Biological Information Fields: Quantum Biophysical Semeiotics clinical and experimental evidences

Sergio Stagnaro¹

Simone Caramel²

Abstract

We postulate the existence of fields of information in biological systems, carried by weak electromagnetic fields (WEF). We introduce some characteristics of 'Biological Information Fields' (BIF), related to their range and fractal structure. Some Quantum Biophysical Semeiotics (QBS) clinical evidences are shown corroborating their biophysical existence and their key role in the genetic reversibility of 'Congenital Acidosic Enzymo Metabolic Histangiopathy' (CAEMH), a singular heritable mitochondrial cytopathy, *condition sine qua non* of the most common disorders, as Cardiovascular Diseases (CVD), Type 2 Diabetes Mellitus (T2DM), and Cancer, and their QBS constitution-Dependent, Inherited Real Risks.

Introduction

The idea that weak electromagnetic fields carry qualitative information that can influence quantum processes, qualitative important in quantum physics, was introduced by David Bohm with its Quantum Potential and the causal interpretation of quantum mechanics [1-5]. In biology, there are several contribution that are consistent with Bohm approach, such as that of Ing. Enzo Maggiore [6], with his biophysical-engineering studies on electro-structure of living systems and the role of information in biological systems, and that of Rupert Sheldrake [7,8] with his theory of morphogenetic fields.

David Bohm introduced the idea of 'field of information' in physics, but we cannot observe any other equal definition in biology and medicine current research.

Quantum Biophysical Semeiotics (QBS) approach [9] is able to observe non-linear dynamics of biological systems in living human body when there are properly put in communication each other, providing a qualitative set of parameters related to space-time behavior, i.e., latency time (in sec.), duration (in sec.), intensity (in cm) and differential latency time (in sec.) of a flurry of reflexes, used for diagnostic, therapeutical [10-20], and monitoring purposes. These information are related with the non-linear dynamics and structures of biosystems, and the law of deterministic chaos, and we can obtain from them important statistic measures, such as the fractal dimension of microcirculatory oscillations, i.e., vasomotility and vasomotion, strictly related with the chaotic equilibria of strange (chaotic) attractors.

QBS already explored issues such as locality and non-locality in biosystems dynamics and structures. these evidences are intensely connected with the idea of BIF and morphological fields, and the fractal structures of genome, strictly related with the corroboration of the Principle of Fractal Genome Recursive Function, according to Pellionisz [21, 22] and Peter Gariaev's wave genomics [23].

¹International Society of Quantum Biophsycial Semeiotics - Via Erasmo Piaggio – Riva Trigoso (GE) e-mail: <u>dottsergio@semeioticabiofisica.it</u>

² International Society of Quantum Biophysical Semeiotics - CP 18 – 31020 Lancenigo – TV – e-mail: <u>simonecaramel@yahoo.it</u>

In addition, QBS provide clinical and experimental evidences of the memory of water, and the principle of water-memory information [24]: the properties of water to receive, conserve, memorize, process and transmit information. The now we can define better this often abuse word 'information', giving it a more precise definition and context, i.e., with the proposed 'Biological Information Fields' (BIF), from a structural and functional point of view.

We can deduce from the properties of water (see for instance the hexagonal structure of ice, created by the interaction of weak electromagnetic fields, the pictures of crystals of water provided by Masaru Emoto related with a QBS experiment with music [25], and the influences of millimeter radiations combined with water [26], that the 'Weak Electromagnetic Fields' (WEF) carrying 'Biological Information Fields' (BIF), receive, conserve, memorize, process and transmit information of/from other WEF-BIF, or WEF-nBIF, where nBIF stands for the weak electromagnetic fields carrying not biological field of information (i.e., from not living substances, such as a cup of pure sodium bicarbonate or of potassium ascorbate).

These interactions between WEF-BIF and WEF-nBIF can be at all levels: atomic, quantum, molecular, genetic, tissues, organs, bodies, and we can explore it from different points of view: biochemical, biophysical, physical, biological, mathematical, geometrical, morphological, functional, structural, etc.

We can explore also the state of each WEF-BIF when they interact or do not interact each other to verify if WEF-BIF are active or not active, if and when there is any activation or inactivation (i.e., QBS apnea test for BIF activation or inactivation, see later on).

We can also explore with QBS tools the WEF-BIF memory in space-time, from a local and non-local point of view, i.e. trough psychokinetic diagnostic [27], and related issues strictly connected with the morphogenetic field theory (i.e., the role of empathy in WEF-BIF local and non-local interactions) and with Masaru Emoto's remarks [28] (i.e., the effects of repeating many time the same WEF-BIF of many people repeating the same WEF-CIF at the same time; see QBS two prayers experiment), whose water crystals geometric structures are similar to the geometric observation in dissipative systems far from equilibrium as studies by Prigogine [29-32]: 3D fractal projection of strange attractors in m-dimension space phase.

QBS assessments are able to bedside verify the quality of WEF-BIF interaction, in the sense aiming to evaluate (through therapeutical monitoring) the grade of bio-compatibility of any treatment for therapeutic prevention. QBS diagnostics can also evidence the importance of trust and empaty in WEF-BIF interactions, and further, the WEF-BIF quality of information, i.e., fractal Dimension of structures and functions [33, 34], the different level of biophysical responses, such as the latency time of reflexes, the types of microcirculatory activation [35, 36].

At genetic and genomic levels, QBS evaluation connect different theories and evidences of other authors, such as wave genomics, fractal genome properties and the Andras Pellionisz's PRFGF [21], that are all together consistent with the genetic reversibility of CAEMH and QBS constitutions [37, 38], including their Dependent, Inherited Real Risks.

Mit-DNA and mit-Genome have fractal structures [39], and in accordance with Gariaev [23], they vibrate, resonate, rotate, in one word they create/update WEF-BIF. Each WEF-BIF has its own structure (fractal), and dynamics (speed, shape of rotation, etc.).

From QBS experimental and clinical evidences genetic reversibility of CAEMH and CAEMH-Dependent, QBS constitutions is not always possible. This depend likely on WEF-BIF and its structural/functional properties and characteristics.

We should explore WEF-BIF stability/instability, i.e., in the sense of Kaufmann approach [40], the SDIC (sensitive dependence on initial conditions), the fractal dimension, and other qualitative intrinsic properties typical of chaos theory and fractals, and assessable with QBS clinical microangiology [35, 36].

In few words, WEF-BIF of mit-fractal genome (in case of genetic reversibility of inherited real risks of degenerative disorders, mitochondrial in origin and present from birth) must be bio-info-compatible with

WEF-BIF of the administered preventive treatment for the success of genetic reversibility, i.e., healing of CAEMH, CAEMH-Dependent, QBS constitutions and their related Inherited Real Risk (IRR) of disease not yet in evolution.

From QBS experimental and clinical evidences we can argue that the PRFGF is running if and only if WEB-BIF of mit-fractal genome [33, 36, 38] recognize some kind of a familiarity with the WEF-BIF of the administered treatment. So, to recognize means that there is a familiarity, a bio-compatibility, of the interacting fractal structures of BIF.

For instance, all the administered treatment belonging to the class of blue therapy (the only set of treatments that individually is able to heal CAEMH and QBS constitutions) are running well because there is some familiarity, in the sense just mentioned above, with mitochondria biophysical and biochemical processes, i.e., ATP processes, K, Na, H2S [41], etc.

For example, it is likely that the fractal structure of the field of information of the 'Quantum therapy with sodium bicarbonate' incorporate the physical quality information of sodium bicarbonate [33] and this allows the virtuous feedback with mit-genome fractal structure in which there is also incorporated some kind of NA qualitative information, bio-compatible in all senses (i.e., shape, rotation, etc., for example carried by water, which has the properties to conserve the angular and geometrical properties without breaking the biochemical structures and equilibria if it is just informed by the waves or in some other particular conditions).

One of the difference between our green therapy (the class of QBS therapies not able to induce genetic reversibility phenomena, but just able to improve some aspects: mitochondrial oxygenation, tissue protection, tissue oxygenation) and the blue therapy (the class of QBS therapies able to favour a complete genetic reversibility) can be explained by the fact that if WEF-BIF's treatment is bio-info-fractal-compatible with the WEF-BIF of mit-genome we are in a case of blue therapy (there is genetic reversibility).

On the contrary, if WEF-BIF treatment is not bio-info-fractal compatible with the mit- fractal genome, then we are in presence of green therapy (not able to remove the genetic alterations, but anyway useful to make the risks residual, still persisting the genetic alteration). In the present work we present some simple QBS clinical tests that we can consider experimental evidences of the existence of WEF-BIF in bio-systems interactions and some of their properties.

Method

We use the QBS method of Auscultatory Percussion of the stomach [42], and in particular we take as parameter of reference the Latency time (expressed in seconds) of the cardio gastric aspecific reflex with mean stimulation of any point of the precordium (skin heart's projected area). From a biological and biophysical point of view, the Latency time (Lt) of cardio-gastric aspecific reflex is related to the local tissue acidosis and tissue oxygenation. Physiologically, the basal value of Lt, at rest, in a healthy subject, is exactly 8 seconds, before the reflex appearing (exactly after 8 seconds from the beginning of the maneuver the stomach dilates).

QBS evidences of 'Weak Electromagnetic Fields' (WEF) carrying 'Biological Information Fields' (BIF)

Test n.1. Marina's Experiment

The examiner, whose WEF is particularly strong, because he is under intense Quantum Therapy, has studied the changes in parameter values of defined biological activity of different biological systems of 5 healthy individuals.

a.1) Within one meter, all biological systems of the examined persons ameliorated significantly, so that their functions, when assessed by means of QBS, for instance, as the Latency time (Lt) of cardiogastric aspecific reflex or of some other reflexes, increases 6 times regarding the baseline values, becoming perfectly identical to those of the examiner! In facts, tissue oxygenation raised from the basal value of 8 sec. to 48 sec.

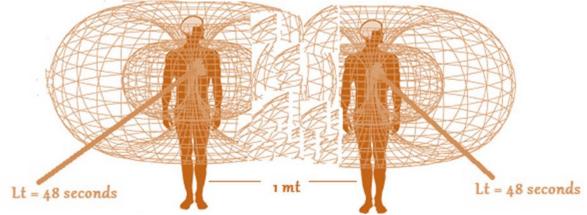


Figure 1. Lt of cardio-gastric aspecific reflex in subjects distanced till 1 meter each other

a.2) Beyond one meter and up to two meters, such a tissue oxygenation augmented to three times (TL = 24 sec.)

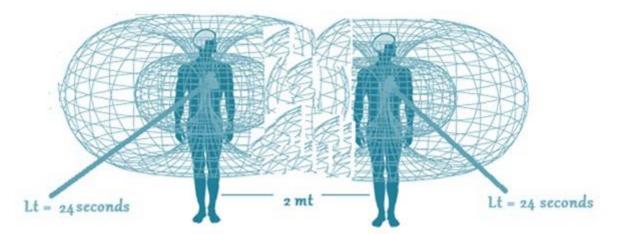


Figure 2. Lt of cardio-gastric aspecific reflex in subjects distanced from 1to 2 mts each other

a.3) If the distance was more than two meters and up to three meters the tissue oxygenation doubled and then slowly normalized to 4 meters.

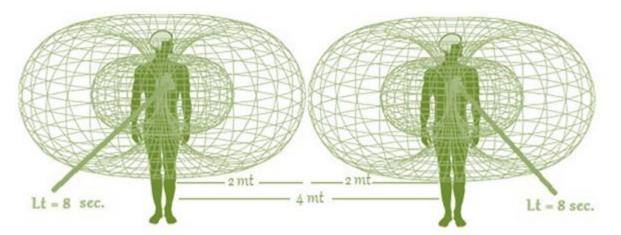


Figure 3. If 2 subjects are distanced 4 mt or more the Lt of cardio-gastric aspecific reflex of both of them returns to its basal value (Lt = 8 seconds). There is not anymore any reciprocal biological interference

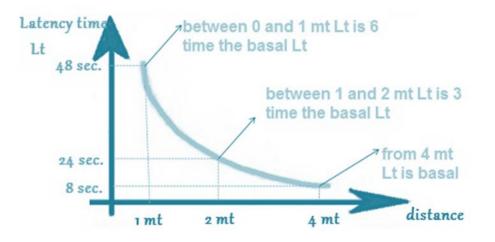


Figure 4. In the diagram the parameter collected in case a.1, a.2 and a.3 are resumed. Legend: Lt = Latency time of cardio-gastric aspecific reflex

Fruit and flower plants show a similar WIF-BIF range. The level of endocellular free energy of the human body is about doubled for the influence – feedback of their WIF-CIB. Man is feeling better in the nature in the middle of trees and flowers.

Test n.2. Experiment about WEF-BIF conveying

Here is an important clinical experiment: The examiner, without thinking about his own WEF - BIF, moving from a distance of 5 meters, slowly approached the examinee.

Simultaneously, if evaluated with Psychokinetic Diagnostics (DP, see references), the microcirculatory fluctuations, for example, of coronary microvessel of the 5 examinees, are augmented in intensity and duration: dilatation of the small arteries, according to Hammersen (Claudio Allegra's Peripheral Heart) raised from the normal, basal value of 6 sec. to 8 sec, and then to 11 seconds, if the distance is more than two meters. Finally, when the examinees were located at a distance less than 1 meter, the above-

mentioned fluctuation of small arteries dilation were lasting for 24 seconds. (4 times greater than the physiological dilatation of the Peripheral Heart, at rest).

Importantly, this final value is perfectly identical to that of the examiner. These parameter are collected with the tools of Clinical Microangiology (cardio-ureteral reflexes related to coronary microcirculation, vasomotion and vasomotility of tissue microvascular unit) (see references). In our opinion, such a clinical evidence shows that BIF is conveyed by WEF.

Test n.3. Experiment with Apnea tests

If, as we are arguing, from Endocellular Free Energy of biological systems originate both the WEF and BIF, then, the apnea test (the 2 subjects does not breath) should brings about necessarily the collapse of both examiner's WEF and BIF. In fact, the apnea test prevents any influence of examiner's WEF and BIF on the five examinees.

The examiner cancels his WEF and BIF by the apnea test: for example, the oscillations of coronary microvessels immediately stop. However, if the same examiner, subjected to Apnea Test, is far just 1 meter from a healthy individual or from a bottle containing pure sodium bicarbonate, simultaneously microvessel fluctuations appear. In the first case, the duration (in seconds) of dilatation is normal, basal, physiological, that is, 6 sec. In the latter case (interaction between the WEF-BIF of the examiner and the WEF-nBIF of the cup of sodium bicarbonate) the duration of the reflex last more and more, but the examiner was not able to state the precise duration value, namely, he did not specified the duration, because he was compelled to breathe again, avoiding to die!

nBIF stands for not biological information field. BIF are related just to living systems (human bodies, animals, plants).

Test n.4. Experiment about geometrical structure of WEF-BIF

The present test is to verify the hypothesis that the geometrical structure of WEF-BIF is fractal and not Euclidean.

If the examiner is far about 4-5 meters from the examinees, and he assesses repetitively the coronaric microvascular dynamics, he can observe that there is an alternation of very rapid short time's periods of no-influence (no-feedback, no-interference, no-interaction) and very short time's periods of coronary microcirculatory activations, oscillating between less than 6 seconds and 7 seconds.

This evidence, in the opinion of the authors, corroborate the null hypothesis that WEF-BIF structure cannot be spherical (Euclidean geometry) since it is likely a fractal structure (fractal geometry): a fractal structure like 'pulsating', 'living', continuously dynamics, in a continuous updating morphogenesis. Morphogenetic fields or WEF-BIF seem to be fractal structures continuously updating their shape and informative content.

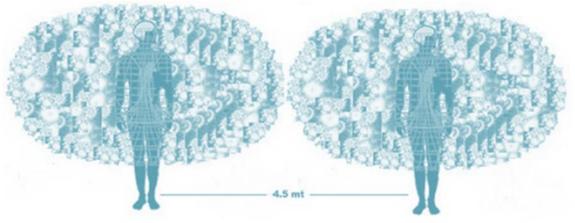


Figure 5. fractal geometrical structures of interacting WEF-BIF

Current and Future Developments

Current clinical experiments are oriented to explore the role of the thought in WEF-CIF interactions, both in local (motility and flexibility of WEF-BIF, i.e., their expansion and reduction by thought [27, 43, 44], eventual interferences in bio-clinical diagnosis, and non-local dynamics (i.e., psychokinetic diagnostics[27], Lory experiment [34], QBS simultaneous reflexes [34,41]). QBS method provides clinical experiments and quasi-quantitative information that any physician, well skilled with QBS tools, can assess, replace and reproduce in a similar way using a common stethoscope. The implications of these results, their sense and meaning, will be discussed in future reviews.

Conclusions

There are clinical and experimental QBS evidences that corroborate the existence of WEF-BIF and support the hypothesis that BIF is conveyed by WEF. QBS evidences confirm that there is an interaction between different WEF-BIF, maximally in a range of 4 meters (maximal distance between 2 human bodies or plants where the interactions reveal reciprocal biological effects at parenchyma and microcirculatory level).

The Biological Information Field (BIF) carried by Weak Electromagnetic Fields (WEF) seems to have a fractal structure continuously changing its form: it seems to be like a living system continuing pulsing for the likely interaction with other WEF-BIF.

References

[1] Bohm D. Causality and chance in modern physics. UPA press, 1961.

[2] Bohm D. Wholeness and the Implicate Order. Ed Routledge, 1980.

[3] Bohm D. Quantum Theory. Ed Dover Publications New York, 1989.

[4] Bohm D, Peat D. Science, order and creativity. Ed Routledge, 1989.

[5] Bohm D. A new theory of the relationship of mind and matter. Philosophical Psychology 1990; 3 (2): 271-286.

[6] Gerardi AU, Maggiore E. Teoria dell'informazione applicata ai sistemi biologici. 33° Congresso Nazionale della società italiana di anestesia, analgesia, rianimazione e terapia intensiva. Palazzo della Cultura e dei Congressi - Bologna 25/27 settembre 1981.

[7] Sheldrake R. A new science of life. Park Street Press, 1995 (first published in 1981).

[8] Sheldrake R. Morphic Resonance. The Nature of formative causation. Park Street Press, 2009.

[9] Stagnaro S, Neri Stagnaro M. Introduzione alla Semeiotica Biofisica. Il Terreno Oncologico. Ed. Travel Factory, Rome, 2004.

[10] Stagnaro S, Caramel S. Inherited Real Risk of Type 2 Diabetes Mellitus: bedside diagnosis, pathophysiology and primary prevention. Front Endocrinol (Lausanne). 2013;4:17. [Pub-Med indexed for Medline] http://www.frontiersin.org/Diabetes/10.3389/fendo.2013.00017/full

[11] Marchionni M, Caramel S, Stagnaro S. (2013) Inherited real risk of Alzheimer's disease: bedside diagnosis and primary prevention. Front Aging Neurosci. 2013;5:13. doi: 10.3389/fnagi.2013.00013. [Pub-Med - Medline] <u>http://www.frontiersin.org/Aging_Neuroscience/10.3389/fnagi.2013.00013/full</u>

[12] Stagnaro S, Caramel S. Inherited Real Risk of Coronary Artery Disease: pathophysiology, diagnosis and
primary prevention. Epidemiology and Cardiovascular Prevention. Brief Communication. 8th International
Congress of Cardiology in the internet. Published: 28 October 2013.FAC Federación Argentina de Cardiologiahttp://fac.org.ar/8cvc/llave/tl054 stagnaro/tl054

[13] Stagnaro S, Caramel S. Vascular calcification and Inherited Real Risk of lithiasis. Front. In Encocrin. 3:119, 2012. [Medline] <u>http://www.frontiersin.org/Bone_Research/10.3389/fendo.2012.00119/full</u>

[14] Stagnaro S, Caramel S. The Inherited Real Risk of Coronary Artery Disease, Nature PG., EJCN, European Journal Clinical Nutrition, Nature PG, 2**013** Apr 24. doi: 10.1038/ejcn.2013.37. [Pub-Med - Medline]

[15] Marchionni M, Stagnaro S, Caramel S. The role of 'Modified Mediterranean Diet' and quantum therapy in Alzheimer's disease primary prevention. JNHA, Springer, Vol. 18, 1, 2014. [Pub-Med index for Medline]

[16] Stagnaro S, Caramel S. The Role of Modified Mediterranean Diet and Quantum Therapy in Oncological Primary Prevention. Bentham PG., Current Nutrition & Food Science ISSN (Print): 1573-4013; ISSN (Online): 2212-3881, 9:1. 2013. Available at: <u>http://eurekaselect.com/106105/article</u>
[17] Stagnaro S, Caramel S. The Role of Modified Mediterranean Diet and Quantum Therapy in Type 2 Diabetes Mellitus Primary Prevention. LifeScienceGlobal, February 2013, *Journal of Pharmacy and Nutrition Sciences*, 2013, *3*.

[18] Stagnaro S, Caramel S. Quantum Therapy: A New Way in Osteoporosis Primary Prevention and Treatment. Journal of Pharmacy and Nutrition Sciences, February 2012.

[19] Caramel S, Stagnaro S. The role of mitochondria and mit-DNA in oncogenesis. *Quantum Biosystems*. 2(1) 250-281, 2010.

[20] Stagnaro S, Caramel S. (2013) BRCA-1 and BRCA-2 mutation bedside detection and breast cancer clinical primary prevention. Front Genet. 2013;4:39. doi: 10.3389/fgene.2013.00039. [Pub-Med indexed for Medline] <u>http://www.frontiersin.org/Cancer_Genetics/10.3389/fgene.2013.00039/full</u>

[21] Pellionisz AJ. The Principle of Recursive Genome Function. The Cerebellum (Springer), 7(3) 348-359, 2008.

[22] Caramel S, Stagnaro S. The Principle of Recursive Genome Function: QBS clinical and experimental evidences – JOQBS, 2011. Available at:

http://www.sisbq.org/uploads/5/6/8/7/5687930/prgf_qbsevidences.pdf

[23] Garaiev P et al. The DNA wave biocomputer. Available at:

http://www.invertone.com/WEBDOC/DNA-Garjajev-Poponin.pdf

[24] Stagnaro S. The Principle, rather than the Theory, of Water Memory-Information. JOQBS, 2011. Available at: <u>http://www.sisbq.org/uploads/5/6/8/7/5687930/wmi_theprinciple.pdf</u>

[25] Stagnaro S. Quantum Biophysical Semeiotics evidences of Water-Memory-Information by means of Music Energizing Action: Caramel's experiment. JOQBS, 2011. Available at: <u>http://www.sisbq.org/uploads/5/6/8/7/5687930/wmi_music_2011.pdf</u>

[26] Caramel S, Stagnaro S, Pyatakovich FA, Yakunchenko TI, Makkonen KF, Moryleva ON. Background Millimeter Radiation Influence in Cardiology on patients with metabolic and pre-metabolic syndrome. Journal of Infrared and Millimeter Waves, Shangai, China, Vol.1, February 2014. Available at: http://www.sisbq.org/uploads/5/6/8/7/5687930/120750.pdf

[27] Caramel S, Stagnaro S. Psychokinetic Diagnostics. JOQBS, 2010. Available at: <u>http://www.sisbq.org/uploads/5/6/8/7/5687930/dp.pdf</u>

[28] Emoto M. The message from Water, Hado, 2001.

[29] Prigogine I. Dissipative structures in chemical systems. In: Fast reactions and primary processes in chemical kinetics by S. Claesson, Interscience, New York, 1967.

[30] Prigogine I, Stengers I. Order out of chaos, Ed. Flamingo, 1984.

[31] Prigogine I. End of certainty. The Free Press, 1997.

[32] Cramer F. Chaos and Order: The Complex Structure of Living Systems Foreword by I Prigogine. Wiley-VCH, 1994.

[33] Caramel S, Stagnaro S. QBS and mit-Genome's fractal dimension from JOQBS 1 1-27, 2011. Available at: http://www.sisbq.org/uploads/5/6/8/7/5687930/joqbs mitgenome.pdf

[34] Caramel S, Stagnaro S. Quantum Chaotic Aspects of Biophysical Semeiotics - from JOQBS 1 28-70, 2011. Available at:

http://www.sisbq.org/uploads/5/6/8/7/5687930/quantumchaotic_qbs.pdf

[35] Stagnaro S. Introduzione alla Microangiologia Clinica. JOQBS, 2013. Available at: <u>http://www.sisbq.org/uploads/5/6/8/7/5687930/mc_intro.pdf</u>

[36] Stagnaro S and Caramel S (2013). The Key Role of Vasa Vasorum Inherited Remodeling in QBS Microcirculatory Theory of Atherosclerosis. Front. Genet. 4:55. doi: 10.3389/fgene.2013.00055. [Pub-Med - Medline] http://www.frontiersin.org/Epigenomics and Epigenetics/10.3389/fgene.2013.00055/full

[37] Stagnaro S, Caramel S. The Genetic Reversibility in Oncology. JOQBS, 2011. Available at: <u>http://www.sisbq.org/uploads/5/6/8/7/5687930/reverse_oncology.pdf</u>

[38] Stagnaro S, Caramel S. A New Way of Therapy based on Water Memory-Information: the QuantumBiophysicalApproach.JOQBS, 2011.Availablehttp://www.sisbq.org/uploads/5/6/8/7/5687930/qbtherapy.pdf

[39] Dekker J. The fractal genome. http://www.wired.com/wiredscience/2009/10/fractal-genome/ Access date: October, 2009.

[40] Kauffman S. The Origins of Order. Oxford University Press New York, 1993.

[41] Simone Caramel. Meccanismi d'Azione Sconosciuti dell'Acqua Termale Sulfurea. JOQBS, 2012. Available at: <u>http://www.sisbq.org/uploads/5/6/8/7/5687930/h2s.pdf</u>

[42] Caramel S. The Auscultatory Percussion of the stomach according to Sergio Stagnaro. The cardio-gastricaspecificreflex.Handbook.JOQBS,2014.Availableat:http://www.sisbq.org/uploads/5/6/8/7/5687930/cardiogarap_handbook.pdf

[43] Stagnaro S. Lullaby Experiment. Quantum Biophysical Semeiotics demonstrates Simultaneous and Synchronous Energy-Information Wave Transmission from Consciousness to Consciousness by Though, JOQBS, 2011. Available at: <u>http://www.sisbq.org/uploads/5/6/8/7/5687930/lullaby_experiment.pdf</u>

[44] Stagnaro S, Caramel S. Two Prayers Experiment: the effectiveness of different kinds of prayer throughQBSassessments.JOQBS,2011.Availableat:http://www.sisbg.org/uploads/5/6/8/7/5687930/twoprayers2011.pdf