of the reflex, the intensity of the reflex (in seconds), and the duration of the reflex (in seconds). In this special 'quantum' case, there is not latency time, so the reflex is perceived immediately, therefore we concentrate our analysis just on intensity and duration of the pancreatic reflex (Figure I).*

## APPENDIX C – Autopoiesis and Energy Information

*In biology, Varela proposed the theory of autopoiesis, useful to understand the connection between organization and structures in living systems. An autopoietic system, so as described by Maturana and Varela, is based on a scheme of autopoietic organization through a process of structuring which can lead to different structures. The autopoietic organization is conservative and always acts on itself: self-production, self-regulation, self-referential, recursion, circularity. The scheme of organization works relentlessly to achieve the autopoiesis through a continuous process of structuring, generating dissipative structures with non-linear dynamics. It has been verified and tested in biological systems the hypothesis of:*

- *the correlation between nonlocal reality and deterministic chaos;*
- *the co-presence of local reality and non-local reality in physiological states;*
- *a sufficient high amount of information energy (EI) as catalytic process to maintain no-locality in the autopoiesis (Scheme II).*




*Scheme II – EI, chaos, non-locality and Autopoiesis*

*In the autopoietic living biological system (i.e., nervous system, immune system), if there was a disease, the autopoiesis would still function. The organization would remain intact, it is stable, continuous, always on, it is a conservative system, and if there were not, the structure and the system would disintegrate, it would disappear the life itself! In macro-interacting biological systems there is a "mind" synthesis of an autopoietic system that is based on a composite unit (i.e., PNEI - psycho-neuro-endocrine-immune system).*

*If the system was fully healthy, there would be actually a non-local reality (parallel to the local reality) - simultaneity and synchronicity - and the presence of deterministic chaos (chaotic or strange attractor). If there was disease, the autopoiesis would still be present, but the non-local reality and the correlated strange attractor equilibrium, corroborating the presence of deterministic chaos, would disappear so that we would observe just limit cycle equilibrium in the case of pathology, and fixed points in case of chronicity. The presence of just the local reality is a consequence of the reduction of EV and EI, but with proportional increase of EM.*

*An autopoietic dissipative structure, always acts satisfying (or trying to meet) the autopoiesis in a simultaneous and synchronous way: there is no cause and effect, but a-causality in a timeless dimension. An autopoietic system is autonomous so that it does not depend on time. This is enough to justify the behavior of living autopoietic biological systems, where there is simultaneity and synchronicity, indices of a non-local reality. There is structural coupling between organization (conservative) and structure (dissipative) to achieve always the autopoiesis. For example, if there was a tendency to disease in biological systems (or if there is pathology), the organization – i.e., the PNEI, psycho-neuro-endocrine-immunological system, would always be orientated towards the survival, materializing and engaging compensatory mechanisms to restore the simultaneity and synchronicity.*

*Scheme II shows that in human bodies there is physiologically the healthy co-existence of two different realities: local reality and non-local reality. The no locality disappears if the mitochondrial respiratory activity, and consequently EI, significantly decreases. For example Lory's experiment fails, if a stimulation is applied in a subject, following the Apnea test, with the result of an impaired mitochondrial activity. The compensation takes place because of 'nuisances' involving dissipative structural changes, but always subject to the power system's and its inherent conservative autopoietic organization.*

*The QBS congenital Real Risk therefore arises at an intermediate stage between the scheme of organization and the structure, a first 'structuration' from the scheme (not observable) on which we can identify it (in case there was) using simple clinical tests at bedside, in a vision in which if there were RR, it would be able to tend to a pathology (potential disease), a pathology which, if occurred, would amount to a fully 'structuration' of the scheme of organization (i.e., genetic alteration of mit-DNA) to disease. RR, if pathologically evolving, is the slow 'eventing' of disease events. Also considered in itself, whether static, is a manifestation of the structuring process of the organization. The process is reversible in the sense that - through melatonin-conjugated[iv], administration of energy (i.e., NIR-LED, Near Infra Red light-Led), and proper diet understood in the etymological sense, etc. the RR can become "residual", so that will not disappear nor will evolve towards the structure.*

*The principle of the process is the Energy-Information (EI), catalytically in nature. The level of Vibration-Energy (EV) related to energy-information (EI) from the perspective of QBS is measured on the level of tissue oxygenation: namely the latency time of reflex, which is not a reflex in true. Indeed, stimulating the trigger-points of a biological system, such as the liver, "simultaneously" there is built up a sympathetic hyper-tonicity after a latency time dependent on the intensity of the stimulus: this is related to the intensity of liberation of adrenaline and nor-adrenaline in the biological system, so that we can observe the nonspecific gastric reflex, stomach swells, "simultaneously" when is reached the critical level of low energy or low oxygen.*

*Under these conditions, in fact the biological system has become thermodynamically isolated. We are in this case, in the non-local reality: there is simultaneity and synchronicity. On a completely healthy human being (without RR) EI is in fact high enough, and then there is simultaneity of information. Local and non-local reality co-exist, exist simultaneously but in parallel, they do not overlap. When EI decreases, EM –Energy Matter – as a consequence increases, and whether EI falls below a certain threshold, non-local reality "disappears" and we can observe just local reality. In summary, if there is enough high EI, there is not RR, while if there is low EI, non-transitory and not occasional - low EI in transient form, for instance, is with the Apnea test in individuals completely healthy without RR – since permanent, then there is RR (associated, i.e., with Oncological Terrain).*

*The production of EI may be endogenous - it is created endogenously in humans through a transformation of breath in subtle and vital energy, and through mitochondrial activity - or exogenous - through the release of substances like melatonin, the adoption of*

*an appropriate diet, NIR-LED (near infrared light) – that stimulates the mitochondrial respiratory function[v], i.e., oxidative phosphorylation.*

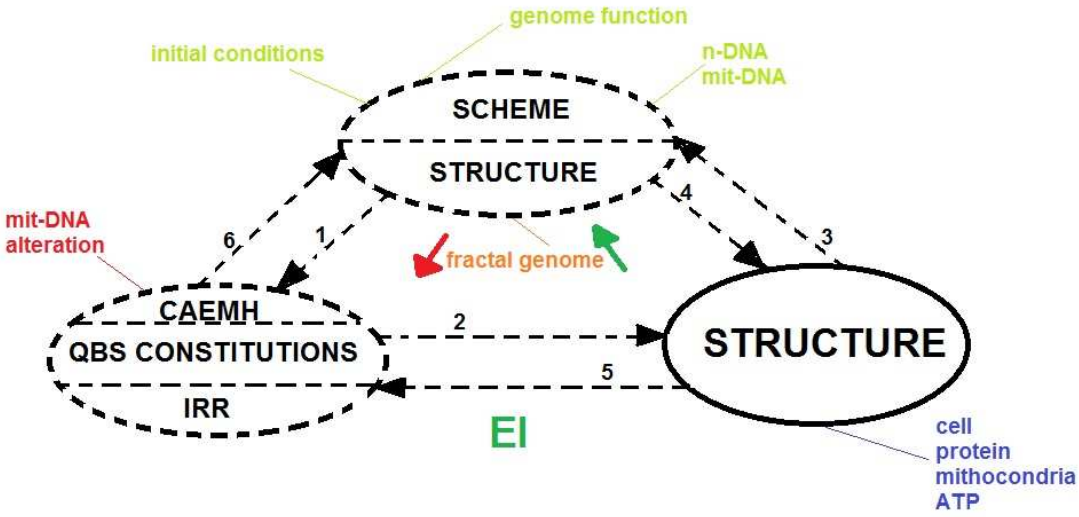
*The endogenous EI born and is formed in the mitochondria, the power plant of human body. The autopoietic system self-produces EI, by transforming EM, including food, water and $O_2$ - which is converted into EV-EI. Endogenously we produce ourselves the EV-EI indirectly with the breath, in the sense that vital energy is a subtle energy that occurs through breathing (it is not air, it is not breath, but it travels and is created together with it).*

*Exogenously the EI is created by chemical transformations and biological properties of certain food we eat or through the release of specific substances (e.g., conjugated - melatonin) or certain stimuli (e.g., LLLT, including NIR-LEDs) to improve the mitochondrial respiration.*

*In biological systems the Energy-Information can be transmitted chemically - through metabolic processes - and/or electrically - with the neurotransmitters - peptides. The peptides can be imagined as an "antenna", which carry information (waves) non-locally, simultaneously and synchronously by resonance (in case of non-local reality with high EI), or locally in space-time. In biological systems the EI is transmitted through the classic routes in the local reality, using substrates that reach the target tissue via blood, lymphatic, venous (hormones, cytokines, etc.) or through the nerve pathways (neurotransmitters) characterized by polarization - depolarization: there is time and energy consumption (if I move a substance from A to B, this imply waste of energy, and spending time). On the contrary, in non-local reality pure and catalytic EI acts according to what is known in the microscopic world, expression of quantum entanglement, observable with the QBS, of both worlds. DNA, like an antenna, simultaneously to "intense" stimulation on certain trigger - points, starts to "vibrate" catalyzing the reactions without energy expenditure, between the compound A and B, with production of C. For example: abdominal lateral pinch of fat "simultaneously" active function of liver PPAR (the mill that burns fat and glucose) revealed by the "simultaneous" local microcirculatory activation[vi]. There is a continuous structural coupling bodies-environment in all directions. If there is a tendency to disease (RR), the complex dynamics in biological system decreases: there is no chaos or lesser according to the fractal dimension (fD), detectable through the reflex-diagnostic-percussio-auscultatory, with the simple use of the stethoscope, measuring the latency, intensity and duration of reflexes. The absence of the strange attractor or of deterministic chaos, is signal of low EI, the entropy is tending to zero, then in this case there is a local reality of information transmission, there is not the non-local reality. We must therefore enter EI (or create the conditions to increase it) in order to restore a sufficiently high level of EI. In accordance to Angiobiopathy, improving mitochondrial activity in the parenchyma and in microvessel cells is involved favorably intracellular free energy and are improved various biological activities: the microcirculation will be normalized.*

## APPENDIX D – The principle of Recursive Genome Function

*In the Principle of Recursive Genome Function the recursive feedback DNA – RNA – Protein from both sides is considered. By this way, not only Genome Function affects RNA and proteins, but also the Proteins can affect Genome Function, because there is an Information feedback: the output information from gene to protein, turns an input information from the opposite side at the next step.*




*Scheme III*

*This is a very important point, because from the fact that proteins can affect Genome Function, we can argue that it is possible to modify or reverse in some way DNA genetic alteration, if there is, directly acting on the structures (cells, proteins, mitochondria, ATP). In truth, there are already QBS clinical evidences that this hypothesis is valid, as proved by Manuel's Story.*

[i] Metabolic syndrome is a combination of medical disorders that increase the risk of developing cardiovascular disease and diabetes. It is also known as metabolic syndrome X, syndrome X, insulin resistance syndrome, Reaven's syndrome. The pre-metabolic syndrome, as defined by Stagnaro, is the syndrome that precedes the metabolic one, and is linked with congenital real risks and their associated biophysical semiotics constitutions.

[ii] The micro-circulatory remodeling is directed by the way of living and working on the parenchyma: if the subject is healthy, is healthy the related parenchyma on the microcirculation (see angiobiopathy theory, dealing with diseases of blood and lymph vessels in accordance with QBS). Certainly a loss, rheumatism, immune, infectious, can act both directly and indirectly. See [http://www.semeioticabiofisica.it/microangiologia/common.htm]. It may be that in the long run re-organization becomes difficult or impossible because the flow decreases more, and then are built up of feedback mechanisms for which are to activate dormant cancer cells. Aging with free radicals that accumulate contributes to further damage both micro vascular and parenchymal: even endothelium (cell layers lining the inner surface of blood vessels and heart chambers) and smooth muscle cells possess mitochondria. Remodeling micro circulatory type cancer is an expression of mutations of genes within cells in that forum: any change in gene expression - cell finds its expression in the parallel alteration of its microcirculation (microvascular tissue units): the tissue here is around the vessels, interstitial, not the parenchyma! If these processes are blocked, stops the entire organization. Very important is that if there are congenital abnormalities, genetically transmitted through the mother (see CAEMH, mitochondrial cytopathy or mitochondrial functional pathology in the site www.semeioticabiofisica.it) amending the unfolding vital physiological processes occur the most serious human diseases, and not, now real epidemics. Autopoietic networks must therefore regenerate themselves continuously in normal and physiological way, to maintain its organization.

[iii] Quantum entanglement, also called the quantum non-local connection, is a property of the quantum mechanical state of a system containing two or more objects, where the objects that make up the system are linked in a way such that one cannot adequately describe the quantum state of a constituent of the system without full mention of its counterparts, even if the individual objects are spatially separated. This interconnection leads to non-classical correlations between observable physical properties of remote systems, often referred to as nonlocal correlations. During the formation of quantum theory, this property of entanglement was recognized as a direct consequence. Quantum entanglement is at the heart of the EPR paradox that was developed by Albert Einstein, Boris Podolsk, and Nathan Rosen in 1935, and was experimentally verified for the first time in 1980 by the French physicist Alain Aspect.

[iv] Melatonin is a natural substance that our body produces itself. It is produced by synthesis in the laboratory and placed in the body is to act on mitochondria, especially increases mitochondrial phosphorylation, it produces more EV and therefore greater EI and this must be for the benefit of the entire body, improves breathing (especially at night; we produce melatonin mainly from the early hours of the night until around dawn), and therefore this is a hormone that is universal and is good for the treatment of multiple diseases, or tendencies to pathology, and then to make the RR residual. It is also a good neurotransmitter.

[v] In therapy, based on what was observed in patients with Oncological Terrain places on the nodes of Curry or Hartmann (worsening of PNEI - psycho-neuro-endocrine-immune system), these energies released will improve and normalize respectively, by their influence on the alignment device, the orbital motion of subatomic particles, including the mitochondrial respiratory chain, which first reacts.

[vi] Lory's experiment is based on the fact that "all" subatomic components and then atomic and molecular structured to form a cell and the whole cell or parenchyma, are correlated between themselves and with "all" the other branch of the same embryological in a four-dimensional space, like they are just "plot" (entanglement) two electrons observed by Aspect in his famous experiment. The effect of' entanglement means that the information takes on a “non-local” dimension. Lory’s experiment is as follows: if it is done a digital pressure applied over a parotid gland, or a salivary gland sublingual, of a "single ovular" twin sister, simultaneously it is observed microcirculatory activation type I associated in the pancreas of the other twin sister, regardless of the distance that separates them: meters or kilometers.