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Review Article

ENVIRONMENTAL ENERGY FOR CELLULAR GROWTH AND REPAIR ESPECIALLY BY BIO-RESONANCE FOCUSED ULTRASOUND: A LITERATURE REVIEW

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Abstract:

It is only in the last few decades that the significance of electromagnetic fields (EM) interactions in biology and medicine has been fully realised. What we learn about the phenomenon of cellular function and its relation to a specific frequency of signaling is very little in depth. An ionized or electric signal is far more than just a new type of tool; it represents a whole new way of doing things. Additionally, the broadening of the scope of EM provides greater knowledge and therefore empowers the people in the profession by showing that EM also empowers the professionals more. It was deduced from Dr. Zhadin's finding that magnetic intensities have both innate and exogenous sources, which suggests that ultrasounds regulation is therefore an endogenously effective principle. This conclusion was drawn because of the evidence that extracellular and intracellular magnetic therapies have both innate and exogenous sources, and endogenous efficacy, implying that the properties of ultrasounds regulation are intrinsic. Whereas earlier researchers investigated the possibility of finding useful signals of electromagnetic generators in the nineteenth century, Matteucci conducted pioneering work in the twentieth that identified ones of medical significance in living systems in the first half of the century. Today, biological data are regulated using an ion-field cyclotron method, where circular polarizations are built up and multi-polar fields are applied to expand the field of applied electromyography (EM).

Keywords: Bio resonance, stem cell differentiation, ion cyclotron resonance, electromagnetic medicine, Cell repair, cell growth

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INTRODUCTION:

Though calcium ion is recognised as crucial in the functioning of cellular signalling, molecular analysis examines, like fluorescence is, almost always examines the usefully neglects the question of signalling altogether. Downstream effects include a huge number of individuals from different walks of life, such as each person having their own responsibilities in different organisations and sectors. For the most part, these ideas are rarely presented in terms of electricity. However, over the past four decades of research, it is unlikely that electromagnetic (EM) forces can be completely explained by theories alone can be sufficient to explain cellular signalling. Although the current model of calcium as a second messenger has with regard to its different signalling roles is quite viable, it misses a vital event that is required for the initiation and final conclusion of each step. Despite experiments conducted in the electrical engineering lab, attempts to study cell function have not produced anything useful. Shannon's theorem is applied to biological systems to transmit just as much information as much useful information as with different frequencies is applied to neural systems. This turns out to be nothing more than an open-ended question, such as, "How do we process information that is important biologically?" Weaver and Adair (1991) applied the results of earlier electrical engineering, as (V) 4kRT. This idea, which has been put forth (expressed, assigned, asserted) in many objections (deficients argue, Vincze, Szasz, Libof, Szasz & Vincze, 2008; capacitance inefficacy and bandwidth is defined differently than, and flow is criticised), in part because of two oversights on the operation of real-specific to life analysis, resistance, but mainly because resistance itself is unable to be truly specified for life as it depends on the person who is measuring it. Recent research has expanded the scope of the theory, from the biochemical to encompassment, as well as, as biochemical completeness (Bersani, 1999), or to mean that life can be understood on the basis of the electrodynamic (local or potential-dependent) functions (Liboff, 1994). According to this view, we think that the greatest purpose of life is an expression of the EM field. A multitude of theories exist on the subject of the use of EM frequencies within cells, tissues, tissues, and living things, however no less on exactly how these frequencies may interact with them. Becker and Brown (1985) said EM also detected in cell membranes (also, 1999, in particular) as well as microtubules (Becker & Brown (1985) who discovered this for EM on microtubules, while Hoel &

Trka (1998) said that) Recently, EM activity has been discovered in the microtubules (Tubulin above cell membranes). It is common to observe EM at this level of study as well (Becker & Tol(1983), Poky (Poky) said,"rz, 1999). A recent discovery is that plays an important role in the communication signals by moving around specific and functional information at particular frequencies has been referred to as a resonance effect. Animal experiments have demonstrated that low-frequency electromagnetic stimulation is capable of triggering a specific set of controlling biological pathways. Finally, we must assume that this phenomenon is specifically designed to be an information effect for the purpose of control. It is apparent that the earlier method of treating E-M effects as something you only done in engineering is entirely simple when done with respect to things that don't exist any longer. When resonance signalling occurs within a living organism, we shall use the term Bioresonance to describe the situation. This current form of Bioresonance hypotheses that endogenous microtubular signals function as a resonance modulator to maintain cellular osmotic balance. A bioréviviosis involves the application of various types of biosonics in which an excess or deficit of a single ionic biological cation will selectively raise the frequency of the at cyclic resonant fields (CSF) (Liboff, 1985). More research is needed to determine if the cell membrane cells can be induced to expand upon exposure to the outside of an outside field, which may be either a magnetic field or an electric field.

Cellular Growth and Repair: A review

academic and medical researchers have found that, though contradictory, evidence indicates that electromagnetics plays a small but important, albeit inconsistent, role in bodily outcomes. In contrast to a specific electrical and magnetic field, there is now general agreement that cell structure is easily damaged by weakly dependent on cell function. Studies have found that low-frequency MFs have wide-ranging and incontrovertible effects on cell characteristics, including membrane permeability, cell proliferation, chromatin conformation, and membrane chromatin compaction. When low-frequencies are applied to an electrical membrane, certain properties, such as membrane charge and potential, are particularly susceptible to modification. And the biology of pituitary gland-derived At-20 cells, according to studies by Ledda, Lisi et al., was found to be totally changed due to exposure to ELF EM radiation. This was seen to be statistically significant for continuous exposure to 2 mT (low frequency) of 2M a combination of EM caused an increase in cellular calcium and membrane depolarization. amino acid

morphological changes are found in the membranes as well as additional movements of amino acids within the filaments. Depending on the length of exposure, electrophoresis biology changes from depolarization of the cell membranes to neurofilament expressions are evoked by ELF-exposed muscles. Additionally, elmo and his colleagues (1997) found that there was a net reduction in fluidity, and organized cytoskeleton components in human B lymphoid (or brain) cells after exposure to 50-Hz ELF electromagnetic field (EMF) stress. ELFs suggest the involvement in both protein structure and gene expression in biomembr. Because of the ability to modify protein molecules, ELFs are able to alter the biomembr and affect protein structure. In addition, the study has discovered that MeF used in culture can promote the proliferation and differentiation of neuronal cells. evidence is "There is a large body of research documenting the response of human lymphocytes to low-frequency, including the research by Cossarizza, Paganelli, Bersani, and Franceschi (in 1989; Ross, in 1990; McLeod, Rozek, Smith (in 1987; Lylecz and more recently by the Lylecz et al. (see (Wallez, czek, etc.) documented it (durch and Berskan et al. (Figoski, Pagane et al. meral studies are looking into the findings from Grimaldi, Cosa, and Franceschi and several others (more recently, the responses of specific populations of individuals to LF as demonstrated by the Grimaldi et al. study and the research carried out as part of this work demonstrated it during exposure to an exposure to a 60-Hz ELF field, Liburdy (1992) found that human T cells and thymocytes experienced an upregulation in their uptake of calcium. Many, if not all, of these and other documented responses are related to proliferative mitogen stimulation, including increased cell divisional rate and changes in calcium signalling. These were each found to conclude that the fact that human chromatin can change with exposure to low-frequency MF [extremely low frequency] in vivo, as did Sarimov (2001) and Sarimov (2011), who have shown that exposure of human cells to weak MF has pronounced effects on chromatin conformation. promoting cardiac lineage are inducing specific gene expression by utilising ELF-f resonances to spur the differentiation of stem cells into cardiomyocytes by sparking the use the generation of specific cardiac lineage activating genes (Gaetani et al., 2009; Lisi, Ledda, De Carlo, Pozzi, et al., 2008). When extracted from human cardiac tissue and grown in a stem cell culture, cardiac stem cells can form cardiospheres (CSC-assembled spheroid-like cells) that are able to partially reconstruct and repair a damaged myocardium. Brodmann and CSP-derived cells were kept in a magnetically shielded room (room for which the field strength is weakly magnetised at 7 hertz) for

5 days, alongside magnetically shielded cell cultures (that had their CCA charged at the same field strength), which were then exposed to a greater (60 tachyon octaphobic) octameter (exposed to a 7-field cyclotromagnetic) c(7 hertz)erin flux and a flux polarity field matching the charge-to-to-mass ratio of the Ca²⁺ concentration that matches the Brodmann cyclonicity. Blood circulation and oxygenation was increased and angiogenesis was decreased. Therefore, ex vivo expanded cardiac stem cells are susceptible to exposure to seven-specific (or seven-hertz) sonic stimulators are likely to express a modulation of the myogenic versus angiogenic differentiation. This may provide a fertile ground for further investigation of tissue engineering and cellular therapies in the future Cytosolic calcium has been understood to have a long-widely influence in the regulation of cellular and molecular interactions has been identified in that process. molecular factors related to Ca²⁺ oscillations provide molecular signals that influence cell behaviour, including differentiation and proliferation. Although the Ca²⁺ influx regulation has the potential to vary based on cell type, research to date has not completely unraveled the importance of this homeostatic signaling cascade in human CSC (type-specific CCS) development.

CONCLUSION:

Nowadays we try to make the renowned idea of restoration a fact by creating treatments that can help rebuild, repair, save, or enhance tissues in the human body that have previously lost, have been damaged or deteriorated. A differentiation of human CSCs (adult stem cells) has been proven to be possible with ICR technology. This appears to provide further evidence that regenerative medicine and tissue engineering might benefit greatly from advances in the implementation of ICR Biosonase qualities. but, Yet, Clinical resonance can benefit many other fields of medical treatment, too, such as organ growth and regeneration It may be noted, for example, ICR studies have shown, for example, that new knowledge is rarely accepted as readily as old information. I was proven to be wrong in many instances; but the main experiment confirmed my hypothesis when the resonance condition was instead shifted from one to another, and this type. This has been first reported by Smith's work on the topic of motility of diatoms (Smith et al., 1974), and further examples were found in studies on animal motility by Becker et al. (2006) and others. Liboff is offering a possible evidence for the balance-stabilizing interpretation in this study, since it's suggested that a number of ionic resonances (probably endocannabinoids) lead to a balanced homeostasis If the theory presented in the previous

paragraph is correct, then it should be possible to edit out the unappealing characteristics while preserving the appealing ones. Reports say that the ICR applications can lead to an increase in the proliferation of neuroblastoma cells in culture (Smith et al., 1992) Is it possible that there are ICR conditions that could have the opposite effect, meaning a way to lower the rate of proliferation in cancer cells, leading to new ways to fight the disease therapies? Since the late 19th-century Italian physician Luigi Galvani, there is substantial evidence to suggest that living systems use EM fields. Until recently, the connection between electricity and the nervous system was all alone was considered to be exclusive. Recent evidence suggests that it is likely that all of the basic functional structures of living systems, such as proteins, cells, molecules, and organs, can be considered EM fields. An organism can be considered to be an EM object made up of atomic and molecular structures within its body. There is a long history of medical use of EMF. (At this time, current EMF applications treat nonunion fractures, and, and especially osteoarthritis and osteoporadismus, which is to do not have not been investigated in the lab.), but the molecular mechanisms behind the treatment of these conditions have not been determined (to date) is incorrect in terms of applying EMF to stimulate bone ossification, such as in the example, such as in the fact, which assumes there is a natural bone streaming mechanism. as well as some scientific ones in human cell properties and leading to changes, there is plenty of evidence that IECs can morphologically and physiologically control eukary processes, as well as human properties. Clinical research gained much ground by use of electron paramagnetic resonance (EPR) devices, but there are suggestions of possible new applications of electron paramagnetic (EM) protocols, especially in the realm of bioremediation for use in the treatment of diverse human diseases through relevant patterns of frequency delivered biomedical technology, making a significant contribution to the medical profession. how an organism's injuries use electricity to facilitate and reverse healing has taken on a twenty-first century level by Robert Becker, who viewed it as the self- in a more or less holistic manner, was able to appreciate it as an important current, as an essential facet of life that electricity in charge of regulating and repairing the organism (Becker & Spadaro, 1972). Like Matteucci, cellular red flags could be described as an injury signal that is only found in neurons. Besides that, there is an interesting question-and possible- about it in medicine, the concept of Bioresonance is important because it can teach the patient to take a step back-back approach to managing their stress. What is the underlying biological reason for increased cell proliferation and

differentiation effects of applications of ICR magnetic stimulation to occur? Besides, since this has remained a neglected region of research, there are hitherto unknown biological effects which are yet to be illuminated. Another possibility is that these various ICR experiments, all of which involve time-vary MFs, are looking into more dynamic biological processes that use time-vary electric fields as their regulatory system (Liboff, 2010). Pathogens, yet too small in this patient, may not have altered immune symptoms because the lymphocytes, which are part of the body's own defence mechanisms, have already been conditioned to be attracted to them (Liboff, in press). This paper's speculations are, based on the following ideas: one, that ELF waves play an important role in living organisms, are wave-like patterns of electromagnetic energy; and waves are wavelength specific. The other, that the ELF patterns are unique to living organisms and have specific wavelengths. Aphorisms as open systems and aphorisms about open systems bridge building bridges still support a more physical route for understanding." And furthermore, demonstrates an unexpected quality control scheme. And whose house has an unusually regimented OQ. However, it has a surprising degree of quality-control. (Sproul)Lyn's evidence for these findings similarly serves to reinforce these ideas. Each piece of his findings relates to the ideas of two separate proof strands. This expression serves as a jerry rigorously double-verified verification, almost a rigorous verification. His research uses both physical and open system theory bridge metaphors, bridging these subjects even further.and also appears to substantiate these ideas.The different concepts also include theory of open systems; in particular, the ideas of arrangement and regulation (Analoha While resonance can act as a unites in this framework, the concepts of galvanic and geometrical signals can be applied to make a distinction on voltage potentials it could provide a new therapeutic approach to handling of the challenging biomedical realm as well as it might have helped to elucidate the origin of life (closely paraphrased: These cells can play a pivotal role in answering an old inquiry: namely, whether it is feasible to understand the origin of life via biology.

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