Skeletal Muscle Cell Glycocalix Evaluation during CFS Treatment corroborates Andras Pellionisz's Recursive Fractal Genome Function Principle

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Introduction

In previous papers we have illustrated the QBS method of glycocalyx evaluation (1-4). We can study important events of cell biology, both in terms physiological and pathological conditions, through the evaluation of the glycocalyx in well defined cells with positive implications for the diagnosis, opening new original ways for the research in medicine. The possibility to assess both the structure and the function of the glycocalyx in any biological system, clinically possible for the first time by QBS, will be a significant moment for Physiology, Patho-physiology, Pathology and especially for the Clinic one.

The QBS method, through the auscultatory percussion of the stomach, allows to evaluate, i.e., the diabetic glycocalyx (3-5), whose alteration is typical of the second stage of T2DM, and the characteristic alteration of the Oncological glycocalyx (1). The physicians should pay particular attention to the different QBS constitutions with their respective inherited real risks, subject to them, conditio sine qua non of related diseases. These facts represent the initial stage of pathological changes, characterized by functional impairment of the relevant glycocalyx.

Consequently, through QBS method is possible to recognize serious illnesses at the bedside, even in the initial stage, such as Alzheimer's disease, when the recourse to the laboratory or to sophisticated semiotics is useless, but the preventive treatment makes possible to achieve the best results. *The pathogenic mechanisms underlying is understandable if you know the early alterations of the glycocalyx of cells carriers of genetic mutations, both of n- DNA and mit-DNA, for the first time described in our previous articles (1-3).*

The cellular glycocalyx, a structure virtually ignored today by the Medicine, consists mainly of glyco-lipids, glyco-proteins, and especially hyaluronic acid, synthesized by three different enzyme complexes within the cell itself, conveyed through vesicles to the outer surface of the membrane. The different cell receptors, such as antennas, are moving in the glycocalyx, and through it there is a change of matter-energy-information from the microvascular and interstitial connective tissue to the cell and vice versa. Therefore, an altered structure of the glycocalyx, which precedes that of amorphous interstitial matrix, if not treated with adequate therapy (10), impairs the normal function of receptors of different hormones, as explained above. These facts were used for the first time in the diagnostic field (1-3).

In previous works we illustrated the QBS method able to corroborate the principle of water memory-information: this is based on the non-local realm beside the local realm in biological systems and especially on the possibility of assessing glycocalyx functioning of every cell (3). The easiest and reliable way to stimulate glycocalyx is *the insulin acute pick test* (8): in health, physician assesses the fluctuations of upper ureteral refelex (= *vasomotility*) in a tissue (e.g., skeletal muscle during small intense digital pressure upon the muscle). At the precise moment, when upper ureteral reflex disappears, doctor brings about *an "intense" stimulation of the VI thoracic dermatomere (pancreas stimulation), causing the acute pick of insulin secretion*.

In health, “simultaneously”, upper ureteral reflex appears, showing its highest intesitity (7). On the contrary, in presence of glycocalix dysfunction (i.e., “structure”, according to Maturana-Varela), as in disorder of whatever nature, including CFS (3), indicating an impairment of both n-DNA and mit-DNA (= “organization”), under identical above- described experimental condition, the latency time of upper ureteral reflex, i.e., increasing of oscillation, is 2-5 seconds or more, in relation to the seriousness of underlying disorder.

For instance, at base line in a former research regarding CFS (3), latency time of glycocalyx stimulation was 5 seconds, significantly pathological. Energized water with the energy frequency gathered by biceps and quadriceps muscles of the patient through a quantum device able to capture and re-transmit customized frequencies from the skeletal muscle, ameliorated simultaneously endocellular energy level: latency time of muscle-gastric aspecific reflex (mean pressure) raised progressively to 16 sec. (NN = 8 sec.) in a few minutes. The day after, skeletal muscle glycocalyx function resulted perfectly normal: its stimulation under *the insulin acute pick test* resulted normal.

Function and structure of glycocalyx are also linked with genome’s structure and function. The structure and function of n-Genome and mit-Genome can be related with a well defined non-Euclidean geometry called fractal geometry, and consequently with deterministic chaos, really helpful for QBS diagnosis.

In 2008 we suggested that the human Genome could have chaotic deterministic dynamics and fractal structure. On the basis of our previous works, we argued that it would be a paradox if a not fractal thermodynamic structure (n-DNA and mit-DNA) could give rise to structures (micro-vessels, glycocalyx) with fractal function. Structure and function are in fact the two poles of the same equation. The genome structure, both from n-DNA and mit-DNA, derives from a scheme of organization behind. The genome structure is itself the scheme of organization for glycocalyx and micro-vessels. We found that there is a hierarchy of structures and schemes of organization; each scheme of organization can be in turn structure, or indeed any structure can be both scheme of organization which defines the lower-order structures, and the image of a process of structuring led by an upstream scheme.

The alteration of the mit-DNA is, on the one hand, the indirect expression of the n-DNA, i.e., the proteins present in mitochondria, but derived from nucleus, and secondly, it is expressed in CAEMH and in the early alterations in different glycocalyx, synthesized by the cell itself on indications given by the n-DNA and mit-DNA. The early altered functions of the glycocalyx of the different cells, are now able to be clinically precisely evaluated by QBS.

Our hypothesis has been experimentally verified in a recent work (Lieberman et al., 2009) where is clearly stated that genome’s structure is fractal. QBS corroborated for the first time, from the clinical point of view, that mit-DNA and n-DNA are effectively fractal (5, 6).

Furthermore, QBS has been related to the Principle of Recursive Fractal Genome Function (PRFGF) introduced by Pellionisz (7, 11), in order to understand if the genetic alteration 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.
QBS clinical and experimental evidences are consistent with and fully confirm the PRFGF. We argued that the genetic alteration of the mit-DNA is reversible, generally not for a lack or impairment of genes, but for qualitative information imperfections in genes networking which lead to the activation of inappropriate genes or to inefficient configurations, defective or missing in some cases. Similarly, in microvessels there are communication obstructions which slow down the communication itself (blood flow) from structural and functional point of view. In parallel, we assumed that the alteration of the mit-DNA is reversible, during lifetime, because we 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 bio-resonance to a virtuous feedback mechanism between DNA, RNA and downstream structures (tissues, cells, proteins, mitochondria,..) and vice versa, restoring physiological DNA dynamics. This is the reason why, as a consequence, genome fD rises to physiological levels, mathematically demonstrating the neutralization of genetic imperfections, as demonstrated, for the first time clinically, by the Manuel's Story (http://www.sisbq.org/qbs-magazine.html).

CFS (Chronic Fatigue Syndrome): diagnosis and therapy

Quantum Biophysical Semeiotics facilitates CFS (Chronic Fatigue Syndrome) diagnosis, as illustrated here after **(**1-3)**.**

The hypothesis 0 to falsify is as follows. In CFS, skeletal muscles, a part from the possible causes of such a disorder, are altered from 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 by a quantum device able to capture customized frequencies from a skeletal muscle, and to re-transmit it powered to a glass of mineral water that patients swallow, physicians will ameliorate until normalize their muscle structure and function, especially regarding local mitochondrial respiratory activity, altered in CFS: type B – blue therapy (10).

As a matter of fact, such a 'quantum energized' water, thanks to the quantum device, should contain Information about the muscle's physiological structure and should conserve it as Memory for enough time to prove that the results are yet 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 (NN=10) D = 7 sec. (3<NN<4)	Quantum device & C.F.S. Type B therapy	Lt = 20 sec. (NN = 10) D = 3 sec. (3<NN<4) 3<MFR<4	Lt = 20 sec. (NN = 10) D = 3 sec. (3<NN<4) 3<MFR<4	Lt = 12 sec. (NN = 10) D = 3 sec. (3<NN<4) MFR = 4 = fD

Table 1. 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 1 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 a Latency time (basal value) of 9 seconds in this experimental case (it can be less of 9, in relation to the severity of underlying CFS), indicating reduced tissue oxygenation. The Reflex duration is 7 (pathologically the Duration is more than 4 seconds), due to the micorcirculatory blood flow impairment.

Interestingly, in health, skeletal muscle microcirculation shows the known vasomotility and vasomotion pattern.

In health, even in individuals recovered from CFS (7), simultaneously to the begin *of Insulin Secretion Acute Pick Test* (9), skeletal muscle microcirculation activates maximally, according to type I, associated, demonstrating that glycocalyx structure and function is normal, and thus mit-DNA and n-DNA are normal, i.e., fractal in structure.

On the contrary in patients involved by CFS, under above-mentioned experimental condition microcirculation activates later, showing altered structure and function of local glycocalix.

In physiological cases the same reflex above-mentioned lasts for 10 seconds; NN=10, normal tissue oxygenation. The duration of the reflex has NN values (3 < NN < 4), perfectly identical to fractal Dimension of local micro-vessels fluctuation, paralleling the Microcirculatory Functional Reserve - MFR.

At this point a quantum device application (blue therapy) is done: for 1 minute two devices are capturing the frequencies from 2 skeletal muscles, a biceps and a quadriceps, whose frequencies are genetic altered as proved by the basal examination. After that, the 2 devices are 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 crystals on the genetic altered articulation, they have been applied at the base of a transparent glass of water for 10 minutes.

After that, the patient drinks the supposed energized water, and a third QBS evaluation has been 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, illustrated in details from the technical view-point, aiming to treat Chronic Fatigue Syndrome, allows to state that a "possible", really efficacious therapy of CFS has been discovered, if it will be corroborated on a very large scale.

Water energized by quantum devices:

1) has normalized the genetic altered frequencies coming from 2 skeletal muscles;
2) has re-structured, after about a week, the local parenchyma by mean of a hard work, revealed by the maximal Microcirculatory Activation in the same muscles;
3) has re-structured the genetic altered glycocalyx structure, as proved by Insulin Secretion Pick Test.

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 uretral 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 then physiological one, which is interpreted as time out of the re-

structuring work of the local parenchyma, and the Duration of the reflex (3 seconds) confirms perfect muscle vessels Microcirculatory Functional Reserve (the therapy is efficient and the benefits are still running).

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 2

In Table 2 different Latency Time (Lt) parameters correlated with vasomotility and microcirculatory activity and 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 of a continuative 'green' treatment to maintain a sufficient high amount of EV and EI in mitochondria.

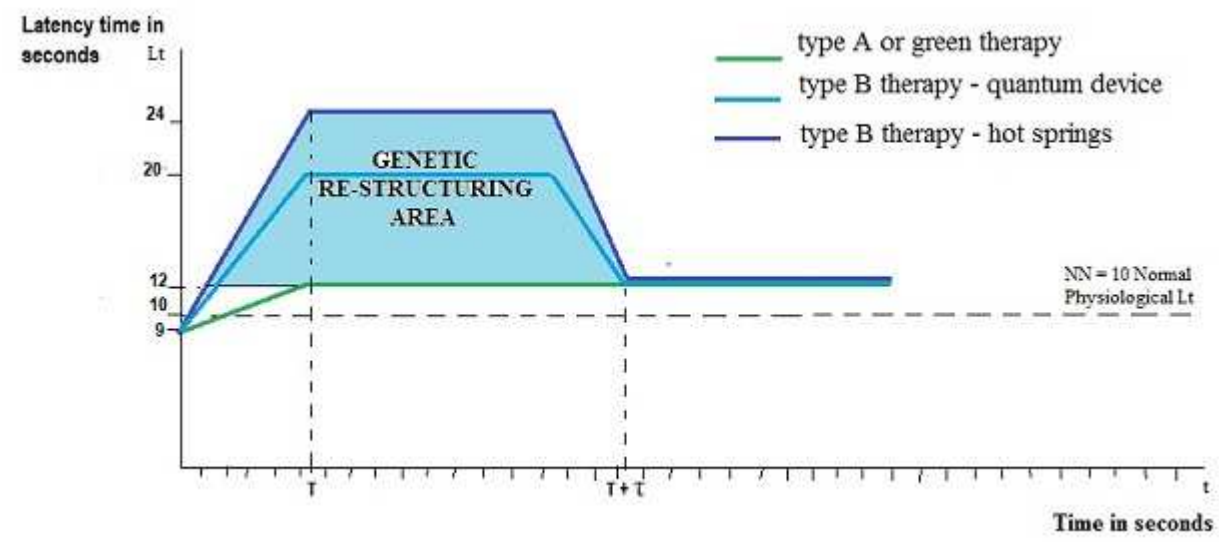

Figure 1

Under type B treatment (blue therapy), done through a quantum device capturing-retransmitting customized frequencies at time T, Lt rises to 20 seconds: a re-structuration of the local parenchyma starts up (Figure 1). 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 of 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 better parameters than what provides 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.

A recent work (12) evidences the 'Klein-Bottle' (KB) topology of the genetic code and the Moebus topology of mit-DNA, in which KB-logical gates and bio-photons establish quantum coherence; these gates already appear to codify the Genetic Code. This approach is consistent with our interpretation of the Principle or Recursive Fractal Genome Function (11), because we argue that a virtuous feedback between DNA, RNA and downstream structures (proteins, mitochondria, glycocalyx, cells, etc.) starts up. 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. In case of mit-DNA genetic altered, according with Rapoport, the angular moment of Moebus torsion is not physiological, and this explains the non-local missing glycocalix's

Answer. If Insulin Secretion Pick Test reveals that glycocalyx structures have been healed, this mean that upstream something is changed: the angular moment of Moebus torsion is turned physiological, allowing non-local communication between DNA antenna and downstream structures (as glycocalix) and viceversa, in accordance with PRFGF of Pellionisz (11).

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 likely 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.

References

1)Simone Caramel and Sergio Stagnaro The role of glycocalyx in QBS diagnosis of Di Bella's Oncological Terrain - http://www.sisbq.org/uploads/5/6/8/7/5687930/oncological_glycocalyx2011

2) Simone Caramel and Sergio Stagnaro Quantum Biophysical Semeiotics of Oncological Inherited Real Risk of Myelopathy: The diagnostic role of glycocalyx.
http://www.sisbq.org/uploads/5/6/8/7/5687930/qbs_myelopathy_glycocalyx_english.pdf

3) Sergio Stagnaro. Glycocalix Quantum-Biophysical-Semeiotic Evaluation plays a Central Role in Demonstration of Water Memory-Information. www.sisbq.org. 19 July, 2011.http://www.sisbq.org/uploads/5/6/8/7/5687930/wmi_glycocalyx.pdf

4) Simone Caramel and Sergio Stagnaro. Quantum Chaotic Aspects of Biophysical Semeiotics - from JOQBS 1 28-70, 2011, http://www.sisb.org/uploads/5/6/8/7/5687930/quantumchaotic_qbs.pdf

5) Simone Caramel and Sergio Stagnaro Quantum Biophysical Semeiotics and mit-Genome's fractal dimension *Journal of Quantum Biophysical Semeiotics*, 1 1-27, http://www.sisbq.org/uploads/5/6/8/7/5687930/joqbs_mitgenome.pdf

6) Sergio Stagnaro. Water Memory-Information containing Muscle Extremely High Energy Frequency: Is the Therapeutic Problem of Chronic Fatigue Syndrome solved? 7 July, 2011, http://stagnaro.wordpress.com/2011/07/07/water-memory-information-containing-muscle-extremely-high-energy-frequency-is-the-therapeutic-problem-of-chronic-fatigue-syndrome-solved/ ; http://wwwshiphusemeioticscom-stagnaro.blogspot.com/2011/07/water-memory-information-containing.html ; http://www.sisbq.org/uploads/5/6/8/7/5687930/watermemoryinformation_cfs.pdf

7) Stagnaro S, Caramel S. The Principle of Recursive Genome Function: QuantumBiophysical Semeiotics clinical and experimental evidences. www.sisbq. *Journal of Quantum Biophysical Semeiotics. http://www.sisbq.org/uploads/5/6/8/7/5687930/prgf_qbsevidences.pdf*

8) Stagnaro Sergio. Insulin Secretion Acute Pick Test and Renal Test of Hyperinsulinemia-Insulinresistance. April 16, 2009, http://sciphu.com/ and at URL http://wwwshiphusemeioticscom-stagnaro.blogspot.com/

9) Stagnaro-Neri M., Stagnaro S., Semeiotica Biofisica: valutazione clinica del picco precoce della secrezione insulinica di base e dopo stimolazione tiroidea, surrenalica, con glucagone endogeno e dopo attivazione del sistema renina-angiotesina circolante e tessutale – Acta Med. Medit. 13, 99, 1997

10) Sergio Stagnaro and Simone Caramel (2011) A New Way of Therapy based on Water Memory-Information: the Quantum Biophysical Approach – 2011 http://www.sisbq.org/uploads/5/6/8/7/5687930/qbtherapy.pdf

11) Pellionisz A. J. (2008) The Principle of Recursive Genome Function", The Cerebellum (Springer), 7(3) 348-359, 2008

12) Rapoport D.L. (2011) Klein Bottle Logophysics, Topological Chemistry, The Genetic Code, Universal Rewrite System, Bauplans and the Surmountal of the Cartesian Cut, http://rxiv.org/pdf/1106.0003v1.pdf

[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