

## The Art of Air 2019: Journey through the Century

### A scientific linkage between Nobel winning research and Airnergy science

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### Introduction to the Journey of a Century

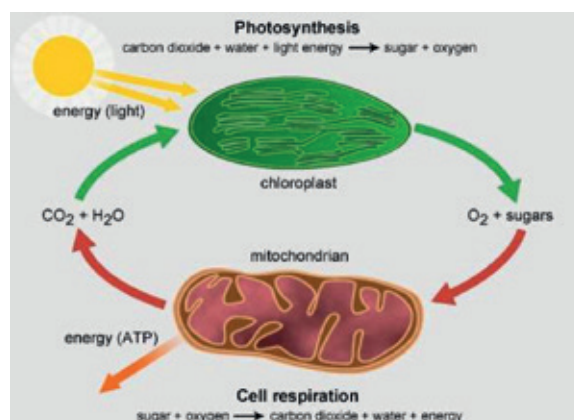
The 2019 Nobel Prize in Physiology or Medicine was awarded to three physician scientists for their groundbreaking work revealing how cells sense and adapt to oxygen availability. They identified the molecular mechanism that regulates the activity of genes in response to varying levels of oxygen. Their discovery was another major achievement to our understanding of human physiology in modern times. Back in 1938, the Nobel Prize in Physiology or Medicine was awarded to Dr. Corneille Heymans for the discovery of blood oxygen sensing via carotid body controls our respiratory rate by communicating directly with the brain. The latest work from these three Nobel winners in 2019 reveals that oxygen sensing presents virtually in all tissues.

This distinguished recognition of oxygen sensing comes at exactly one century (1919-2019) after the first publication by Dr. Otto Warburg, Nobel Prize Winner in 1931, who pioneered research on photosynthesis, oxygen-transferring ferment, and respiration. This century-long Nobel winning research on the essence of life is orchestrated by another category of recognition - Innovation of the Century (1912-2012) - awarded to Airnergy science by Fitness Tribune. These two century-long journeys coined each other in such a unique way that it has inspired me to provide a scientific link between these century long journeys of Nobel winning research and Airnergy Science.

### Nobel Researches on the Essence of Life: Photosynthesis and Cellular Respiration

The law of conservation of energy states that energy cannot be created or destroyed in an isolated system. It can only be transformed or transferred from one form to another. This fundamental law is reflected in the process between photosynthesis in nature and cellular respiration in human beings.

For over three billion years, nature has been using sunlight as its primary energy source in photosynthesis. The photosynthesis process captures energy from the sun in the form of electrons. It then splits water to create oxygen and sugar with the help of carbon dioxide (CO<sub>2</sub>). Cellular respiration, on the other hand, conducts the exact opposite reaction, i.e. it converts sugar and oxygen into carbon dioxide and water. Human beings, animals and plants depend on the cycle of cellular respiration and photosynthesis for survival. However, both chloroplasts and mitochondria were descended from ancient bacteria through the process of evolution. Those ancient bacteria have the capability of directly harvesting photon energy from the sun and have been conducting energy harvesting and transfer for their host cells ever since. It has long been believed that the purpose of photosynthesis is to capture and to convert electrical energy into chemical energy stored in the bonds of glucose, while cellular respiration is to release chemical energy stored in sugar to produce adenosine triphosphate (ATP) for the cell.



However, scientific research has revealed that ATP production in mitochondria is dependent on light. This suggests that the true nature about cellular respiration is driven by electron harvesting. Essentially, rather than ATP, water is the true molecule of life which provides the vital energy for life.

Through his experiments, Dr. Otto Warburg has demonstrated that hemoglobin and chlorophyll evolved from the respiratory pigment, which means that respiration must have evolved before photosynthesis. This scientific conclusion was the first direct evidence to suggest water as the true origin of life as it was the precursor for life, since it existed prior to ATP. Rather than being a medium, water is the essence of the entire photosynthesis and cellular respiration cycles.

Water on earth has been dated back to around 4.6 billion years ago, which is far earlier than the photosynthesis or cellular respiration processes. We know two thirds of our cells are water by volume. However, by molecular fraction, more than 99% of molecules are water molecules. As early as 1920, Sir William Hardy already speculated a colloid state of water as a result of his observation on cell division. Today Dr. Gerald Pollack has successfully demonstrated the existence of a 4th phase of water which essentially is formed as a result of electrical energy harvesting and conservation. Moreover, new human photosynthesis research has discovered the unexpected capability of melanin to dissociate the water molecule to produce oxygen under physiological conditions. This scientific discovery provides undisputable evidence and supports the notion that water is the central piece of cellular respiration, instead of ATP. This notion has long been suggested by another Nobel Prize winner, Dr. Albert Szent-Gyorgyi, in his proposal of the basics of the living functions of water and the electro-magnetic field, in which  $O_2$  in  $H_2O$  is for specific electron excitation. This statement explains the paradox between the conventional wisdom of ATP production in mitochondria as the key to life and the surprising fact that 20% of total oxygen is being consumed by the brain. This is surprising because the brain weighs less than 2% of total body weight and has much less mitochondria than other cells in the body. Today neuroscientists have identified a previously unknown form of neural communication that self-propagates across brain tissue and can leap wirelessly between neurons in different regions of the brain. The most radical finding is that electrical fields can activate neurons across a complete gap in severed brain tissue. Moreover, the so-called Brain-Gut Axis is also connected by electron excitation. Note that the gut has been scientifically referred to as the second brain in humans. These biophysical mechanisms of brain activation have revealed their intimate connection with the physical properties of water, which led to the suggestion that water is the “molecule of the mind”.

The above scientific evidence has led to a firm conclusion that the essence of life and cellular respiration lies in three key elements:

1. Electron energy from the root source of light
2. Activation of oxygen to unlock embedded electron energy
3. Formation of 4th phase water as a result of electron energy harvesting

Understanding this vital essence of photosynthesis and cellular respiration is a prerequisite to understanding Airnergy science, which has been crowned as the Innovation of the century (1912-2012).

## **Airnergy Science: Replicate the Nature through Science and Innovation**

In 1912, the renewed medical faculty at Heidelberg saw the qualification of Dr. Otto Warburg who started his research in oxidation at Heidelberg and went on to receive the Nobel prize in 1931 for his research in the field of respiration, metabolism and photosynthesis. His remarkable work has been elusive and inspiring to many of those innovators who wish to create green technology for health by tapping into the science of fundamental energy for life. Amongst them, Airnergy company, located in Hennef and close to the proximity of Heidelberg, has truly

converted the essence of those Nobel-winning research theories into cutting-edge technology.

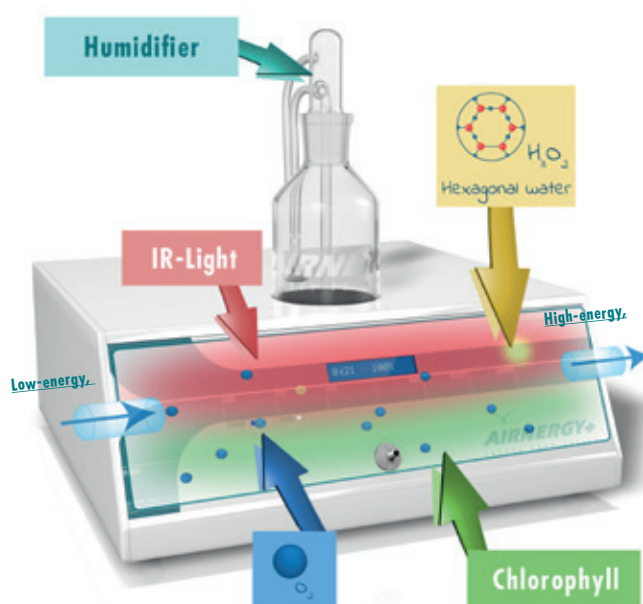
All vital processes occur in an aqueous environment as it was stressed by Dr. Albert Szent-Gyorgyi. Without a consistent presence of water vapor, humans will become ill even if we increase the percentage of oxygen and even with pure oxygen. As a matter of fact, not only the air we breathe, but even the fire we make requires the absolute presence of water vapor in the atmosphere. This has been proven by scientific experiments. Airnergy spirovital technology has ingeniously extracted the crucial knowledge in electron energy harvesting through specific monochromatic lightexcitation, optimized oxygen activation, and an essential aqueous background. In addition, above all, Airnergy technology pioneered the spirovital delivery method, which has utilized breathing as the critical vehicle to connect body and mind. If we can illustrate the Airnergy system as an orchestra, then the masterpieces of music would be those Nobel-winning research findings as the blueprint, the musicians would be the proprietary engineering in Airnergy technology, and the orchestral conductor would be the spirovital breathing. These collective efforts have contributed to the overall merits of Airnergy science.

Airnergy activates oxygen by applying specific monochromatic light to the oxygen in the ambient air after filtering out harmful pollutants. The specific wavelength triggers the maximum photosynthesis reaction to enhance the activation process of oxygen.

Oxygen molecule in the air is stabilized in triplet state with a vast energy store which can release more than 180Kcal/mole upon its reduction to two water molecules. But unlike other molecules in the environment, oxygen in its singlet state is even more excited than in its triplet one. In the world of bioenergetics such as photosynthesis or cellular respiration, the level of Energy of Electronic Excitation (EEE) is extremely important. The higher the energy level, the more different types of work may be performed by the same quantity of energy and the higher the efficiency of its utilization.

Singlet oxygen is the highest level of oxygen excitation which also has a much longer lifetime than any other singlet state of molecules. This may be of paramount importance for the bioenergetic transfer to water within its vicinity, which gives rise to a structured water and to generate other activated forms of oxygen for biological needs.

It is worth mentioning that activated oxygen is essentially Reactive Oxygen Species (ROS) which has been commonly misunderstood as harmful for life. In reality, ROS is eminently needed for vital living activity and is the means to sustain life, to transfer energy, and to fight against the harmful invasion of “bad” bacteria to our bodies. Our immune system adapts to the availability of oxygen as discovered by scientists including the Nobel winners mentioned above. Scientific research confirms all antibodies could produce hydrogen peroxide (H<sub>2</sub>O<sub>2</sub>) which is our natural defense to bad bacteria invasion. In addition, excited singlet oxygen can split water to form additional oxygen species and normal oxygen though the following formula:  ${}^1\text{O}_2 + \text{H}_2\text{O} \rightarrow \text{H}_2\text{O}_3 \rightarrow \text{O}_3 + \text{H}_2\text{O}_2 + \text{O}_2$ . As discovered by many scientists, ROS essentially emits light and this is how it regulates cellular activity in an oscillatory pattern. However, ROS is a double-edged sword that can boost the immune system and cause damage to cells at the same time. Antioxidants are needed at the right time, the right place, and at the right quantity in order to maintain an oxidative balance. Thus, oxygen activation during the process of cellular respiration and other physiological processes has its energy-giving purpose, yet it also can be the main cause of many health issues and



diseases. It is all a dance of creation and destruction.

Airnergy, on the other hand, has creatively introduced an elegant activation process outside the human body by using water vapor as the optimal medium to harvest the energy generated from oxygen at its highest energy state (singlet state). This is the most profound and innovative transformation from the theoretical Nobel research to a state of art technology to the world. By taking the activation process outside the body and converting the energy into structured water molecules, it has effectively eliminated the intrinsic harmful potential. To better understand this, I would like to illustrate with an example of the heating system we use today. In ancient times, we could only gain warmth in a house by burning a fire inside the house. However, by doing so, the house can get damaged by the smoke and ashes from the burning fire. As we progressed to modern times, we now set fires outside the house and use a heating system to bring warmth into our homes. Effectively we have created a way to have the same result, i.e. of receiving without exposing us to the damaging effects of a burning fire inside our homes. The example of ancient fire-burning practice is exactly what is happening inside of us -- our cells are constantly exposed to the harmful oxidative damage which is increased as we age or if we become ill with diseases. To address this paradox in life, Airnergy takes an approach similar to bringing a central heating system to our bodies. The external energy harvesting and conservation processes of Airnergy effectively prevent ROS damage to our cells and instead bring pure green energy in the form of structured water to our bodies. ROS is generally short-lived and can directly react with water. Because of this, not only the initial singlet oxygen produced by Airnergy, but also the eventual ROS ( $O_3$ ,  $H_2O_2$ ) from its reaction with water are converted to the electric bond of forming 4<sup>th</sup> phase polywater ( $H_3O_2^-$ )<sup>n</sup> or EZ water as termed by Dr. Gerald Pollack. This was one of the dominant factors as to why Airnergy was awarded with the Five-Star Diamond Award by The American Society of Hospitality in the category of green technology in 2014.

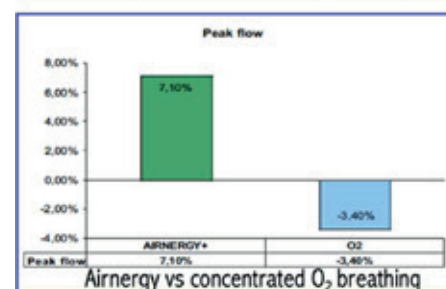
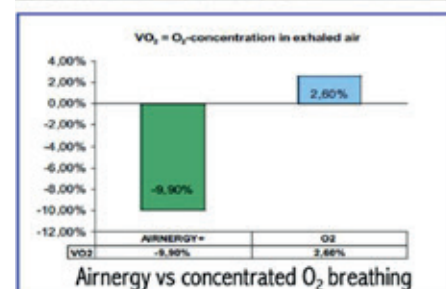
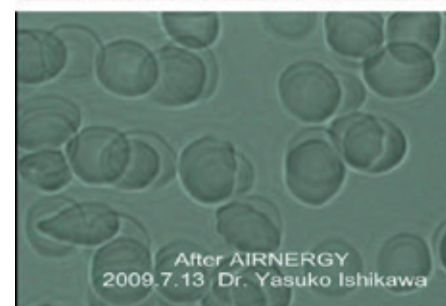
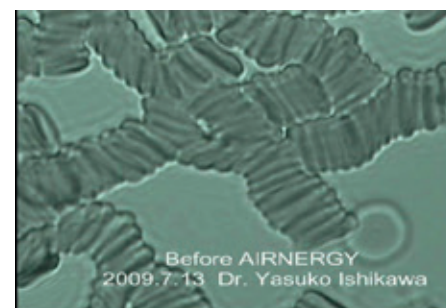
## Breathing as the Bridge for Mind and Body

Aristotle, the father of western philosophy, has famously said “Air gives us a soul, life and consciousness”. The science of breathing or pranayama stands on an ancient foundation with a history that can be traced back 5000 years. Centuries of wisdom were built around the notion that breathing is the intermediary between the mind and the body. Today modern scientific research has confirmed that mindful breathing is one of the most effective ways to lower stress and create a sound mind. An effective breathing regimen can regulate blood pressure, boost the immune system, improve energy metabolism, and lead to a host of other health benefits. A neural circuit in the brain stem has played a key role in the breath-brain connection and is part of what has been called the brain’s “breathing pacemaker”. Like the pacemaker for the heart, breathing itself is the pacemaker of our entire existence including the body and the mind. As discovered by Dr. Corneille Heymans, the major sensor of blood oxygen that regulates breathing is the carotid body, a small chemosensory organ located at the carotid bifurcation. The carotid body has the highest blood flow per tissue weight of any organ and plays an important role in the monitoring and maintenance of physiological levels of blood gases that reflect the activation of respiration. His research suggests there is an oxygen sensor in the carotid sinus that can transduce a signal through the carotid sinus nerve to the brain stem to stimulate breathing. Subsequent studies support a role for changes in mitochondrial metabolism in carotid body oxygen sensing that form the basis for the mitochondrial hypothesis on the blood oxygen sensing mechanism. Recent research has further associated this control mechanism to plasma membrane through a linkage to membrane signaling including reactive oxygen species (ROS) generated by electron leakage. This oxygen sensing mechanism is further facilitated by the kidneys for blood pressure control and a cascade of events through all tissues. These findings have further confirmed that tissue hypoxia or lack of oxygen is the driving force behind cancer, heart disease, diabetes, chronic fatigue and many other health conditions. As a matter of fact, all chronic pain, suffering, and diseases are caused by a lack of oxygen at the cellular level. Through his further research on cellular respiration and cancer, Dr. Otto Warburg has famously developed the concept of Warburg Effect in can-

cer. According to his finding, all normal cells have an absolute requirement for oxygen, but cancer cells can live without oxygen, it is a rule without exception. If we deprive a cell 35% of its oxygen for 48 hours and it may become cancerous. What is being considered a remarkable statement about life is the following “When respiration disappears, life does not disappear, but the meaning of life disappears, and what remains are growing machines that destroy the body in which they grow”. This is exactly what is happening with all the health changes we are facing today, from obesity, diabetes to cancer. A normal cell can convert one molecule of glucose into 36 ATP in mitochondria to satisfy its energy requirement with the help of oxygen. However, under hypoxia condition, this normal aerobic cellular respiration is no longer feasible due to lack of oxygen. As a result of this, one molecule of glucose is being converted into only 2 ATP in mitochondria in anaerobic cellular environment. Since all cells must to obtain the same level of energy to maintain its functioning, thus 19 times more of glucose or sugar is needed under such a condition. This is the so-called Warburg Effect in people such as diabetes and cancer patients. Therefore breathing is the fountain of life and is the only way nature keeps to sustain life through cellular respiration.

In light of earlier discussions on the light-emitting nature of oxygen activation and the intrinsic energy preservation capability in structured water, breathing is the only way to sustain life. This process is closely associated with the internal oxygen sensing mechanism and it paves the way for the connection between body and mind. Contrary to our traditional understanding of an organic-based breathing analogy, breathing is an electronic bio-regulation process that operates in the quantum realm of life force. This is the most important aspect of breathing science which is governed by the law of quantum biology. This is similar to the way photosynthesis has been proven by scientific research. The oscillatory breathing pattern dictates the quantum coherent bio-regulatory process in the mind and body which is the essence of life and health. Life comes between the two processes, catching the electron in its high energy state of activated oxygen, then letting it drop back to its ground state within its aqueous machinery using the energy released for its cellular maintenance. This is exactly the principle of stable non-equilibrium formulated by Ervin Bauer in 1935, which led to the development of theoretical biology. According to this principle, a living system actively extracts matter and energy from its environment and transforms this energy-matter into the more expensive energy of excitation of its own structure. In this analogy, free radical reactions to create activated oxygen is basically the processes of an electron transfer, and oxygen molecule as a paramagnetic particle is attracted by an electrical field. Hence, the more active these reactions are, the more oxygen is needed for their sustenance, and they react by more actively attracting oxygen.

According to the above scientific discoveries and physiological principles, the spirovital breathing of Airnergy has remarkably replicated and enhanced the natural breathing process. Spirovital brings a high level of pure green energy into the body, which creates greater oscillatory coherent pacing. This in turn enables a much greater wellness and therapeutic effect on detoxification, vitalization and rejuvenation. As shown by numerous studies including comparative doubleblind studies, Airnergy inhalation leads to remarkable health benefits compared to placebo or high concentration



of oxygen breathing like oxygen bars. Some of the effects such as the placebo effect, the amount of oxygen concentration in blood, and the parasympathetic system activation when compared to Airnergy had opposite results.

The particular effect on cellular energy increase due to Airnergy has been reflected by blood cell analysis as shown in all studied users. All normal cells maintain a so-called transmembrane potential (TMP), which is induced on a cell membrane from an external electric field like an electric charge to a cell. This electric potential is key to cellular functioning and survival. The transmembrane potential is measured at around -40mv to -80mv in normal cells. In normal cells, the fat cells have one of the lowest electric potential, thus obesity is simply a manifestation of lacking energy. Cancer cells, on the other hand, can't survive an electric charged field and have a demolished electric charge compared to normal cells. New cells and heart endothelium cells have the highest potential and can go above -90mv, thus the heart is the last place to find cancer cell generation. As shown in a study done by Dr. Yasuko Ishkawa in 2009, there was a remarkable change in the cell shape and distribution as a result of an increased electric charge to the cells after 21 minutes of Airnergy breathing. Essentially, Airnergy is a Cellular Energy Generator that provides the essential electric food for cell living and functioning. This cellular energy generating effect has been demonstrated in various practical applications on Airnergy breathing in various fields. The same astonishing benefits have also been reported in a comparative study conducted on 967 children between 6-15 years old who suffered from the Chernobyl disaster. Adding Airnergy breathing resulted in clinical improvement in 100% of participants.

This cellular energy generating effect has also been observed from another comparative study conducted by Dr. C. Schöllmann. Compared to concentrated oxygen inhalation, Airnergy breathing reduced the oxygen concentration in exhaled air and increased the peak oxygen flow in the blood stream. This increased oxygen concentration provides more fuel for enhanced cellular activity through the oxygen sensing mechanism. The decreased blood oxygen flow with concentrated oxygen breathing further demonstrates the notion that tissue hypoxia or lack of oxygen at the cellular level is not a result of oxygen concentration, but rather it is due to a lack of electric excitation and energy harvesting in the air we breathe.

## The Air we Breathe and the Butterfly Effect in Health

According to the World Health Organization (WHO), air pollution is now the single biggest environmental health risk to humans and over 88% of premature deaths are caused by air pollution in low- and middle-income countries. This pollution is more than just the pollutants produced by industries or households around the world. The deforestation and weakening earth electromagnetic field have also contributed to this disaster to our planet. Since oxygen is a paramagnetic particle, the weakening earth electromagnetic field leads to less oxygen entrapped in the atmosphere and in the ocean. Moreover, an increased level of pollutants would trigger more unwanted chemical reactions that deplete oxygen and generate more harmful substances in the air. The water molecule or aqueous vapor is equally affected and can become more acidic as a result of absorbing more of these harmful substances. Today, nine out of ten people are breathing polluted air around the world, which kills 7 million people every year according to WHO. One third of deaths from stroke, lung cancer and heart disease are due to air pollution as it can penetrate deep into our respiratory and circulatory system, damaging our organs and causing allergic immune responses. This global effect is hard to escape, no matter who you are, where you live, rich or poor, or even if you are a breathing master.

While understanding the causative link between air breathing and our health, most of us are unaware of the Butterfly Effect in life. The so-called Butterfly Effect, e.g. the fact that a butterfly flapping its wings in Brazil can set off a tornado in Texas, was discovered by Edward Lorenz during his observation of weather models in 1961. However, the theory behind it can be traced back to the 18<sup>th</sup> century Chaos Theory by Henri Poincaré (French

mathematician, theoretical physicist and philosopher of science). In Chaos Theory, the Butterfly Effect means a small change in one state (the initial state) of a deterministic nonlinear system can result in large differences in a later state. This simple principle is exactly what happens with our own health as our individual conscious mind and collective health care systems have failed to understand the Butterfly Effect. Rather than focusing on the initial input of the butterfly affecting our health, we have been focusing on the output of tornado consequences of diseases. This is the fundamental reason why healthcare costs are at the highest levels ever, while our health is not improving, and, in fact, is becoming an pandemic crisis to mankind.

Understanding this fundamental principle of Chaos Theory or the Butterfly Effect is essential to our pursuit of life and wellbeing. It echoes the law of conservation of energy as discussed earlier, i.e., energy can only be transformed or transferred from one form to another. Today, the initial input of energy has been destroyed from the beginning of life which leaves us devoid of the vital mind-body connection. Without tackling this critical flip of life and death, any attempts to reverse the devastating health tornado shall bear no true fruit of wellbeing and longevity. This is also the precise rationale for why a simple Airnergy spirovital breathing mechanism can lead to overwhelming health benefits and astonishing clinical outcomes across all fields of health.

## **A Closing Word on the Future of Medicine and Wellbeing**

The Flexner Report of 1910 has transformed the nature and process of medical education and practice around the world. This transformation has fundamentally affected our understanding of life in that life is driven by nothing but energy. When we talk about evidence-based medicine, we don't realize that behind the 4% of what is evidence-based lies 96% of unseen energy, dark matter, and dark energy. Einstein has famously stated "The field is the sole governing agency of the particle" which has become a pseudo-phenomenon in medicine. Two centuries of reductionistic approach of "Divide and Conquer" in medicine based on Rene Descartes's philosophy has resulted in only seeing the trees but not the forest. In light of the recent development in science and medicine, it is time for us to revisit our approach to health and wellbeing in general. Today electroceuticals as the future of brave medicine has been brought up not only in major media like Nature and Time Magazine, but also has appeared in leading medical journals. This global trend is concurrent with the increasing number of Nobel Prizes being awarded to groundbreaking research in the fundamental aspects of life and energy. The Nobel Prize in Physics 2018 was awarded to two groups of scientists for their groundbreaking innovations in the field of laser physics. The way a laser emits light is by oscillating electrons between two allowable states, such that a photon of an initial energy then drops from the higher-energy state to a lower one. Isn't this the same principle as how life is sustained as described by Nobel Laureate Dr. Albert Szent-Gyorgyi -- that life is being shoved within this less than a millionth of a second of energy transferring process?

In his most celebrated work, *In Search of Lost Time* from *La Prisonnière*, Marcel Proust wrote "A pair of wings, a different respiratory system, which enabled us to travel through space, would in no way help us, for if we visited Mars or Venus while keeping the same senses, they would clothe everything we could see in the same aspect as the things of the Earth. The only true voyage, the only bath in the Fountain of Youth, would be not to visit strange lands but to possess other eyes, to see the universe through the eyes of another, of a hundred others, to see the hundred universes that each of them sees, that each of them is; and this we do, with great artists; with artists like these we do really fly from star to star."

I consider this as the genuine merit of how we should view and understand the essence of those Nobel winning research theories on life and the inherited knowledge in Airnergy science. Today the devastating health crisis is not a result of lacking science or innovation, rather is a result of lacking a new way to understand the true essence of life. Since its initial inception, Airnergy has contributed to the success in people's life around the world rang-

ing from the racetracks in sports, elite hotels and wellness spa, anti-aging clinics and fitness centers, to health and healing at households to medical clinics. There is little commonality between all the user groups as why and how Airnergy could help them except one single aspect. All of them require the life sustaining electric energy at cellular level which is exactly what Airnergy delivers.

Today in addition to classic spirovital method, Airnergy has introduced another energy streaming method which directly apply its specific monochromatic light to the skin to provoke formation of 4th phase water and oxygen generation from water molecule has described earlier on those renewed findings in science.

As an ending to this attempt of bringing a scientific link between Novel winning research and Airnergy science, I would like to quote Nikola Tesla – “If you want to find the secret of the universe, think in terms of energy, frequency and vibration”. This statement is perfect description on the fundamental elements that have not linked our science and innovation but also have provided the root connection to life that exists inside each of us - the universe at cellular level.

Airnergy has a slogan of “We changed the air we breathe”, I would like to humbly call for having new eyes in our pursuit for true science, health and wellbeing:

**– Change our air, change our life and, above all, change our future!**

