“Medical applications of electromagnetic information transfer through aqueous systems.”

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“We must not look upon science as a "body of knowledge", but rather as a system of hypotheses, with which we work as long as they stand up to tests...”

Karl R. popper
Quantum Biophysical Paradigm

INFORMATION

LIFE

MATTER

ENERGY
“Electromagnetic energy is the fundamental energy upon which all living organisms depend.”

Werner Heisenberg
- Do human cells produce electromagnetic signals?
- Do cells emit electromagnetic signals?
- Do resonance signaling occurs in livings?
- Do cells communicate through electromagnetic signals?
- Do human organisms emit electromagnetic signals?
- Do electromagnetic interactions with livings occurs?
- Do aqueous systems store electromagnetic information?
The Electro-Magnetic Information Transfer Through Aqueous Systems (EMITTAS) procedure has been supported by a number of experimental evidences on cells, receptors, bacteria, fungi, and seeds.
Electro Magnetic Information Transfer Through Aqueous Systems

Waves generator electronic amplifier

Receiver antenna
Source molecules
Input Signals

Transmitter antenna
Aqueous systems
Output signals
Electro- Magnetic Information Transfer Through Aqueous Systems

- Suitable patterns of electro-magnetic signals can be recorded, stored, translated and retrieved to biological targets selectively modulating their activity.

- This phenomenon occurs through the water structure re-patterning induced into an aqueous systems by quanta of meaningful electro-magnetic signals.  


As his natural development this procedure has been recently translated into clinical applications in order to assess some possible medical applications.

Information flow in biological systems can either be studied by a chemical and molecular description either by a bio-electromagnetic signals emission and processing approach.

It is well established that electromagnetic signals are ceaselessly endogenously generated at different level in many cell components and play an active role in synchronizing either inner cell function at microscopic level either systemic adaptive response of organs, apparatus up to the whole organism.

In this framework all the local or systemic adaptive responses, could be identified by their specific electromagnetic correlates. Each specific adaptive reaction, being unique for any person at any time, allows to identify his own specific and personal electromagnetic signature enfolding, very likely, even their specific emotional features.

These electro-dynamic fields meet the requirements to induce a coherent collective behavior into single cell components as well as into water molecules surrounding them and into water molecules inside internal or external aqueous system. These electro-dynamic field are self trapped in form of electro-solitons contributing to the maintenance of the dynamic stability of any system component without loss of energy or information.

Aqueous systems can store quanta of electromagnetic information

- Aqueous systems seem to play a key role providing the basis for recording, storing, transferring and retrieving clinically effective quanta of information able to yield the self-regulation and self-regeneration potential of the organism itself at both local and systemic level.
At ambient conditions our traditional view of water is an homogeneous distribution of tetrahedral structure hydrogen bonded. In spite of this very simple description a more complex picture arise from recent reports identifying the presence, even at ambient condition, of inhomogeneous structures that fit the concept of “coherence domains” in agreement with the Quantum Electrodynamic Theory (QED).


Consequently aqueous system, such ones enfolded in livings, could play an additional role in modulating biological functions by generating dissipative structure providing basis for processing, storing and retrieving information mediated by electro-magnetic signals.


Any pattern of electro-magnetic signals, both endogenous and exogenous, when became resonant with some of the coherent domains of water, can induce a dipole moments re-patterning inducing them to oscillate coherently each other generating a new phase correlation leading to a new phase modulation.


Previously we translate this concept into a clinical trial in which we demonstrate that patterns of endogenous dysfunctional signals recorded by an electro-medical device (Med Select 729) and transferred to an aqueous system (Nomabit Base) were able to induce both systemic and local effect on pain in respect to placebo.

Endogenous signals from painful region

Aqueous system for self administration

Input Signals

Output signals
Biophysical insights into personalized medicine and successful aging

- What is Personalized Medicine?
- What is a Biophysical Approach?
- How to apply them synergistically to stress related diseases?
- How do they related to successful aging?
- How to bridge these concepts?
“As I age, my molecules do not age; rather, the interaction quanta change and with them the structure.”

Ilya Prigogine

Nobel prize, 1977
What is Personalized Medicine?

- Personalized Medicine is rooted in a systemic view of the person and encompasses health and disease in the framework of adaptive dynamics as a dynamic irreducible complementarity.


What is Personalized Medicine?

- Personalized Medicine try to overcome stiff protocols and suggest the application of algorithms in the attempt to tailor the treatment as much as possible taking into account the complex individual features of the person over disease, it is non-reductionist.


What is Personalized Medicine?


What is Personalized Medicine?

- Personalized Medicine is therefore coping with the challenge of aging population and increasing number of complex stress related disease from a systemic perspective.


What is Personalized Medicine?


What is a Biophysical Approach?

- Being alive means basically to adapt ceaselessly to both internal and external stimuli due to many different stressors.
- In order to keep stability through the dynamic changes in both internal and external environment we undertake a ceaseless process that has been defined as allostasis.
What is a Biophysical Approach?

- Since any biological process is strictly coupled to their biophysical correlates in terms of electromagnetic signals and electromagnetic fields.

- Electrodynamics fields are, therefore, tightly bound to all levels of the alive starting from the molecular one, through the cellular, to the tissue till to the systemic in a multilevel and coherent cooperation.
How do they apply to stress related diseases?

As a natural consequence both health and disease have their “own” biophysical patterns enfolding the very personalized features of each cell, tissue, organ, or entire system including information from their past and perspective toward their future. In this framework all diseases has clearly to be considered as stress related because stress is not only unavoidable but even useful in the perspective of the successful aging.
How do they apply to stress related diseases?

Nevertheless when the wear and tear of allostasis became too heavy or too long to bear it become **allostatic load**: in one word when it became dysfunctional it open the way to pathophysiology instead of strengthening health opening the way to resilience. Thus health and disease could be better understood as an expression of the allostasis / allostatic load dynamics.

How do they apply to stress related diseases?

- How to use such biophysical correlates of stress related disease to yield a coherent self-regulation and self-regeneration capability in the system?

- **Biophysical therapies** allow to record the endogenous “own” pattern of signals from the patient (or their biological samples) and returning them back in order to trigger their self-regulation response through a **resonance** effect.

How they related to successful aging?

- Since the proactive management of stress is a basic tool for the management of allostatic load, biophysical methods should be carefully considered as integrative tools in different areas impacting public health, contributing to reduce the global burden of stress-related disease and promoting successful aging.

How they related to successful aging?

“The leading specific causes of YLDs were much the same in 2010 as they were in 1990:

1- low back pain,
2- major depressive disorder,
3- iron-deficiency anaemia, 4- neck pain,
5- chronic obstructive pulmonary disease,
6- anxiety disorders, 7- migraine,
8- diabetes, and 9- falls.”

How to bridge these two concepts?

- Stress related diseases are increasing their prevalence in general population and are getting more and more acknowledged as a basic mechanism in almost all burden both psychological and physical.


How to bridge these two concepts?

- Stress related diseases are acknowledged as an expression of a maladaptive response and can be nowadays explained in the framework of the allostatic load theory that build a good bridge between adaptive dynamics and development of diseases as expression of an effort of keeping stability through changes.

Biophysical Approach to Chronic Kidney Disease

- Chronic Kidney Disease and their subsequent complications and consequences is an increasing concern in general population.

- Chronic Kidney Disease is a very serious concern when occurring in young patients. Moreover it is related to aging and therefore is becoming very common due to increase of the aging populations.
Biophysical Approach to Chronic Kidney Disease

According to the allostatic load theory, CKD is a result of the increasing rate of chronic stress-related syndromes in both young and elderly people. CKD represent a true price of adaptation according to the allostatic load theory and contribute to a general functional decline and an increasing cumulative biological risk.

Successful management of Chronic Kidney Disease could, therefore, represent an important part of successful aging strategies together with the management of other emerging chronic diseases.

We previously reported the improvement of renal function in a case of autoimmune nephritic syndrome by mean of a biophysical integrated approach. This improvement was long lasting and the follow up was extended up to ten years. We also extended the procedure to a group of 30 patients presenting early stage of Chronic Kidney Disease (CKD).

Biophysical Approach to Chronic Kidney Disease

- Foletti A, Baron P., Carli N., Bucci G., Farinaro C., Cozzolino M.

- Materials and methods:

- We decide to integrate the current golden standard treatment of CKD early stage with a biophysical procedure to assess whether it could be of some support. A cohort, prospective, study was carried out for one year involving 160 patients 80 in the therapy and 80 in the control group.
Materials and methods:

The CKD-EPI formula allowed to calculate the estimated Glomerular Filtration Rate – eGFR expressed in ml./min. from serum creatinine (website “mdrd.com”)


Biophysical Approach to Chronic Kidney Disease

Materials and methods:

- All patients were clinically assessed every 3 months and samples for serum creatinine to estimate glomerular filtration rate by CKD-EPI algorithm.

- Each 3 months, patients in the Biophysical group received the Biophysical protocol (Med Select, Germany) and output signals were simultaneously recorded on a commercial available aqueous system of oligo minerals provided with dropper (Nomabit Base, Italy).
Electro Magnetic Information Transfer Through Aqueous Systems

WAVES GENERATOR
Med Select 729

Receiver antenna
Endogenous signals from renal region

Transmitter antenna
Aqueous system for self administration

Input Signals
Output signals
Estimated Glomerular Filtration Rate in ml/min

**Biophysical Therapy** patients – before versus after
(increase of + 21.6%)

![Bar chart showing eGFR in ml/min](chart)

- **Start**: 66.55 ± 17.42
- **End**: 76.13 ± 18.75
- **p** < 0.0001
Estimated Glomerular Filtration Rate in ml/min

**Control patients** – before versus after
(decrease of -6.06%)

Start | p<0.0001 | End
--- | --- | ---
70.80±10.59 | 66.37±11.13
Biophysical Approach to Chronic Kidney Disease

**Conclusions:** Integration of a biophysical approach in management of CKD early stage has been shown to be feasible, safe, and effective. It could also represent a synergistic and personalized tool to reduce global functional decline, reducing biological risk and therefore contributing to successful aging instead of frailty.

Biophysical approach to low back pain

Since a biophysical treatment has been reported to be effective in the general management of pain, we decided to assess the specific effect and treatment duration of this therapeutic strategy in low back pain. We were interested in verifying the possibility that a **single** clinical procedure could reduce pain and improve patients’ quality of life within a period of three months.
Biophysical approach to low back pain

- An Electromagnetic Information Transfer Through Aqueous System was employed to record endogenous therapeutic signals from low back pain of each individual using an electromagnetic recording device (Med Select 729, Germany) and a commercial available solution of microelements (Nomabit Base, Italy).
Electro Magnetic Information Transfer Through Aqueous Systems

WAVES GENERATOR
Med Select 729

Receiver antenna
Endogenous signals from low back pain

Transmitter antenna
Aqueous system for self administration

Input Signals

Output signals
Biophysical approach to low back pain

- A highly significant reduction in the Roland Morris low back pain and disability questionnaire score was observed after 3 months following a single biophysical intervention (11.83±6 at baseline vs. 2.3±3.25 at 3 months, P<0.0001).
Biophysical approach to low back pain
Biophysical approach to refractory gynecological infections

Biophysical approach to refractory gynecological infections

- Refractory gynecological infections are often very difficult to treat. The need for new strategies of their management is therefore continuously increasing.

- Some researchers have recently pointed up that microorganisms could emit specific electromagnetic signals.


Biophysical approach to refractory gynecological infections

- Moreover electromagnetic signals could be able to yield response from immune system.
- The aim of this study was to assess the possibility to employ electromagnetic signals from swabs of refractory gynecological infections to raise a response of the immune system able to erase them.
Biophysical approach to refractory gynecological infections

Twenty-two consecutive patients with refractory gynecological infections, since at least 3 months, participate into this study employing an electro medical device (Med Matrix, Germany) to perform the electromagnetic information transfer through aqueous system procedure on a commercial available solution on microelements (Nomabit Base, Italy).
Biophysical approach to refractory gynecological infections

- Vaginal swabs were picked up for microbiological assessment at baseline and after 7 days.
- Out of 22 swabs performed, 15 were positive for microbiological assessment at baseline.
- Out of the 15 positive at baseline, only 2 were still positive after one week of biophysical treatment mediated through aqueous system (p<0.0031).
Biophysical approach to refractory gynecological infections

- Biophysical treatment of refractory gynecological infections seems to be an useful and promising second line clinical tool.


Biophysical approach to depression and anxiety

The Italian version of the self-rating anxiety scale and of the self-rating depression scale was used to assess score at baseline and after 3 months of a single biophysical procedure (Med Select 729, Germany) recorded on a commercial available aqueous system (Nomabit Base, Italy).

WAVES GENERATOR
Med Select 729

Electromagnetic Information
Transfer Through Aquous Systems

Endogenous signals from the front
Aqueous system for self administration

Input Signals
Receiver antenna

Output signals
Transmitter antenna
Biophysical approach to depression and anxiety

Fifty patients was enrolled in this open label pilot study for a total of

9 males and 41 females

- Mean age was $44.76 \pm 12.78$. 
Biophysical approach to depression and anxiety

Comparison between score from patients at enrollment time and after 3 months were analyzed by Student’s t-test. A p value less than 0.05 was considered as statistically significant.
Depression quoted by Zung self rating depression scale

Depression start: 53.32 ± 9.67
Depression end: 38.32 ± 8.24
Anxiety quoted by Zung self rating anxiety scale

- Anxiety start: 50.72 ± 8.03
- Anxiety end: 35.12 ± 7.41
This preliminary report provides further evidence of the theoretical implications and clinical applications of Quantum Electro Dynamic concepts in biology and medicine.

Medical application of Electro Magnetic Information Transfer Through Aqueous Systems

A biophysical treatment (Med Select 729) synchronously integrating the Electro-Magnetic Information Transfer Through Aqueous Systems procedure has been successfully applied to the management of articular pain, low back pain, early stage of chronic kidney disease, refractory gynecological diseases, minor anxiety and depressive disorders.
Remarkably this clinical strategy was delivered in a **single therapy session** since the Electro-Magnetic Information Transfer Through Aqueous Systems allowed the patient to continue his own personal treatment at home by the self-administration of the drops recorded during the initial and unique therapy session.
A significant and long-lasting improvement has been reported in the aforementioned diseases showing a potential beneficial use of such biophysical procedure in the management of common diseases in a very personalized way.
“Dealing with water you should prefer experience to reason.”

Leonardo da Vinci