UBIQUITINATION 23: LOOKING BACK FOR A QUANTUM LEAP FORWARD

READERS SUMMARY:

1. **DO GENES CONTROL OR RESPOND TO THE ENVIRONMENT?**
2. **IS CANCER A DISEASE OR A RESPONSE TO A POOR ENVIRONMENT?**
3. **ARE ALL DISEASE DUE TO LOW OXYGEN LEVELS AND A LACK OF UV LIGHT?**
4. **HOW DOES A MICROBIOME BECOME ILL?**
5. **DO YOU WANT TO BUY PRECEPTS OR CONCEPTS?**

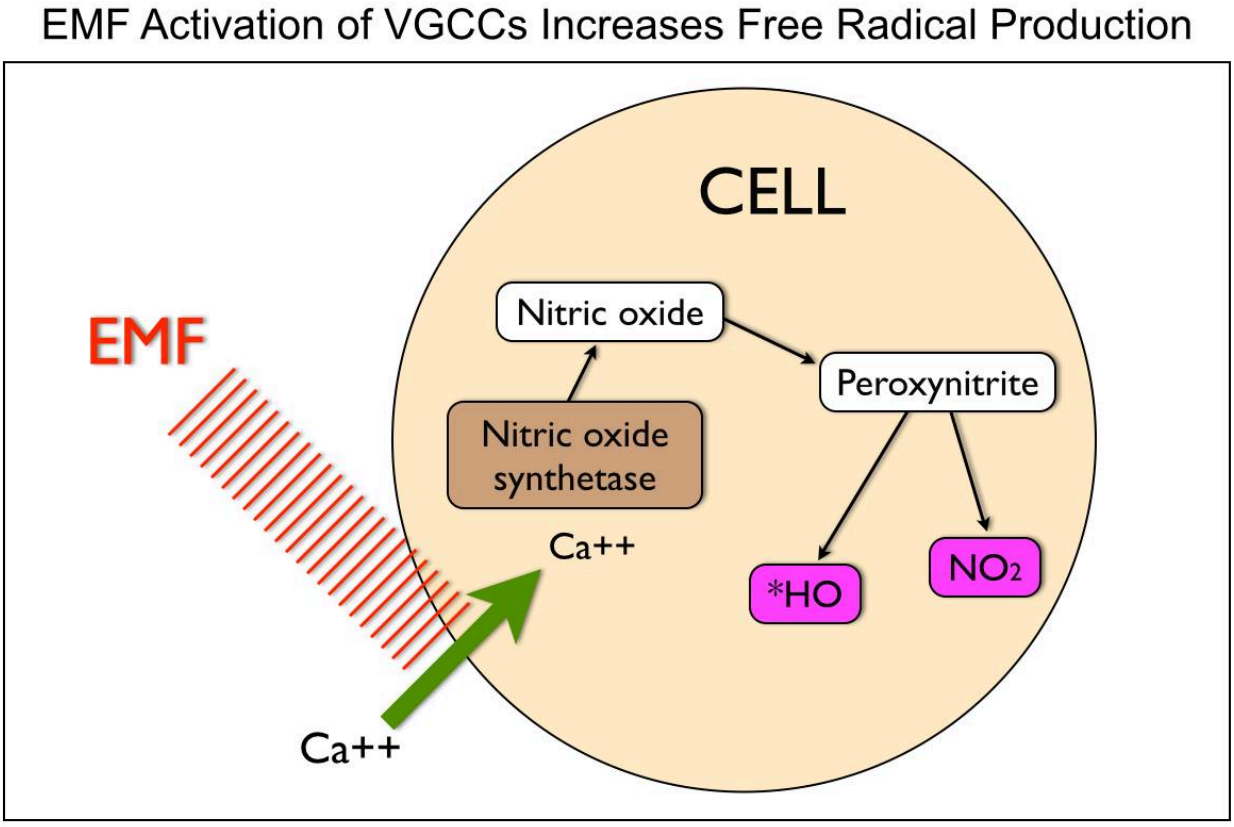
THE BLOG TAKE AWAY: Understanding that all life is quantized becomes really important in understanding modern diseases like cancer in my view. Disease today are evidence of environments humans have faced in the last 100,000 generations. Ubiquitination rates are linked to the rate of these changes. If the changes match the circadian cycles of today we consider that an adaptation. If they are mismatched to today's' environment we call it a disease. This is why having the modern perspective of genetic determinism has hurt modern medicine. We are looking for defects in the genome when it is the environment that is the main changing element. Genes are controlled by non-linear optical signaling as the environment changes. It is these changes that alter the genome. Our genome is designed to respond to environmental signals, not control them. When you are truly connected to nature, time slowly melts so life gains traction. The slope of the line for time is proportional to the coherence of the connection. When you become coherent with nature's music within you, that is when you can make sense of the distraction going on around you. Medicine applies technical solutions to adaptive

challenges today and this is why it is failing.

CONSIDER CANCER:

The Warburg Hypothesis as it stands today is that tumors are actually obligate users of glycolysis rather than mitochondrial respiration when a cell becomes cancerous. Cancers are all associated with the highest ubiquitin replacement rates for proteins in cells.
This is the modern hypothesis as it stands today. Is there is another more plausible explanation for a Warburg metabolism?

A little-known fact about a Warburg metabolism: everyone focuses in on the glucose aspect of Warburg's findings, but if you read his original papers, he also found a lot of ammonia released simultaneously to glucose use. Why did he find that? Ubiquitin up-regulation creates excess protein turnover, and this leads to the production of a lot of ammonia. When ammonia production is increased, oxygen levels fall, superoxide levels drop, while Reactive Nitrogen Species increase. Non-native EMF does it as well. Look at the picture below.



Cells release more ELF-UV light when this occurs. Light energy and information are lost. The exclusion zone (EZ-Pollack 2013) is lost within cells. This process is always associated with light frequencies that have too much power for the system and therefore, light has to be emitted. This is why the artificial light is problematic for biologic systems. This has been well documented in the literature by Dr. John Ott.

Power in light waves is a function of its frequency. It is the

only way the power of light can be modified in nature. When the frequency is changed, what else occurs simultaneously in mitochondrial cytochromes? The amount and type of free radical signals released also change. When nitrogen gets oxidized, this means electrons are taken away from its molecular structure. When electrons are removed from any proteins it makes them less hydrophilic and as a result, the size of the EZ in cells drops. This is also true in the MINOS that surrounds the cytochromes. The MINOS must remain reduced, ie filled with electrons, to maintain a large EZ to continue to be able to exclude protons. This is why the mitochondrial matrix is filled with protons and why there should not be a lot of free protons outside the matrix. This sets up chemiosmotic gradient between the two areas of a cell. This can be used to do work and harvest energy. When the size of the EZ drops, ammonia rises and the mTOR pathway is activated. Resveratrol, turmeric, and metformin have been shown to prevent ammonia toxicity in cells. **When protons cannot be contained within the matrix or the EZ decreases the mTOR pathway is activated**. This is why mTOR expression is a problem for generating longevity. It works by limiting or lowering ubiquitin marking of proteins in cells. With mTOR activation we see pseudohypoxia develop, NAD^+ levels drop and NADH rises at cytochrome 1.

Why should you care deeply about the nitrogen atoms present in NAD^+? When nuclear NAD^+ levels drop, cells lose the ability to properly regulate mitochondrial homeostasis independently of PGC-1α/β pathways. PGC-1α is a transcriptional coactivator that regulates the genes involved in energy metabolism in cells. PCG-1α is a so activated by endurance exercise and sprinting. PGC-1α is a major regulator of mitochondrial biogenesis and function. This pathway helps cells get rid of redox shifted mitochondria that cannot make energy well. I spoke about them in the Ubi 4-7 blogs. Those are mitochondria ruined by blue light, nnEMF, and 24/7 carbohydrate uses. This

protein interacts with the nuclear receptor PPAR-γ, which permits the interaction of this protein with multiple transcription factors to optimize energy production in cells by optimizing mitochondrial function. This protein can interact with, and regulate the activities of, cAMP response element-binding protein (CREB) and nuclear respiratory factors (NRFs). It provides a direct link between external physiological stimuli (think environment) and the regulation of mitochondrial biogenesis. This pathway is responsible for regulating muscle fiber types in skeletal muscle. This determines how sensitive or resistant we are to insulin and glucose and how well we can use fats. **All this is tied directly the environment that the mitochondria is sensing.** All this happens before there are any changes in the nuclear genome. This shows you that the environment dictates to the genome. It is not the other way around as modern science keeps regurgitating. This also shows how a badly lit environment at our surfaces, is capable of uncoupling light from nitrogen and water cycles. Thus, artificial light is fully capable of increasing ubiquitin rates for all proteins in humans. This is a core finding in cancerous states. Fake light frequencies also increase the atomic size of the respiratory proteins in the cytochromes. Why is this a big deal?

Eukaryotes spend 80% of their total energy budget on protein synthesis. That process is controlled by ubiquitin marking rates. This is why you need to understand ubiquitin well. This is why we have had 23 blogs in this series so far. Once you master ubiquitin you can use that recovered energy to reverse illnesses. Each peptide bond requires 5 ATP to seal the bond. That amount is 5 times as much that is needed to polymerize nucleotides into DNA!! In a cancerous environment, each protein is reproduced in thousands of copies in every cell, which is continuously turned over by ubiquitin to repair wear and tear.

The energy cost is tremendous for protein turnover. It is designed by nature to be quite stable. When your environment is energized it increases ubiquitin marking in proteins.
This increase of energy within our environment increases epigenetic expression in the entire genome, while seriously causing a massive cost of energy to be used in the process. This is a big freaking deal, folks. Without energy, life first gets sick, then it dies earlier than it should. Current beliefs think that ATP is the only way eukaryotes generate energy. Quantum biology is sending us a bigger message. ATP cannot possibly be the key energy-giving protein because we cannot make enough of it to stay within the second law of thermodynamics. Water and DHA (light from a DC electric current) create most of the 80% of the energy we need for protein synthesis.

What else happens in this case when ubiquitin rates rise faster than energy is supplied to ribosomes? Declining nuclear NAD^+ has been linked to aging and every disease known on this planet. Declining NAD^+ is linked to lowered redox potential in cells and occurs during aging. Declining NAD^+ is always seen with pseudohypoxia and lowered amounts. Aging is linked to pseudohypoxia, which disrupts OX/PHOS functioning of NAD. Nicotinamide adenine dinucleotide (NAD) is a coenzyme found in all living cells. This compound is directly linked to ubiquitination rates in all living things. Nitrogen, water, and light control how metabolism in living things handles carbon acquisition, assimilation, and destination. NAD^+ is a compound that is a dinucleotide since it consists of two nucleotides joined through their phosphate groups. Here again, you see nitrogen and phosphorus linking up atomically to regulate carbon cycle use in cells. This series has gone into exquisite detail how these cycles fundamentally work. Phosphorus is nitrogen’s gatekeeper in a cell. This is why phosphatases control protein activation and folding. Protein folding was the story behind the OSF series on this blog. It

was also covered here in Ubiquitination 13. One nucleotide in DNA or RNA contains an adenine base and the other nicotinamide. Nicotinamide adenine dinucleotide exists in two forms, an oxidized and reduced form abbreviated as NAD^+ and NADH respectively.

As we will see, it is a molecule of central importance to metabolic and other key biological processes in humans because of how it directly couples to ubiquitin. When ubiquitin is coupled to metabolism properly, by light and dark cycles, ***carbohydrates become a natural braking mechanism to the PER 1 and PER 2 clock genes.***

Could the break be related to something in these biomolecules put there by photosynthesis? It actually slows their epigenetic expression to regulate mitosis of the cell cycle. What might slow things down in mitosis? Could it be atomic mass changes? Mitosis signaling in the cell is stimulated by ELF-UV light release from a cell. All cells release ELF-UV light. The same is true for vegetables like onions. This story was told in Roeland van Wijk's new book, "*Light Sculpting Life*". Mitosis can only occur when ***UV light is released***. Cancer is a disease where mitosis is massively up-regulated. This means that cancer has to be associated with massive light release from cells to stimulate mitosis and cell growth. Do you still think cancer is a genetic disease or might it be an epigenetic disease?

The reason carbohydrates are chosen by Mother Nature to be the braking mechanism is they are the one food electrons that carry the most UV photon power from the sun to be collected, recycled, and used by the living system as a non-linear optical signal. Carbohydrates are grown in longer light cycles when UV light is more powerful. This frequency gets codified in foods. This energy is coupled to many molecules but ultimately resides in the NAD complex in cytochrome one of mitochondria. ***Remember every mammal on this planet has a clock***

gene before every somatic gene. So when these two cycles are uncoupled (mostly by bad frequency light) you should expect excess glucose uptake to slow the PER 1 and 2 mechanism!

People have forgotten the basic physics of light. I have not. I have been leading you up this very fundamental issue. The frequency of light is directly linked to the color of light by its physics. E=hv is that equation. ***It turns out that life pays deep attention to this relationship, even though medicine and biology do not today.*** Humans can see things, but they do not observe nature's mechanism well because they are quantized in action. Biologists and physicians do not learn quantum physics. That must change too. The eye cannot see what the mind does not know. This is why we have the current beliefs that cancer may be related to abnormal glucose and ammonia metabolism in the Warburg mechanism. ***The real quantum issue is not that glucose is used by cancer cells as an exclusive fuel, it is the ammonia made from the massive protein turnover that is caused by increased ubiquitin marking.*** The only reason we believe glucose is cancer's preferred source of fuel is that everyone believes that food is more important than light frequencies. This is the modern precept. It is not nature's concept. It is the biggest false belief modern science has. Food is not primordial, circadian signaling of light, however, is. Light trumps food at every level of organization in living things.

Remember, that DNA/RNA only code for protein, so extra ubiquitin marking turns on protein synthesis and degradation, tied to mTOR and altered ubiquitin. Each peptide bond requires 5 ATP to seal the bonds. That amount is 5 times as much that is needed to polymerize nucleotides into DNA!! Each protein is reproduced in HIGHER numbers of copies in cancer states which means that all energy stores are depleted faster. This is why dehydration and ubiquitin marking are always associated with low NAD^+ levels and low oxygen levels. In this state, the cell is chronically devoid of light energy collection from the sun

because of a missing or small exclusion zone layer at the eye, skin, gut, or respiratory surfaces. EZ's need electrons to form and this, in turn, allows chemiosmosis to self-organize electrostatically without any need for ATP. When an EZ is present it allows for 'protonicity' (proton flows and tunneling) in EZ water in a cell. When this is absent, the cell has to rely on fast ATP pathways to keep up. This is the story told to you in EMF 4. The irony of EMF 4 for most paleo athletes, is they think they need carbs because they use a blue light and work out constantly inside where artificial light predominates.

KEY TRUTH BOMB: When all these aspects of the environment are collected together in someone's N=1, this drives NADH high at cytochrome 1 and results in a lower NAD^+ low at cytochrome 1. As a result, pseudohypoxia develops and is the acute result. Oxygen is the terminal electron acceptor in mitochondria. We are equipped to handle this acutely. What happens because of modern environments? It becomes a chronic effect, and NAD^+ drop and this slows electron chain transport. When it slow chronically respiratory proteins get larger on an Angstrom basis and this decreases the ability of electrons to tunnel and it alters free radical generation. Through this coupling, you begin to realize that oxygen and UV light exposure are fundamentally linked to all living things. Most disease is tied to a lack of O_2 and a serious lack of UV light collection from our skin. It was shown over 80 years ago that UV radiation is capable of increasing venous oxygen levels by itself. No lungs are needed to do this. I eluded to this in Tensegrity 1. Dr. George Miley found out about this in the 1930's and used UV light extensively in the US prior to the development of Big Pharma and antibiotics. His work clearly demonstrated an increase of oxygen absorption by the blood following ultraviolet exposure to destroy bacteria. *UV light is toxic to bacteria but it is not to eukaryotes.* He went on to report the significant effects it had on people with

pseudohypoxic states. The more cyanotic a patient with sepsis was the better they responded to light therapy. The same is true today in tuberculosis and in psoriasis. The interesting part of his work is in over 6500 documented cases no side effects where found and no one developed any skin cancers. In the literature, he showed people on a drug, sulfanilamide, went from deadly septic cyanosis to a healthy color within a few minutes of UV radiation exposure. *Check cite 1.*

Humans have the ability to increase oxygen levels in their venous blood with sunlit light exposure alone. Oxygen is the terminal electron acceptor in all mitochondria. If oxygen is not present at the terminal electron acceptor from foods, ETC slows. When ETC slows respiratory proteins in mitochondria swell and their atomic size in Angstroms increases. This is covered in detail in Nick Lane's book, called "The Vital Question". This is the huge epigenetic clue the biologic sciences are all missing. A lot of research has been written and about the PER 1 and 2 genes in the chronobiology literature but few are coupling it to David Sinclair's paper on pseudohypoxia and low NAD^+ published in December 2013. The PER 1 and 2 genes work by negative feedback control and they control circadian timing in all cells. When either side of their feedback is altered the results is an extinction of the circadian timing mechanism. This results in a WARBURG metabolism. This is akin to the predator/prey analogy I gave you earlier in this series. Both gene products cease to work with light and nitrogen as designed by nature. The result is you get sick and die earlier. It also leads to cancer generation.

BIOLOGY GEEKS: So in my recent webinar series, in 2015, I have taught you about the loss of negative feedback control and what happens when you lose it on one side of the coupled event. There I used predator or prey to make the point. If you alter the balance of predator or prey the result is always the EXTINCTION of both animals. I have told you that in aging and

neolithic disease generation that NAD^+ becomes altered in relation to NADH. ***The chronic loss of NAD^+ is the critical sign of a loss of negative feedback control of the ubiquitin cycle.*** Now for how this scales to your molecular circadian clock and your peripheral clock genes (CCG's). The current model of the mammalian circadian clock includes two interlocking transcription-translation feedback loops comprised of several so-called "clock" genes and their protein products, which ultimately regulate the transcription of "clock-controlled" genes. These feedback loops consist of positive and negative components. The positive components include the basic helix-loop-helix-PAS domain transcription factors, CLOCK, and BMAL1. These transcription factors heterodimerize, translocate from the cytosol to the nucleus, and bind to circadian E-box promoter elements that enhance the transcription of genes encoding the negative components PERIOD 1 & 2 and CRYPTOCHROME 1 & 2. The CRYPTOCHROME and PERIOD proteins feedback inhibit the transcription of the Cryptochrome and Period genes by blocking CLOCK/BMAL1-mediated trans-activation. The second feedback loop involves the trans-activation of the Rev-Erbα and Rora genes by CLOCK/BMAL1. The protein products of these genes compete for binding to RRE elements in the Bmal1 promoter, driving a daily rhythm of Bmal1 transcription and closing the second feedback loop. *Rhythmic expression of these clock gene products produces circadian clock outputs by regulating transcription of clock-controlled genes (CCGs)*. At least some of these CCGs, including aanat, the gene encoding the penultimate enzyme in the melatonin biosynthetic pathway, contain circadian E boxes, which have a core nucleotide sequence of CACGTG and are activated rhythmically by CLOCK/BMAL1. Post-translational regulation, including phosphorylation, acetylation, ubiquitination, sumoylation and proteasomal degradation is also important in the regulatory mechanisms generating the circadian oscillation. Once your eye clock's optical signaling goes awry, your SCN's optical signaling goes haywire. It

controls every single cell in the human body. When it goes awry diseases are the result. Food is a bit player in this dance. Light is the key signaling metric in the story. It is a 'matter of time' before your circadian clock genes in tissues the SCN controls go haywire. The time required for this interruption of signaling is a function of the environment you allow your surfaces to sense. Those surfaces are the eye, skin, gut, and respiratory systems. All of them are adjacent to water and an EZ. What will be the ultimate result of poor signaling? **EXTINCTION of both sides of the circadian coupling and cancer is that result. This is the definition of a loss of negative feedback control.** GEEK FEST OVER.

This has been discussed in the cancer literature many times, but no one in oncology really understands ubiquitin signaling well enough, because it is driven by the physics of light and not your glucose level from foods!!! An elevated HbA1c is a sign to a clinician of a badly lit environment of the patient. The perspective is what is blocking us from real breakthroughs. Oncologists have yet to make sense of Warburg's findings because they don't understand yet how light cycles and dark period in humans allow their eyes, guts, and mitochondria to sense these coupled cycles. Most progressive oncologists are beginning to see the link by way of food and ketosis, *but they will not fully understand Warburg's findings until they understand how light controls the circadian clock in the central retina.* We lose the normal carbohydrate braking mechanism when circadian cycling is no longer yoked to water or nitrogen cycles, giving us the false impression carbs are cancer's preferred fuel.
The key to understanding this link to light frequency will be when they begin to look carefully at superoxide levels and the triplet state of free radicals and compare them to ubiquitin marking. I mentioned this in the Ubiquitination 5 blog. Ubiquitin marking then needs to be married to the cell's redox potential to sort this out properly.

WHY IS LIGHT THE KEY?

Why are we really in the dark? Because we do not fully understand nor appreciate how the photoelectric effect works at surfaces and interfaces. In 1902, Austin and Starke reported that a metal surface impacted by an electron beam emits a larger number of electrons that were previously present within the system. In 1902, no one could make sense of this because the experiment occurred before quantum mechanics was discovered. This paper is incredibly important to disease states today because it tells us how cytochrome 1 really works in mitochondria.

All food is broken down to electrons so if more electrons can be made in a system using the interaction of ECT and the iron atoms in the cytochrome complexes and the nitrogen atoms in NAD^+ at cytochrome one we would need less food to generate the proper signals. When this process is interrupted or slowed down for any reason, (low EZ or pseudohypoxia) we would need more electrons from food to make up the difference to speed up ETC. This is likely why obesity, T2D, and cancer all are related in optically in the quantum fashion of how electrons are handled at cytochrome 1. *It turns out you cannot emit the appropriate amount of biophotons in a cell to release light from a cell when O_2 is missing either!* When O_2 is missing (pseudohypoxia) free radical signals that mitochondria normally in use, are also missing. Russian scientists found this linkage in the 1930's, in many of their experiments, but no one in the western world seems to realize this importance today as cancer rates are exploding. Fritz Popp was the once scientist who reignited this spark in the 1960's through 1980's who realized that all cancer states were associated with an extraordinary amount of light loss by cancerous cells. *It turns out the spectrum of that light is the most critical part of the oncogenesis mystery we face today*.

Again, no long-term magical effect is had by nutritional ketosis by itself. All ketosis does is provide an excess

amount of electrons to speed ETC flow. The speed of electron flow is tied to the redox potential of the cytochromes because of their quantum effects; this makes them tightly coupled to the type of free radical generation is broken. Everything is quantized in mitochondria just as it is on a plant's leaves. Mitochondria require a constant flow of electrons to beam to a metal target (Mo and Fe) while O2 is present to get the proper free radical signal and emit the proper frequency of light in the cytochrome proteins. Proteins are absorbers and emitters of light. This is why DNA only codes for proteins. They are hydrated semiconductors that emit light which codes for physiologic function based on their optical properties and how they work with the sun's light. ***Excellent optical signaling is a hallmark of health. Poor signaling is associated with poor health and diseases of aging.***

Your mitochondrial membranes are studded with proteins containing molecular iron-sulfur clusters captured from life's rocky origin to maintain your proton gradients in your cells. There is no better illustration of the can-do and make-do spirit of evolution in operation than this. It turns out that those mitochondrial membranes have a total area of 14,000 square meters. This equates to about five football fields!! Each one of these membranes has 30 million volts of charge contained in them when the membranes are not affected by non-native EMF signals that cause calcium release. That charge is maintained by the exclusion zone (EZ) surrounding the mitochondria. This is what allows chemiosmosis to occur. Why? An EZ excludes protons from movement or from tunneling! Calcium ions act as the glue holding the two lipid bilayers together to hold this charge on all eukaryotic membranes. Non-native EMF causes calcium efflux. This removes the glue and the cell membrane breaks down and loses its charge and cells lose their redox potential.

WHY IS THE EZ CRITICAL?

This specific sensitive environment around the mitochondrial membranes is required for the proper release of UV light from cells. It also related to mitochondrial function in another way: **One cannot make free radicals in a hypoxic or pseudohypoxic state.** Did you know that? I bet you did not. This means we a constant source of O_2 and UV light to keep oxygen as our terminal electron acceptor in our mitochondria.

Now you may be beginning to see why we need to really understand Sinclair's paper from December of 2013 well. Low NAD^+/pseudohypoxia states links and reiterates the work of Russians early in the 20^{th} century. I had to look back in science to see what we missed to figure this all out. I learned that Dr. Miley used UV light to increase oxygen tensions in blood to kill bacteria in terminal patients to treat sepsis (*and they lived in an era without most antibiotics*) and he got the idea from a physician Dr. Niels Ryberg Finsen, who won the Nobel Prize in 1903. I then went to Russia and found the work of Kubetsky, Tarosov, Konev, Vladimirov, and Zhuravlev in the 1960's. Konev's group showed definitively the spectral distribution of the color of light released in yeast cells. These cell's emissions were between 250 nm and 380 nm range with a peak max at 330nm. *This spectral range is all in the UV range of light.* Melanin, a skin pigment in humans also has an absorption spectra that matched this frequency of sunlight maximally. This matched the exact range that Russian scientist Gurwitsch's had original found in 1923 and published in his most crucial experiment in Russia about onion root sprouting. He linked UV light release in cells to mitotic signaling. These are no coincidence's they are fundamental to how cells to signal. **UV light is a critical component of non-linear optical signaling.**

There is a huge advantage to using light over DC electric currents to signal in cells. It is more energy efficient and allows more information transfer using a lot less voltage. This is why the human brain can function as it does on just 20 volts of electric charge.

RUSSIAN LIGHTS

Russian scientists showed between 1923 and 1970 that oxygen had to be present in a critical enough dose to get the free radical generation to form this mitogenic UV radiation release from cells. This is why I did not miss the significance of Sinclair's recent paper in 2013. It is the key I have been waiting for close to a decade. I have suspected for ten years that the answer would be linked to light, nitrogen, and sirtuin pathways in cells, but I did not have the smoking gun until Sinclair's paper showed up. Sinclair's group is focusing in on the sirtuin and O_2 links, but even they did not understand the quantum effects on light and nitrogen. The Russians data has documented this linkage to an ELF-UV light release from cells since Alexander Gurwitsch work on mitogenic radiations from living things done early in the 20^{th} century. This is why ketosis is just a half-truth when we have mitonuclear asynchrony in a disease or a cancer state. Half truths always lead to beliefs that are false.

I do believe ketosis plays a role in illness reversal, and my book, The Epi-paleo Rx, is clear on this point. But the key point must be made, ketosis is only capable of buying you some time to fix the bad non-native EMF environment that allowed you to get ill, to begin with. *You will never get well if you remain in the same environment you got ill in because the environment dictates the surface chemistry of your eye, skin, gut and respiratory tract.* How light interacts with these surfaces is critical to disease generation and wellness creation. **These are all linked via your mitochondria by EZ water in cells that carries UV light optical signals. This is why EZ water absorbs at 270 nm.** In order to work optimally, your mitochondria have to have perfect quantum synchronization to your nuclear genome using non-linear optics. This is called mito-nuclear coaptation. I spoke about this on Ubiquitination 5 and Nick Lane's new book really gets into the details. The only way to get rid of bad redox shifted

mitochondria is with a proper quantized pulse of superoxide to stimulate mitophagy/autophagy. **This is wholly dependent upon proper oxygen saturation and optimized UV light release in cells.**

SYNONYMS OF SICKNESS

If these "conditions of existence" are not present in the environment we allow our surfaces to sense, and they persist long enough, infertility, obesity, and T2D are diseases you will likely get before oncogenesis manifest. This is why all diseases of aging are linked to aging. This is the quantum tie to all these disease states. So acute nutritional ketosis in cancer states, for me today, is akin to an oncologist using chemotherapy or XRT today. In these states, DHA with ketosis can often buy you more time to reverse the environmental problems that exist for the person. It buys the clinician time to recover the immune system cells first by optimizing ELF- UV light release inside cells to regenerate signaling to generate NK cells from our stem cells to eradicate the cancer cells. Ketosis with DHA helps when ubiquitin is uncoupled from the light just for mitochondrial energy production. It, however, cannot generate the proper free radicals from the Type 1 or Type 2 photochemical reactions required to reverse any illness. This was the key point buried in Ubiquitination 6. It won't cure cancer, it is just one small thing that helps until you fix the real problem……..bad frequencies of light within a bad environment that destroys proper mitochondrial signaling.

MICROBIOME QUORUM LIGHT SENSING AND UV LIGHT

The last key link with light is with HDAC inhibitors present in the gut: BUTYRATE ketones are not the only common metabolite with HDAC inhibiting properties, but so are sirtuins and butyrate in the gut. Sirtuins are very important signaling components in this quantum dance, especially in the gut and within the eye's clock mechanism. **Free radicals cannot be made in the absence of oxygen and this points out why**

butyrate production from short-chain carbohydrates in the gut is required in these cases. Butyrate production is lost in many cancerous states, especially in the colon. It would be an ideal strategy to switch between these natural light prescriptions as a dietary form of therapy as time evolves in an illness state. **The key teaching point most in medicine and ancestral health miss is that our microbiome can't make butyrate when nitrogen cycling is uncoupled from sunlight for any reason.** The other point they both miss is that the microbiome is made up of bacteria. *Bacteria are easily destroyed by any amount of UV light.* Remember all disease states are associated with a simplified less diverse flora. Illnesses release more UV light from eukaryotic cells in the gut. Eukaryotic cells are immense compared to bacterial cells in size. This was a key point in Lane's " The Vital Question". The impact of excessive UV light release from our cells on bacteria will affect the species of bacteria in the microbiome differently. Bacteria have another issue that photosensitizes them to UV light. They contain substantial amounts of photo-sensitive amino acids compared to our cells. *They have a lot of phenylalanine and tyrosine and those two amino acids are relatively rare in eukaryotic cell proteins by design.* The reason for the bactericidal effect of UV light upon them is because they absorb greater amounts of UV light from cells that are emitting more of this light. *The UV light causes a coagulation of the bacterial colonies and destroys the biofilms that allow them to adhere to surfaces.* Since our eukaryotic cells do not have a lot of these amino acids that absorb UV light the bacteria are preferentially destroyed. Eukaryotic enterocytes cells release more ELF-UV when their redox potential is lowered for any reason. In all disease states, eukaryotic cells release more UV light than they do in wellness states. This is why all disease states are associated with a less diverse flora in species and number. The excess ELF-UV from our cells destroys the microbiome. **Bacteria have 5 times the amount of these two amino acids of eukaryotic cells.** It is a light effect, not a food effect.

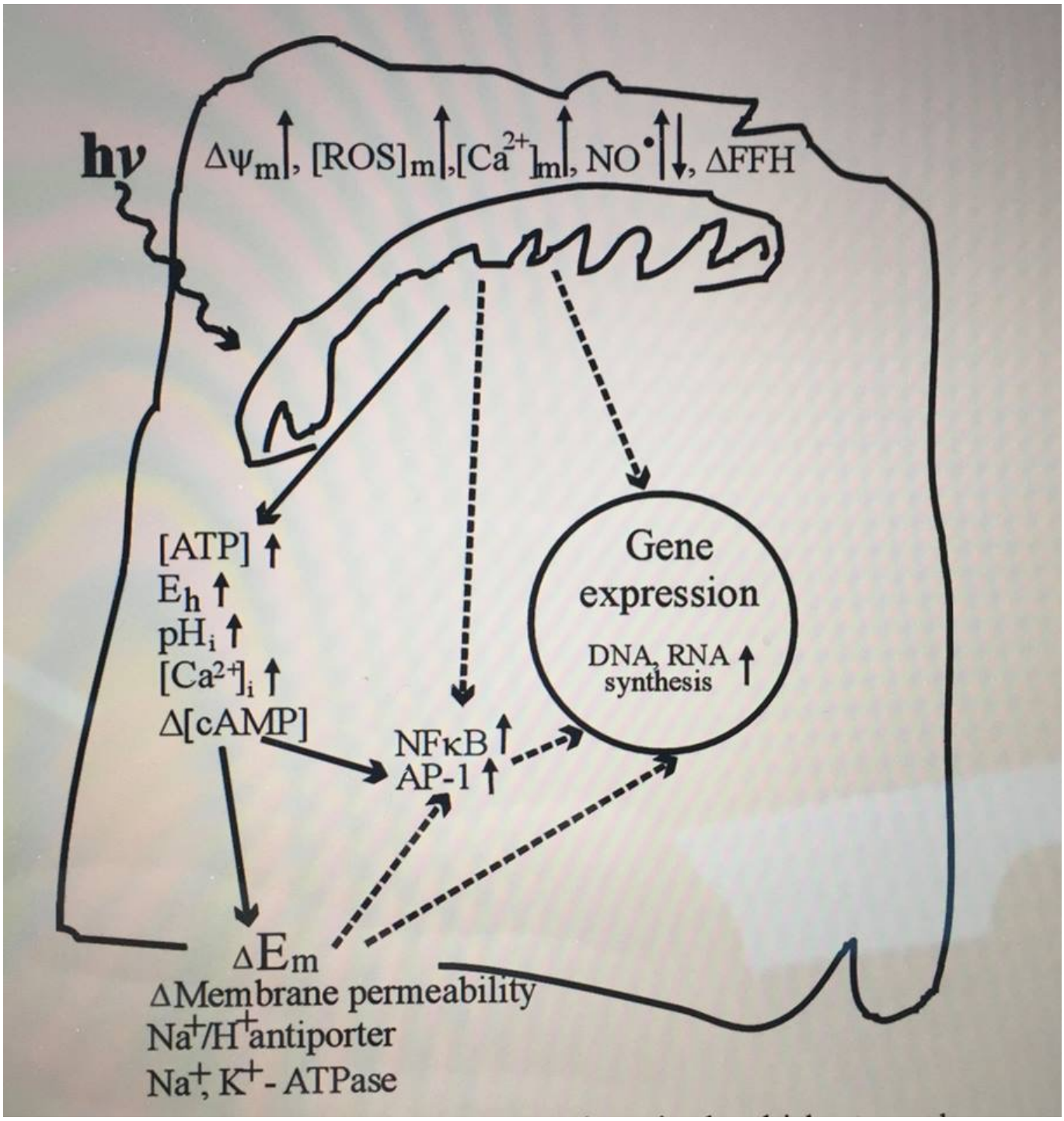
This shows you why replacing bacteria in the gut with probiotics fecal transplants fundamentally acutely works. If you do not improve the redox potential of cells by improving your environment your cells will continue to leak excessive amounts of ELF-UV and the probiotics and/or fecal transplant effects will be short-lived. If you want to keep wasting your money with the "ancestral guru's precepts" in their clinics to treat your gut disorders, by all means, do so. They know nothing about photochemistry and will keep selling you their precepts, opinions, and bullshit ideas.

EPI-ONCO-GENESIS PART DEUX

This concept remains true regardless of what you eat because light collected and retained from your surfaces controls the flow of carbon in our blueprint. With time it will be shown that the way light frequencies are collected and stored in cells and water at our surfaces determines the biochemistry of cells at deeper levels in our body. This means what your eye clock, peripheral clocks, and gut sense is the critical factors in wellness construction. **Modern medicine and ancestral health are about sustained restoration, not optimal renovation.** I see things a lot differently. Our microbiome and soil chemistry in plants works in the same fashion because both are linked to ubiquitin function which ties directly back to light and dark signals.

Light rules nitrogen and water cycles, therefore, ubiquitination rates matters deeply to the nitrogen availability, because we are partly plant-like in our design because of how our batteries are related to the generation of the DC electric current. *That's why **UV-activated auxin** (a plant hormone I mentioned in Ubi 22) has the ability to kill cancer cells in many animals.* Many people do not know about auxins, nor how they can act in animals. They link water chemistry and lack of charge separation directly to nitrogen

cycles. Without the coupling of water and nitrogen cycles, photosynthesis becomes physically impossible and the plant cannot generate a DC current for repair. As the repair mechanisms decrease, plant cell growth is also radically altered via loss of control of ubiquitination rates. Compare this loss of the DC current mechanism with animals: the DC current is critical for regeneration of T-regulator cells that make natural killer (NK)killer cells to eradicate cancer from tissues. This is where cancer begins to manifest. The immune system is crippled from making T regulator NK cells as ubiquitin rates rise. This causes excessive UV light loss from cells and a loss of free radical signaling. **The animal's cells lose its negative control feedback to stop cellular growth.** Robert O. Becker's work on the regenerative ability of the DC electric current in mammals is critically important in understanding the atomic mechanisms between Hydrogen, Oxygen, Carbon, and Nitrogen in this process. Bacteria are capable of using all of these atoms as terminal electron acceptors in their biology. Humans can use them in small discrete bursts, but we only use oxygen well as a terminal electron acceptor in our mitochondria. If these atoms atomic re-cycling is not coupled properly to light at surfaces, cancer cells are not properly marked by ubiquitin for removal and recycling and the immune cells are not able to get rid of them. This is how cancerous transitions begin.



HOW DOES CANCER UNCOUPLING BEGIN?

The uncoupling of water chemistry from nitrogen cycles is that reason because higher pH (alkaline) improves the size and the charge separation of water inside a cell to create a large DC current. Research has clearly shown the survival of cancer cells requires an elaborate system for acid resistance, but no one has linked this finding to Gerald Pollack's work on the

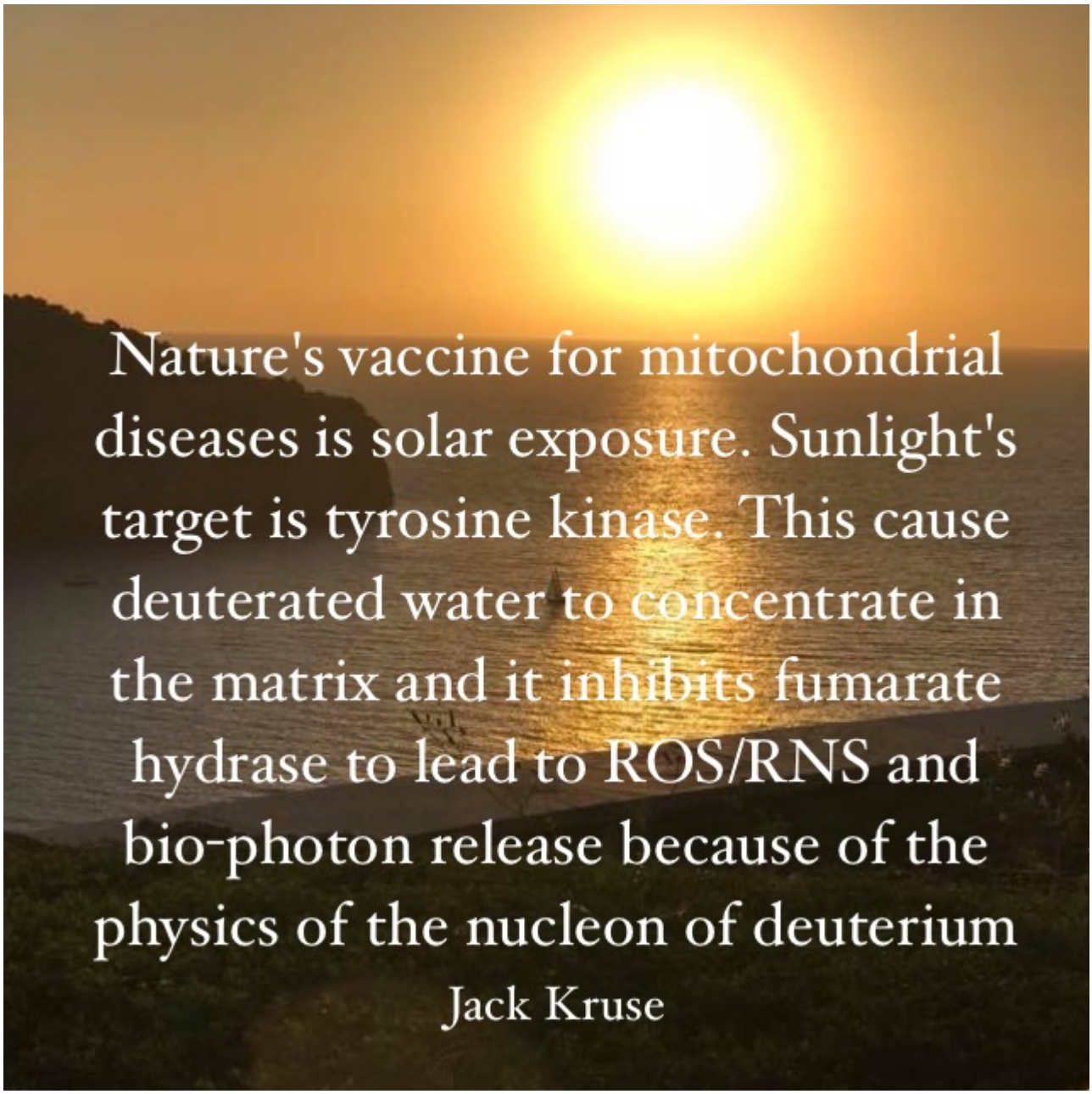
size of the exclusion zone (EZ) of water. L-glutamine (Gln) has long been known to be essential for cancer cell growth; No one really knows the reason, but it has been attributed and thought to be related to the nutritional value of Gln as carbon and nitrogen source. This is the modern precept that has been frozen into oncologist/researchers minds as a concept. I do not believe this to be true, on the basis of some recent findings in 2013 by Sinclair, and because of Gerald Pollack's work on the EZ of water. Gln provides a novel *'acid resistance'* through the release of ammonia. This "acid resistance" increases the size of the EZ of water surrounding our mitochondria and proteins. Pollack has shown us that pH of the water and the size of the EZ possible are linked stochastically. The size of the EZ correlates with how much light energy EZ water can hold. **Optical signaling carries massive amounts of energy and information. So when the EZ is destroyed it allows epi-oncogenesis to take hold of a cell's metabolism. This is fundamentally what a Warburg metabolism is.** When you see things from my perspective, just about everything we believe about disease generation explodes. All our medical concepts are really precepts because we missed how light at surfaces really works. In fact, it becomes clear that nature's concept of wellness is 100% in opposition to what we have published in our textbooks of medicine. *The Warburg metabolism **shows excess ammonia release** because of this change in optical signaling.*

HOW WE NEED TO VIEW WARBURG METABOLISM

The reason should be simple to understand now; it's done to maintain a higher pH to allow water to charge separate to make a larger EZ. A larger EZ means we would expect a higher DC current in those cells. Dr. Becker showed in his research that the DC current in a cell/tissue is directly related to the cells ability to regenerate. This is true in plants and animals. Ammonia release maybe the reason why the human liver has such an ability to regenerate. No one in medicine seems

to have an idea why the liver can do what it does, with respect to its auto-regeneration. I think I do. L-glutamine (Gln) is one of the most abundant food-borne free amino acids for a very deep reason. It increases the pH to increase the EZ in the microbiome to control its growth. Upon uptake of Gln into the microbiome, Gln is converted to L-glutamate (Glu) by the acid-activated glutaminase with concomitant release of gaseous ammonia. The free ammonia neutralizes protons, resulting in elevated intracellular pH even in acidic environments. Leptin resistance is associated with low pH environments and a lack of energy flows. Higher pH environments increase the size of the EZ of water. They also increase proton conduction and the ability to proton tunnel on enzymes. *The larger the size of the EZ in cells, the higher the DC current to regenerate NK cells in the immune system to fight cancer.*

SHOCKER TRUTH BOMB: Glucose is also increased in cancer cells, according to Warburg's experiments. It is known that glucose can slow epigenetic expression of the PER 1 and PER 2 genes that sit in front of every somatic human gene. PER 1 And PER 2 genes undergo increased expression due to excessive light exposure; while Gln is increased cancer to limit acid production, raise pH to improve the size of the EZ formed by water chemistry. Oncogenic states are increasing Gln production on purpose to raise the pH in water via enzymatic deamidation, to gain this effect. *Warburg metabolism is a cell trying to save itself from your environmental choices.* Hyperlink



BACK TO PLANTS AND THEIR WAY OF USING UV LIGHT TO CONTROL GROWTH

The auxin repressors provide a great example of one of the light-mediated pathways leading to auxin-induced changes of gene expression. Plant epigenetics is also UV light mediated by ubiquitin! This pathway involves the proteins called (TIR1) transport inhibitor response 1, (ARF) auxin response factor, (Aux/IAA) transcriptional repressors, and the ubiquitin ligase complex that is a part of the ubiquitin-proteasome protein

degradation pathway.

Ubiquitin is about the light cycles. Plants control this process differently than humans do but the process is about UV light signaling. Plants alter their geometric shape to alter light inclination by putting out branches and leaves in a spiral formation up from the trunk. Some face the sun all the time and others not so much. Nature has ingenious ways of regulating how many photons fall on the plant as a whole.

3 ways plants do it:

1. spiraling steepens angle of inclination of light decreasing solar power
2. low leaf area is a way to alter surface area to sunlight (cactus needles are their leaves),
3. reducing stomatic conductance is the third way on a leaf. This alters water chemistry at the edge of the leaf water interface in the leaf. This alters the exclusion zone physics of water for photosynthesis.

All of these things link directly to the initial interaction of light and nitrogen…….Why?

Nitrogen atoms make the key photosynthetic pigment called Rubisco. It is the key to the QED mechanism of photosynthesis. BOOM. Now you may be understanding why I recommend the books I do, to understand this very quantum process. **Photosynthesis happens at surfaces of leaves and water is the critical solvent at that surface.** Every step of photosynthesis has been worked out and is now fully quantized. If you read “Life at the Edge”, by Jim Al Khalili the process is detailed for you to understand.

Now let us scale this to animals and specifically humans. How do our cells power down UV light frequency? Nitrogen. Where is nitrogen located in us? It’s inside the porphyrin ring of RBC’s in the arterioles of your skin where light first hits your body. Porphyrins absorb all frequencies of UV light

extremely efficiently. Porphyrins are massively present in RBC's. **Could porphyrins in our red blood cells somehow lower ubiquitin rates below in some light generated fashion? YEP**

What is ubiquitin all about? The interaction of sunlight on the 4 atoms of nitrogen in porphyrins. RBC's contain porphyrins in your blood plasma. When sunlight hits your skin there is a 40% increase in blood flow to the deeper levels of your skin to absorb UV light. When you eat food is also light coded. When you eat there is 50% shunting of blood to your gut. Anyone see a similar mechanism in these two surfaces when the light in any form is presented to this surface? Everything is quantum and not zen.

VACCINES

Why is this so important to understand well? Consider how misunderstood the vaccine debate is. Both sides of that debate are fundamentally wrong, and neither is fully aware of what they both have missed. Neither understand optical signaling. When your opinion on how the details of light and nitrogen determine the biophysics of nitrogen cycling in proteins, both sides might be clueless on the etiology. Why? Proteins are biomolecules that are designed to absorb specific solar radiation frequencies that drive cell signaling. These frequencies must be absorbed and re-emitted to get accurate optical signaling. The light signal should never be reflective of proteins in cells. Do you know why aluminum is not used anywhere in biology even though it is a low atomic mass atom? **Aluminum reflects UV light.** All cells release ELF-UV. This explains why aluminum is rarely used in biologic systems, like CELLS!!!! Take a guess where scientists decided to use aluminum as an adjuvant in many cases? In vaccines! Cells are designed to optically signal and emit ELF UV light, so if a cell emits UV light, it should be INTUITIVE that putting aluminum in a cell is nothing short of a bad idea that could cause a signaling problem if the vaccine is used in a person who has a low redox potential. The anti-vaxers have a

right to be upset but their complaints on why vaccines are not good are way-way off base. Those who have a low redox potential will release more ELF-UV that will disrupt UV optical signaling in more serious fashion. Most children live in environments that cause lowered redox potentials. The schedule of modern vaccines has increased why humans redox potentials have dropped substantially because of technology. This is why we have a problem. Their concepts are their precepts and not nature's reality.

BACK TO PLANTS AND THEIR ENVIRONMENT

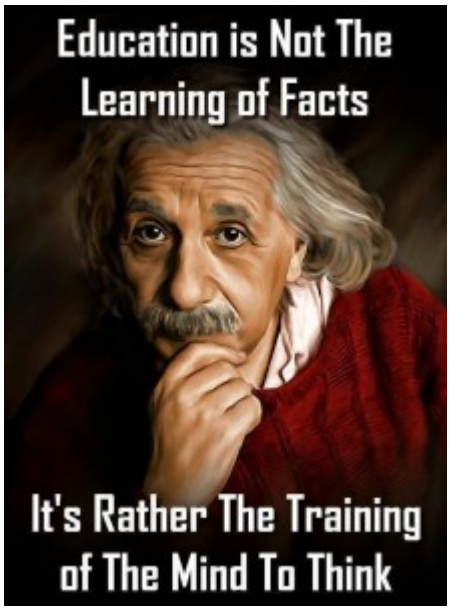
Sunlight and water is the source of energy for the cell in plants and mammals. Mammals have another way to harness the sun's power via DHA, that plants cannot utilize. In fact, plants even have hemoglobin compounds in them did you know that? Have you ever wonder why this might be a QED story?

The atmosphere is a bio-plasma for sunlight. This initial interaction of the cathode rays of the sun is the first special relationship on Earth that allows for the life we have on this planet. This is why 78% of it is filled with nitrogen. What does nitrogen do? It powers down sunlight to make sunlight usable for life below. It collimates the beam of light to focus it on the proper parts of the spectrum of light. This is how DNA codes for the proteins it does. They are optically chosen by light and water. Light and water interact at every surface in life.

What does life below do to surface sunlight on the retina, gut, skin, respiratory system? It powers the energies down so our cells can use it. How does it do this? It uses nitrogen to further slow light down by changing its frequencies inside a porphyrin ring of chlorophyll and hemoglobin.

Ubiquitin function is all about the atomic actions of nitrogen with respect to light. There are 4 nitrogens inside the flat molecule of porphyrins that hold a metal ion. Do you see a tie yet between plants and animals? NITROGEN slows light down in both plants and animals. Medicine and 'paleo bro-science'

have no clue how surface magnesium can possibly help biochemical processes on the surfaces of your skin below inside a cell because they are ignorant of how the surface chemistry of light and cells initially interact to power a cell. **There are surface chemists who have been doing this science for over 100 years.** This science is well known and well published. People do not realize that our surfaces are capable of using Einstein's photoelectric effect with bio-molecules. I do. All of it is tied to the photoelectric effect. This is why dermatologists hate the sun, and this explains why your "paleo guru's" can't fathom how Epsom salts work on skin to affect biochemistry below in deeper levels. Soon you will see that all surface chemistry begins with how light interacts or does not interact with the atomic lattice in your skin first. That interaction alone determines what is possible or impossible in the cells below. *Your current gurus have no clue that this precept of mine is nature's truth.* That is their current opinion. Your current opinion likely needs re-evaluation if you follow their advice. Advice is nothing but a precept. It is not a natural concept. Opinions for the sake of opinions can lead to destruction. "I have an opinion, therefore, I have a right to influence others" without any support from a structure of truth, is a road to straight to wellness hell or a hospital. That is the paleo solution. If you want it…….go take it.



TYING NITROGEN TO LIGHT WITH DHA

Now you might see why I been hinting at chronically low NAD^+ levels so much, in ALL human cancers. NAD^+ is all about the interaction of light on nitrogen atoms in us. When it is low it is a signal light is uncoupled from nitrogen, water, and carbon in humans. When NAD^+ falls, a cell is usually very dehydrated. Dehydration = no EZ. Ketosis raises NAD^+ but it needs DHA and water present simultaneously to generate a large DC electric current. Large DC currents = LARGE EZ's. That ketosis also requires a lot of DHA to maximizes water ability to make an EZ and generate proton flows free of the need from massive amounts of ATP. Ancestral health and medicine miss all this atomic action at surfaces. They use carbs to ramp up ATP production to offset the energy loss in water and have no idea the ramifications of continued bad thinking and chronic exercise. The scale of their understanding is myopic.

water + light = plant photosynthetic batteries all quantized.
DHA + cholesterol + melanin + water + light = human batteries all quantized.

We use DHA to extend our battery to disconnect from the Earth's magnetic field and the sun to move across the tectonic plates. Plants are fixed to it, so mammals need another part

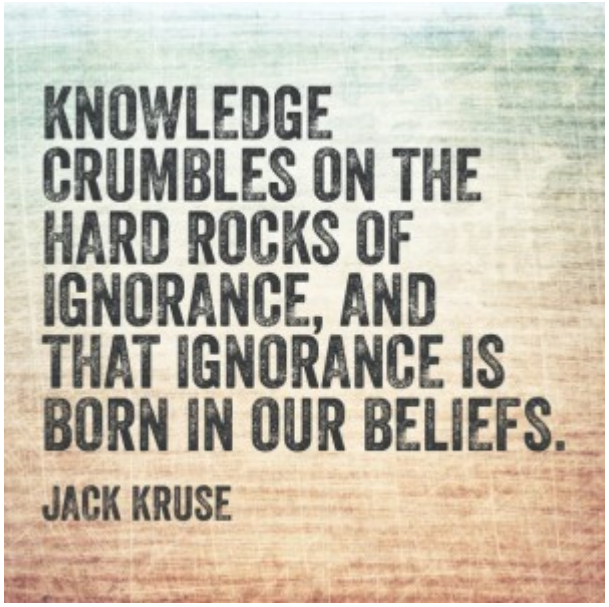
to their battery to disconnect from their power source to live the life they do.

COLD THERMOGENESIS IN PLANTS ALSO LINKS WATER AND NITROGEN

Why do alpine and arctic trees have higher leaf nitrogen content than you can find in their soil? Their ubiquitin rates are slow because of what? COLD environments they live in.

How do one limit mTOR and IGF 1 in mammals? Ubiquitin 7 blog gave you that answer too! **COLD and SUN**

COLD is not hormetic as the "*wolf*" told you.



It is a quantum effect linking water chemistry to nitrogen cycles to keep pH higher, and oxygen levels higher increasing the number of electrons in the EZ of water surrounding proteins while increasing proton conduction to facilitate enzymatic flux without needing massive amounts of ATP. Cold has an amazing effect on the hexagonal array of water and its viscosity. Viscosity slows light down so our surfaces can capture it better when our RBC's are further from our skin. This is why skin normally thins in winter too. We want to bring our RBC's closer to any source of UV light in cold environments. Both are needed to make a Rayleigh Benard convection cell in an animal cell.

AMPK is limited directly by pathways by cold environments in animals and plants.

Longevity in plants and animals is also linked by nitrogen, water chemistry, and cold exposure.

Plants who live in the cold environments also have other leaf morphology changes to deal with cold…….They have hairs!! Ancestral leaders have not told you that because they do not know it. I bet you did not know it, either. Cold plants can act like polar bears in the Arctic and wolves in the tundra. Plants and animals are very similar when you look at them at the quantum scale. How they do things differs, but why they do it is exactly the same. **Light always controls the process.**

Analogy time: leaves are to cells as photosynthesis is to mitochondrial functioning!! Today, we know every step of photosynthesis is quantized, yet no one believes yet, what I do today, that the same is true of our mitochondria and our surfaces. Ironic, but they will soon have to consider my precept because it created by nature's concepts.

SUMMARY

In your youth, your brain gets loaded with a paradigm's policy of truth. As you age, experience and wisdom based on failure build your inconvenient truth. You'll see continue to see your problems march by and multiply if you continue to do as you were taught.

Things can change if you change your ideas of the truth. Life can be different if you choose it
Most don't like to rock the boat……..so they remain civilized with respect to the paradigm.
As time elapses and failures mount, you will always wonder what might have happened if you stopped lying to yourself.

This place exists and oasis to question your youthful thoughts and ideas. It's never too late to change events in the quantum

world.
If you keep doing as you have always done, you'll create time and space of a reality where you will face the consequences of bad thinking
The delivering of this biologic proof will come directly from the ideas you allowed to infest your mind in youth.

When you get older……..and failure mounts, never again to be fooled is what your brain and heart begin to resonate with your new paradigm or reality
Our species is capable of creating alternative realities with thoughts…….but few of us use this ability.

If you don't, you'll live a life where you get to 40-50 sick and tired of being sick and tired. You'll come and visit my profession with problems describing how you feel poorly almost as if you are tongue-tied. The doctor will listen and do what they were taught in their youth. And most go with it……because they have no better ideas of truth in biology.
With serial failures……some will give up. Others will adapt better to learn the lesson well, that the paradigm of their youth was the real issue.
Some will begin to realize that the best plan of attack is to hide what you have to hide from those who you deal with daily……some will be your own family and friends.
And you might get lucky and find an oasis of new ideas, where you finally feel comfortable to tell what you have to tell so that others might learn what took you so long to put into words. Some will leap without wings…….others will become voyeurs, and others will just run away…….
Those that run away will find that their problems continue to multiply as time elapses while their time shrinks……..with diseases.
None of this will change if you continually decide to faithfully pursue the policy of truth you had preloaded in your head while you were young and ignorant of the scale that life really operates at.

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