

It is Time for a New Approach to Cancer Treatment: The Modulating of Biological Events by the Delivery of “Correct Energy Frequencies” as Innovation in Medical Practice

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INTRODUCTION

Biophysics is the science of the application of the laws of physics to biological phenomena. It is also known that molecular science, especially intra and inter cellular signaling also plays a role in biological phenomena.

The main purpose of this commentary is to shed some additional light in said mechanism by now correlating recently published findings that in this author opinion could explain the role of the breakdown of H_2O_2 molecules in DNA damage that could induce diseases geneses, such as in multiple sclerosis, Alzheimer up to cancer.

Recent advances in biophysical modulation affecting cells molecular signaling; this via published peer reviewed studies documenting biophysics as modulator of biological events in the human body. Relevant references can be easily retrieved from the published literature. Examples are: Results from simple optical microscopy methodologies of *in vitro* experiments that show molecular changes by biomagnetic fields modulation in human tissue, occurring while the human hair was imbedded in fresh human blood (**Figure 1**) [1]. The blood coagulation was triggered only by the one-sided electromagnetic fields (EMFs) of the hair shaft. Other publications shows or the deformation of prokaryotic cells (RBCs) by magnetic fields emitted by magnetized magnetite fragments and iron filings (**Figures 2 and 3**) [2], to a more complex study where ion cyclotron resonance was used to achieve the modulation of biological events by Biophysics, as stated in that study “The delivery of **correct frequencies** has the potential to become a safe, very affordable, and effective **therapeutic modality** that is amenable to being integrated with pharmacological drugs, thus representing a substantial innovation in medical practice” [3].

CANCER AND THE CELLULAR RESPIRATION HYPOTHESIS

As previously published in 2015, a manuscript was introduced hypothesizing a biophysical energy transduction occurring during cellular respiration as additional factor in

cancer genesis. As published “Seven decades ago, a seminal paper by Dr. Denham Harman, introduced a theory stating that there are good reasons for assuming that endogenous irradiation in the living cells could lead to cancer via an obscure mechanism. The main purpose of this manuscript is to shed some light in said mechanism by proposing a five-step eukaryotic cell cancer triggering cycle. In other words, a new factor is introduced, namely the recently found emissions of electromagnetic forces (EMFs) as a possible causing agent in diseases, including cancer” [4]. Three years later, the validation continues by demonstrating via *in vitro* studies the modulation of molecular signals resulting from exogenous or endogenous biophysical energy resulting from H_2O_2 decomposition. Some examples are: The rodent whiskers EMFs modulating brain signaling [5], oxidative stress via H_2O_2 decomposition as factor in Alopecia areata [6], the transduction of cellular membrane proteins and structural cell membrane alterations induced by exogenous energy waves energizing lipid droplets as the proposed underlying mechanism in very intensive pressure pulses treatments claims to a cancer cure [7]; and water H_2O_2 levels as factor in swimmer melanoma [8], leading to a mini-review entitled “The secondary role of UV light in swimmers melanoma genesis”[9].

THE NOVEL GRADUAL TRANSFER OF H_2O_2 MOLECULES TECHNIQUE

Some of the above mentioned articles would not have been

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possible without slowing the transfer of H_2O_2 molecules into human tissue. The slowing of that translocation allowed for the introduction of details previously obscured due to the explosive nature of that reaction (Figure 4).

GRAPHIC EXAMPLE OF BIOPHYSICS CAUSING TISSUE MOLECULAR CHANGES

Image showing removed magnetite fragment on fresh blood (Figures 1-4)

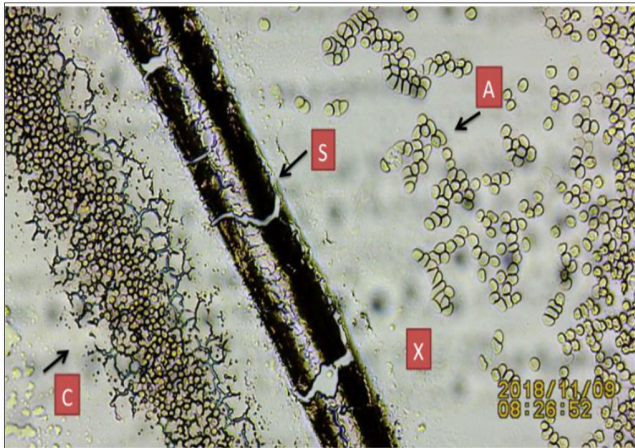


Figure 1. Microphotograph depicts hair shaft outline. A: RBCs, Agglutinated and in Rouleau formation; S: Hair shaft; C: Coagulated blood, denoting fibrin formation in side void of biomagnetic fields; X: Diamagnetic zone Example of Biophysical (magnetic) field from (S) unilateral human scalp hair shaft triggering molecular changes expressed as coagulated blood (C). The contralateral side void of magnetic energy (X) is displayed as non-coagulated blood tissue (A)

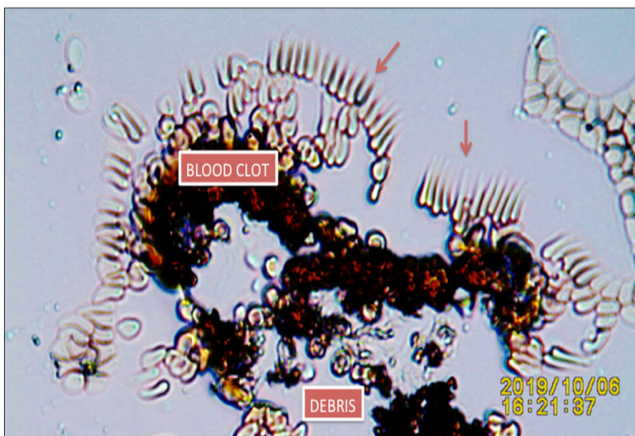


Figure 2. Unpublished image from files. Showing the effect of a magnetite fragment when in contact with fresh human blood tissue on a glass slide.

Red Arrows: Showing deformed RBCs in teardrop shapes, as well as coagulated blood and cellular debris

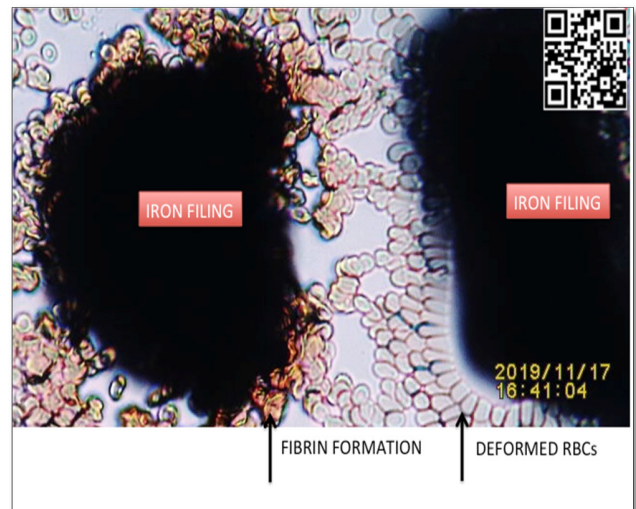


Figure 3. Additional example of changes in molecular signaling. Metal iron filings imbedded in fresh blood showing different effect. Left side of image triggering a coagulation cascade. Right side of image triggering RBCs deformations. As per previous experiments, the cell deformation is theorized to result from a magnetized iron fragment.

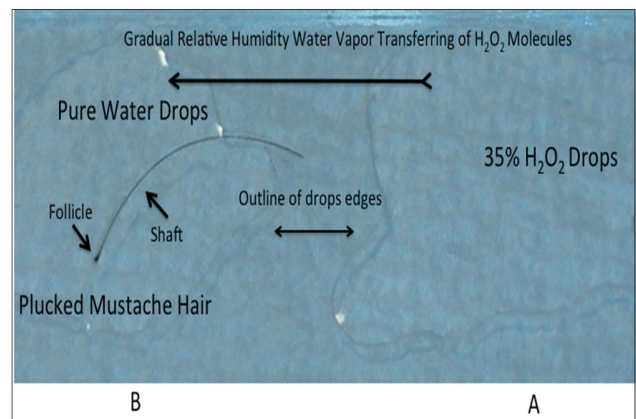


Figure 4. Glass slide technique for gradual transfer of H_2O_2 molecules. A: Drops of 35% H_2O_2 on right side of glass slide; B: Plucked mustache hair in pure water drops. Long black arrow showing theorized gradual transfer of H_2O_2 molecules penetrating pure water drops Image reproduced from: “Water H_2O_2 Levels as Factor in Swimmers Melanoma” further details by linking to <https://www.ommegaonline.org/article-details/Water-H2O2-Levels-as-Factor-in-Swimmers-Melanoma/1781>

The risk for “swimmers melanoma” was explained as follows: “The formation of **hydrogen peroxide** results principally from the UV portion of sunlight exciting humid substances in the **water** and thereby leads to the formation of superoxide ion, which reacts with itself to form H_2O_2 ”. In a subsequent experiment, the gradual transfer of H_2O_2

molecules technique was validated; in that case, the absence of H_2O_2 breakdown in the human hair shaft medulla was demonstrated. That finding is documented in **Figure 3** [10].

DISCUSSION

Why H_2O_2 amongst other antioxidants?

First, the commercial availability of hydrogen peroxide to independent citizen scientists; and the ease of tissue acquisition from their own bodies, i.e., human hairs, skin keratin plaques, blood samples via finger sticks amongst others. Second, the prevalence of published papers; and the fact that H_2O_2 has been found to convey signaling across cellular membranes in plants and animals [11-14].

Proposed mechanism explaining H_2O_2 breakdown and cancer

The DNA binding with lipid droplets: It is known that shockwaves arising from ROS breakdown create oxygen bubbles. That these bubbles rupture and emit energy in the form of shockwaves (**Figure 5**). That when a surge of electrons reach a lipid droplet energy transfer ensues. Presented herein are shockwaves inducing a luminescence phenomenon seen in lipid droplets once an energy saturation point is achieved. Lipids are categorized as a “regenerative substance” this property is confirmed by data demonstrating the recurrent discharging of energy by lipids as long as the endogenous energy from shockwaves persist [15] (**Figure 6**). Proposed is that the luminescence occurs to maintain the intracellular space in equilibrium, thus possibly causing damage to surrounding structures including DNA. The biophysical mechanism described above is “a fit” in explaining DNA damage resulting from ROS decompositions. After all DNA has been reported to bind to lipid droplets [16]. Cell deformations could be caused when lipids, such as sebum is adjacent to cells (**Figure 7**).

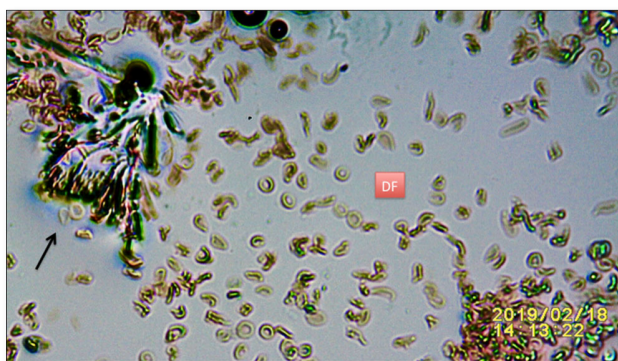


Figure 5. Unpublished microphotograph showing the effect on a fresh blood smear of released energy from a bursting oxygen bubble. Showing effect on RBCs deformation by H_2O_2 decomposition.

Black Arrow: Aftermath of decomposition; DF: Deformed RBCs field

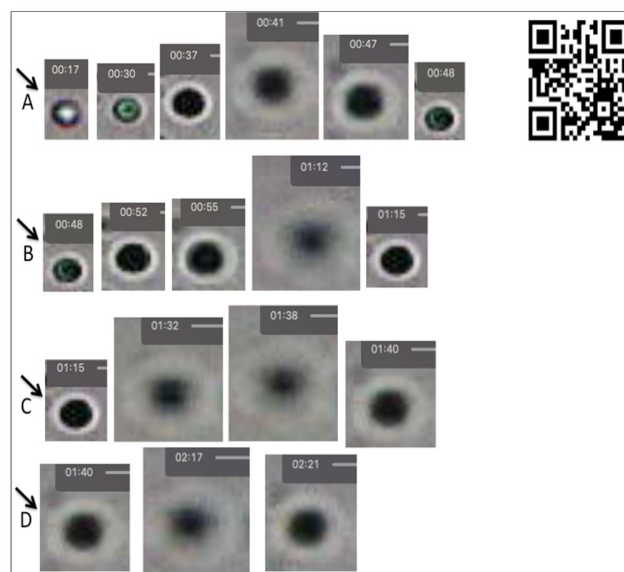


Figure 6. Demonstration of possible irreversible damage to lipid membrane by recurrent shockwaves.

Panels A, B, C, D black arrow indicating beginning of lipid droplet membrane changes

Black Arrows: Compare baseline images changes with each cycle, suggesting possible residual damage to membrane from continuous shockwaves. For additional details, please link to: <https://youtu.be/hUFDnZXoCGc> or scan QR Code in upper right of image



Figure 7. Tissue cross-talk. Microphotograph of video frame showing blood tissue electromagnetic field reaches of the human hair follicle deforming RBCs.

Black arrows: Pointing at deformed RBCs; FI: Removed follicle imprint; S: Sebum; C: Coagulated blood
Please visit video link: <https://youtu.be/ErBiwoXgxRY> or scan QR code below in right upper corner of image

The hair shaft skin junction as entry site of water bound H_2O_2 (Figures 8 and 9)



Figure 8. Image from files, showing oxygen molecules emanating from the hair shaft/skin junction.

Red Arrow: Oxygen bubbles; Black Arrow: The infundibulum is theorized to be the “point of entry” by the H_2O_2 molecules into the human hair. This is also hypothesized to emit electromagnetic radiations within the follicle (Orange Arrow) altering DNA and inducing melanoma tumors

For additional details please link to:

<https://youtu.be/09tYp348jKM> or scan QR Code in left upper corner of microphotograph

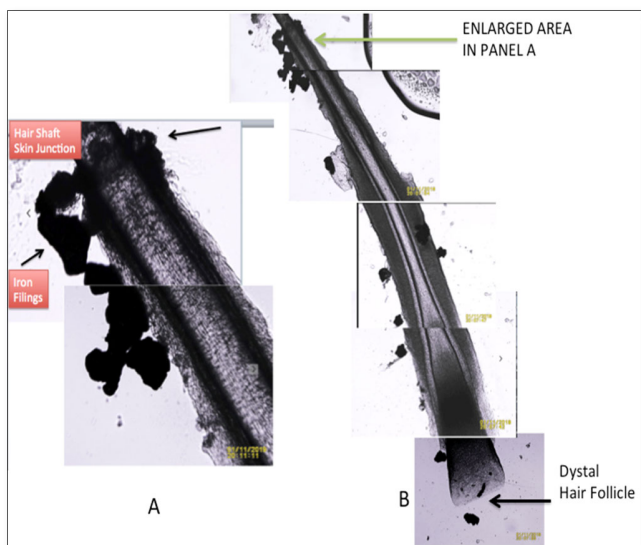


Figure 9. (n=1 of 2) Superimposed photomicrographs of hair and metal iron filings trapped between two glass slides (sandwiched). Panel A showing enlarged area of hair shaft/skin junction a.k.a. as Infundibulum, attracting string of iron particles. Demonstrating an area where exogenous material could penetrate into the follicle.

Validation of H_2O_2 molecules gradual transfer technique

Additional Example of oxygen bubble resulting from H_2O_2 molecules gradual transfer into an injured (transected) hair follicle. The slow and gradual transfer of H_2O_2 molecules allowing for the detection of presence/absence of catalase in the hair follicle inner structures (**Figure 10**).



Figure 10. Human scalp hair follicle immersed in pure water and near drops of 35% H_2O_2 . Microphotograph of still video-frame from video-recording showing gas bubbles emitted.

A: Transected line; B: Bubble; C: External root sheath; D: Cuticle; E: Cortex; F: O_2 source; X: Direction of gas flow (between cortex and cuticle). Details are appreciated due to slower H_2O_2 decomposition accomplished by a low H_2O_2 substrate concentration.

Please refer to supplementary video link:

https://youtu.be/w2-tE57Ok_o or scan QR Code on image

SUMMARY

Published reports demonstrate that “ H_2O_2 forms by the conversion of dissolved organic matter by the sun UV light in fresh or salt-water bodies” [17]. Experimental data identifies the hair shaft/skin junction as a point of entry for water bound H_2O_2 molecules (**Figure 8**). Theorized is that in swimmers, melanoma tumor cells are then formed by the decomposition of H_2O_2 by catalase; and the malignant cells then spread into the surrounding tissues. This is supported by published peer reviewed experiments demonstrating that when the H_2O_2 molecule is decomposed in tissue EMFs deformed cells. That these EMFs could modulate molecular signaling in tissue. That this modulation could lead to cancer genesis or other inflammatory diseases. Images were presented of endogenous and exogenous electromagnetic energy causing cells deformations and affecting the lipid

droplets membranes. In this author's opinion in the cancer war, is time for further research to identify "the correct frequency" to neutralize O₂ bursting unwanted or nefarious biophysical signaling causing unwanted cells deformations or metabolic changes.

FURTHER RESEARCH IS WARRANTED

In skin melanomas, this author recommends for experimentation the animals of choice to be pig or mice, since their skin proliferation (melanomas) "begin in the hair follicle and then spread into surrounding connective tissue, sweat glands, sub dermal connective tissue and fat" [18,19]. Which raises a few questions: The first being, would the topical application of antioxidants in pig inhibit the generation of melanoma or affect tumor regression? This question arises since the goal is to neutralize the H₂O₂ molecule prior to entry into the hair infundibulum. If positive results, that would shed some light on the cutaneous melanomas conundrum; and then emphasis could be placed on how to counteract the oxygen molecule shockwave energy as a tool to modulate biological changes. It is clear that despite the dollars invested in research and development, we are still far from achieving the mission: a cure for cancer. "Increasing numbers of studies have revealed that **many oncogenic-signaling elements show double faces**, in which they can promote or suppress cancer pathogenesis depending on tissue type, cancer stage, gene dosage and their interaction with other players in carcinogenesis" [20].

Could it be that the bursting O₂ molecule has also a dual role; and could also lead towards a cancer cure?

Would the bursting O₂ molecule be a factor affecting the double face of "oncogenic signaling elements"?

The above questions are supported by reports of a molecular "dual role" of H₂O₂ in cancer [21].

REFERENCES

- Embi AA (2018) Hair and blood endogenous low level biomagnetic fields cross-talk effects on fibrin inhibition and rouleau formation. *Int J Res Granthaalayah* 6: 200-208.
- Embi AA (2018) Biomagnetism as factor in red blood cells deformation. *Int J Res Granthaalayah* 6: 46-57.
- Corbellini E, Corbellini M, Licciardello O, Marotta F (2014) Modulating biological events by biophysics: An innovative molecular methodology using ion cyclotron resonance - A pilot study. *Rejuvenation Res* 17: 188-191.
- Embi AA (2016) Endogenous electromagnetic forces emissions during cell respiration as additional factor in cancer origin. *Cancer Cell Int* 16: 60.
- Embi AA, Jacobson JI, Sahoo K, Scherlag BJ (2015) Demonstration of electromagnetic energy emanating from isolated rodent whiskers and the response to intermittent vibrations. *J Nature Sci* 1: e52.
- Embi AA (2016) Comment on: "Oxidative Stress in Alopecia Areata: A Case-Control Study." *Am J Clin Dermatol* 17: 313.
- Embi AA, Steve H (2019) The transduction of cellular membrane proteins and structural cell membrane alterations induced by exogenous energy waves energizing lipid droplets as the proposed underlying mechanism in very intensive pressure pulses treatments claims to a cancer cure.
- Embi AA (2018) Water H₂O₂ levels as factor in swimmers melanoma. *Lett Health Biol Sci* 3: 1-4.
- Embi AA (2018) The secondary role of UV light in swimmers melanoma genesis. *Int J Mol Biol Open Access* 3: 119-121.
- Embi AA (2018) Absence of H₂O₂ breakdown in human hair medulla implications in follicular melanogenesis. *Int J Res Granthaalayah* 6: 72-78.
- Center for Disease Control. USA. Suggested technique for Blood Smear. Available at: https://www.cdc.gov/dpdx/resources/pdf/benchAids/malaria/Malaria_procedures_bench
- Hooijmaijers C, Rhee JY, Kwak KJ, Chung GC, Horie T, et al. (2011) Hydrogen peroxide permeability of plasma membrane aquaporins of *Arabidopsis thaliana*. *J Plant Res* 125: 147-153.
- Slesak I, Libik M, Karpinska B, Karpinski S, Misalski Z (2007) The role of hydrogen peroxide in regulation of plant metabolism and cellular signaling in response to environmental stresses. *Acta Biochim Pol* 54: 39-50.
- Palomero J, Pye D, Kabayo T, Spiller DG, Jackson MJ (2008) *In situ* detection and measurement of intracellular reactive oxygen species in single isolated mature skeletal muscle fibers by real time fluorescence microscopy. *Antioxid Redox Signal* 10: 1463-1474.
- Embi AA (2019) Introducing *in vitro* experiments of oxygen bubbles shockwaves triggering intracellular lipids luminescence: Implications in cancer etiology. *Int J Res Granthaalayah* 7: 355-364.
- Zhang C, Yang L, Ding Y, Wang Y, Lan L, et al. (2017) Bacterial lipid droplets bind to DNA via an intermediary protein that enhances survival under stress. *Nat Commun* 6: 15979.
- William JC, Shao C, Lean DR, Gordon AS, Scully FE (1994) Factors affecting the distribution of H₂O₂ in surface waters. *Adv Chem*.

18. Bundza A, Feltmate TE (1990) Melanocytic cutaneous lesions and melanocytic regional lymph node in slaughter swine. *Can J Vet Res* 54: 356-362.
19. Wong SY, Reiter JF (2011) Wounding mobilizes hair follicle stem cells to form tumors. *Proc Natl Acad Sci* 108: 4093-4098.
20. Zhang J, Chen YH, Lu Q (2010) Pro-oncogenic and anti-oncogenic pathways: Opportunities and challenges of cancer therapy. *Future Oncol* 6: 587-603.
21. López-Lázaro M (2007) Dual role of hydrogen peroxide in cancer: Possible relevance to cancer chemoprevention and therapy. *Cancer Lett* 252: 1-8.