

# ORGANIZATIONAL STRUCTURAL FAILURE 3: DARWIN WAS WRONG

## READERS SUMMARY:

We know evolution is the best guess idea we have for life, but was Darwin fundamentally wrong about what drives biologic change? Yes, he was, in my opinion. Information buried in light controls the direction of life using quantum thermodynamic principles.



Was Darwin wrong jumping in without a mechanism for natural selection or conditions of existence?

Early on in the EMF series, one of my readers, Jason, asked me if I had jumped the shark when I said that biology gave the Nobel Prize to the wrong guy in 1978. I remember messaging him on Facebook and telling him that I had a few more people to call out before I was done. Changing a paradigm calls for slaying some core beliefs. We have to attack the holiest of grails to see that evolution, the process that drives life, causes a thermodynamic problem. Looking at it from a new perspective opens the doors to many answers that have eluded our species.

Today I am going after Darwin and all his neo-darwinian kling-ons, such as Sir Richard Dawkins. If you are going to go big.....I say do it in a large way .

I have told you I admire Nick Lane and Lynn Margulis because they show that good thinking can lead to massive insights. Lynn, using the theory of endosymbiosis, really went after the Darwin theory of evolution. She made a lot of headway and was able to show many people that there were a number of cracks in the idea of natural selection. There was another scientist, however, that I believe made a bigger splash because he was closer to correct than anyone else as to why Darwin was wrong. He wrote a book in 1975 called Molecular Population Genetics and Evolution. I happened to read an old copy of it I found in a used book store, and it proved to be a fortuitous find.

Back when the book was being written, molecular biology was in its infancy, and the rules were only just being laid down as far as how things work in a cell. At the same time, evolutionary biology was still following Darwin's dogma while creating textbooks that only considered the morphology of life, and not how variation of life actually occurred. Masatoshi Nei's words were that of a maverick in this book. That gravity is what drew me in. His basic premise is that natural selection occurs because of a mutation driven evolution. He seems to have been tripped up by the data on the MHC1 gene, and he freely admitted it in his writing. It forced him to accept a neutral theory of evolution. Even though he had no proof, Masatoshi Nei should have pushed harder because he was right. The MHC 1 gene is uniquely human and has an extraordinarily high degree of polymorphism. As I

mentioned in Brain gut 2, the reason is because this gene was made of viral spare parts that humans acquired via leaky gut. The viral parts were all crafted from sunlight. The MHC1 gene is a gene created to solve a very specific thermodynamic problem that primates faced in the East African rift. This is why the MHC 1 gene has been stumping many people. They have analyzed the morphology of the chimp to human transition, tried to explain it, yet remain utterly stumped. It made total sense to me.

One of the more classic examples he used in his book was based upon the protein hemoglobin and its variation within the animal kingdom. This was a stroke of brilliance. He pointed out how some birds, for example, have a variant of hemoglobin that allows them to soar over mountains standing 25,000 feet in the air. Think about the Arctic turn or the Albatross that I wrote about in my book, the Epi-paleo Rx. Now contrast that with reptilian hemoglobin from alligators that allows them to stay underwater for a long period of time. Alligators can even hibernate under water for months in a process called brumation. This ability would seem to call for an emergent new type of hemoglobin, no? Most people think hemoglobin is just hemoglobin, and that is absolutely wrong. Within the family of hemoglobin proteins comes extreme variation that is directly linked to natural selection. The interesting point here is that these facts about hemoglobin's variability in the animal kingdom have been known for some time, but Darwin's theory of evolution cannot explain it. It can describe it with the moniker called "natural selection," but that is about all it can do.

## **QUESTIONING DARWIN**

Most people in science have a preconceived notion that natural selection must be the driving force behind evolution because Darwin said it was. It also shows that evolutionary biologists treat Darwin like a god. He is revered much like Newton was before Einstein. Dr. Nei was one of the very few scientists who decided to question 'Darwin the evolution god'. Funny thing.....he didn't find any good answers from his theory. In fact, when he tested the genetics of the variation of the modern speciation of humans, he realized Darwin was clearly wrong. He elegantly wrote that in his 1987 book called Molecular Evolutionary Genetics. Few people noticed. Dogma is a bitch to conquer.

So Dr. Nei decided to rethink his truths and innovate a new solution to a very stubborn problem. When trying to prove a "god of evolutionary" dogma wrong, you can best expect a lot of arrows in your back. He sounds like my kind of person. There's kind of an unwritten rule in evolutionary biology: you just do not criticize Darwin. Just ask Richard Dawkins or Jerry Coyne. They are two very bright neo-Darwinist who are still alive and kicking on social media. They are protector's of the dogma as it stands today.

Within biology, few people have had the veracity to go after Darwin seriously. Most people have not questioned it, and most textbooks like to proudly inform you of that fact. To me that is a sign that this is a good place to destroy a paradigm. Lynn Margulis tried to question it, and she was the only one, in my view, that put a deep dent in Darwin's theory with her theory of endosymbiosis. Dawkins has tried to use fancy words and language to fit this idea into the Darwinian framework, but, if you are honest with your science, he has done a pretty shitty job of cutting and pasting. Consider this: "Words can be meaningless if they

are used in such a way that no sharp conclusions can be drawn." These are words of the wise Dr. Feynman.

He is a biologist, not a physicist. If you're smart, you would pay attention to Feynman's insights. Dawkins reads the second law of thermodynamics left to right, not right to left. Remember, all problems in thermodynamics are a study in mass equivalence. This invokes Einstein's most famous universal law, taking us directly back to the ultimate dragon slayer of the English science community. He proved Newton wrong, and I believe his work will eventually prove Darwin wrong as well. There is nothing special about natural selection. However, there is some magic in quantum mechanics. Dawkins has no clue how to solve the thermodynamic problems that life presents. He still thinks genes are the end all be all in the equation. Genes are too atomically large to determine life on a quantum stage. That is going to change if medicine is going to move past where it is now. In my opinion, this blog contains the new epistemology of modern medicine.

Dr. Nei has some very cool ideas. He believes you should question dogma and ask why. He says question everything. You must think for yourself, without any preconceptions. In the end, that is really the foundation of scientific progress. I feel like he is my Asian brother from another mother.

## **WHAT CONTROLS US?**

Atoms are in everything that makes us, especially proteins. Every part of you is controlled by atoms right now. All atoms

are quantized. The laws of the universe scale from the quantum level to the macroscopic level. Quantum mechanics is foundational to everything in this universe. This implies that, in order to have a fundamental understanding of life, you must have a quantized molecular mechanism to prove your theory. Darwin has nothing to prove anything he wrote in the Origin of Species. He provided us with observations that correlated to morphologic change. This is correlative data, not causative data. Lots of people forget that basic fact because of guys like Huxley and Dawkins. Dr. Nei, however, has made some keen observations that should make us want a better explanation. He knows it, too. When you are dealing with atoms, you are dealing with quantum mechanics. This is an area where Dawkins will have to trick you to believe Darwin's ideas. Nothing in Darwin's theory talks about nature's basic quantum language because it was not discovered yet. Darwin gets a pass on that but Dawkins does not. Feynman famously said that if your theory does not match your experiment, no matter how elegant the theory, it is wrong. Well, I am going to show you Darwin was, in fact, wrong. I am going to use quantum mechanics to show you why. The key to understanding how evolution occurs is to understand the fundamentals of Einstein's mass equivalence.

The mass equivalence equation shows us the wide reaching impacts of failing to understand how small changes in quantum mass can create widespread changes in energy. You should consider this: Avogadro's constant is the only scaling factor we have that allows us to go between the macroscopic world to the quantum level (sub atomic scale). This allows us to link observations we make in nature directly to the mathematics of the quantum realm.

Since the beginning, we know one thing for sure. There were

quantum subatomic particles present at genesis. First and foremost, this implies that a quantum evolution began as a by-product of some type of supernova blast. ***This quantum mechanism evolved into a chemical evolution with the construction of atoms.*** From this chemical evolution emerged biochemical evolution some 3 billion years ago. No one is following these clues back to how all things began.

When you open any modern textbook on evolution, it will announce to the world that natural selection drives the biochemical evolution. The interesting thing is, as Dr. Nei has pointed out in at least three books of his that I have read, that natural selection has never been scientifically proven to be true. They only seem to harp on the greatness of natural selection. Jerry Coyne has the twitter tag that evolution is truth. I agree with him on that, but where I disagree with him is that Darwin also has "the goods" on the mechanism of how it actually works. I will give Darwin some credit, however. When you read his original works, as I have, he believed that, of the two issues driving evolution, the most important were the "conditions of existence". This was true in the *first 6 editions* of the Origin of Species, but it is a lost thought in today's world of biology. Reading any modern biology text book, you'd never get that idea. They all tout natural selection as the driver for biochemical evolution. That insight is dead wrong, too.

Darwin was right about this back in his day, but he never wrote a thing about it because he could not fathom the queerness of Lady Evolution. To do that, you needed Einstein's mass equivalence equation. The problem is that neo-Darwinians never use the conditions of existence as their starting point. Darwin himself said countless times that it was by far the most important of the two. Instead, they have focused on using natural selection because it is the only support found in the data covering the morphology Darwin

observed. This is their achilles heel. **Morphology is not a quantum mechanism, it is a set of beliefs governed by observations.** If you are an echo chamber for what you thought Darwin said, as Dawkins is, you keep hearing how evolution happens via natural selection. To the unsophisticated reader, this comes off as scientifically sound when it, in fact, is not. Morphology is to evolution theory about as useful to modern scientists as "ornithology is to birds".

Dawkins and Coyne will point out to you, however, that it is highly scientific when you compare it to guys like Deepak Chopra, who says God created everything. Here is my rub with the neo-Darwinists.....can they tell me how condition of existence or natural selection happens mechanistically? Neither has and neither can. So that means I have a duty to ask better questions.

The game I am playing with you all here is an interesting one. When you do not have a true mechanism, you have a duty to ask better questions so you can find one. As I do that, many will want to take me away in a tight straightjacket just for questioning Darwin. I feel good about raising these questions in this light because I know this is how science really works. I don't listen to guys who lecture me about how they think it works, especially when they cannot explain the molecular mechanism. Moreover, nature's imagination is a hell of a lot smarter than Darwin or Dawkins could ever be. She is never going to let either of their positions stand the test of time.

Just from common sense, quantum mechanics describes nature as absurd. QED was not around during Darwin's life, so I can give him a pass on this. I cannot afford that luxury to



Dawkins, who has made his career as Darwin's highest priest. Dawkins has tried to argue Darwin's thesis and ideas with fancy prose, but he does this without any quantum substance. And yet, quantum mechanics, when tested, fully agree with Lady Evolution. This means we must go after today's beliefs to uncover a better answer. It is buried under stones no one has picked up. When the quantum experiments have validated nature's absurd behavior, we must accept Lady Evolution as she is; bizarre and absurd. QED seems counterintuitive to evolutionary biology because she asks you to read the mass equivalence equation right to left in order to understand her. Life is fundamentally a thermodynamic problem, not an evolutionary one.  $E=mc^2$  means that  $2 \times 3 = 6$  just like  $3 \times 2 = 6$ . Few see that irony built into Einstein's mass equivalence equation. This is what makes quantum mechanics beautiful, but also a great challenge for biologists today. Dawkins never got those instructions because he has no clue how a quantum mechanism underpins biochemical evolution. That is why he has no molecular proof Darwin is correct. Lady Evolution continues to show her information to those who are willing to look deeper. This is why I am unsatisfied with biology and medicine today. No one is asking the better questions. So I decided to for myself.

The key for quantum evolution is to know how the molecules of life, namely proteins, change over time. Dr. Nei believes it is the mutation through a change in DNA. I believe that stage is too large for the quantum mechanism. Here is where I break with his ideas and go to an even smaller stage. The quantum stage has some interesting facets with regards to small changes in mass in thermodynamic systems. Avogadro's constant is our best scaling factor between macroscopic and microscopic (atomic scale) observations directly in nature. So this is where I began.

When you examine the mathematics of scaling in Avogadro's constant and in mass equivalence, some unusual things becomes crystal clear. Subatomic changes lead to wide alterations in energy because of how  $E=mc^2$  is defined.  $E=mc^2$  is the rule of the universe.

Dr. Nei was correct in believing that nucleic acids are where the evidence will be found for transformation, but you've got to have the exact mechanism down on a quantum basis to make your case that Darwin was fundamentally wrong.

### **THE QUANTUM MECHANISM**

An important step in the central dogma of modern biology (DNA encodes RNA encodes protein-RL) is the folding of the peptide to form the protein, which can then become biologically activated and contribute as a component of the "electrostatic attractor". This electrostatic attractor links to energy production or lack thereof in a cell. Energy production is linked to mitochondrial function and the exclusion zone of water in the cytosol. This mechanism can eventually lead to the phenotype change of the protein, the gene, the cell, the tissue, or the organism very quickly. Modern science already knows the first two folds are determined by DNA code itself (and gave a Noble Prize for that discovery). They, however, have no idea precisely how the last two folds occur. I believe I might. The last two folds are 100% determined by the redox state the cell finds itself in. This is why so many proteins, like melatonin, oxytocin, and serotonin, can have so many varied actions, because the redox state is dynamic and fluctuates with the charges around proteins. All proteins are hydrated. This means that the exclusion zone of water is likely a critical piece of this quantum mechanism of nature. I believe the quantum mechanism of evolution is akin to the

“condition of existence” in Darwin’s theory of evolution.

This might confuses neurobiologists and evolutionary biologists, because they do not understand the bio-physics of water nor do they understand the power and range of light. The cellular environment determines the protein’s possible tertiary and quaternary folding with precision by bringing together charged portions of the amino acids after they are made from DNA and RNA. All moving charges are affected by the wave function of electromagnetic radiation. Since light is a form of electromagnetic radiation, this mechanism has a sensitive and specific quantum controlling lever for substrates of biochemistry in cells. Every human cell has 100,000 chemical reactions occurring per second. It seems like an incredible task until you realize the one octave of the electromagnetic spectrum that falls to Earth to interact with our cells has 8,683,317,618,811,886,495,518,194,401,280,000,000 different frequencies of light between 260nm -780nm. One frequency of light can control the individual atoms in a protein to program them with redox information, and those atoms make up the amino acids that make up proteins with their triplet code, which then can be controlled by other frequencies that determine the last two folds in proteins to determine protein phenotype and ultimate physiologic function in a cell.



The 2006 NASA ST5 spacecraft antenna. This complicated shape was found by an evolutionary computer design program to create the best radiation pattern.

A protein's final bend eventually leads to their function and phenotype just like the bends in an antenna control how it works. This belies how life utilizes the conditions of existence to set the table for natural selection to begin in nature. Natural selection by itself cannot explain life. It only describes morphologic aspects of life. It is electronic induction of protein side chains by the movement of electrons and protons in the hydration shells around proteins where life begins to solve the problem the Second Law of Thermodynamics presents.

If the charges are altered along the back bone of the amino acids for any reason at all in the endoplasmic reticulum or Golgi apparatus, *proteins mis-fold* and a new emergent protein shows up as a result. ***The movement of these small subatomic particles (by addition or subtraction) leads to massive changes in potential energies of these new emergent proteins.***

Because energies are massively altered, function and phenotype can be altered as well. These changes can be dramatic when there are many subatomic particles involved in the carrying of energy without much mass. It turns out that electrons, protons, and photons are such particles. When a protein's energy is altered for any reason, we see species variation in morphology. This is how natural selection and conditions of existence merge in the new theory of quantum evolutionary biology. This is the smallest stage possible for life to have begun to organize. How did it happen? Read on.

The “conditions of existence” are the energy and the information added to the system of life called proteins. This occurs by way of atoms, amino acids, and then the proteins that make them. If the protein has some beneficial function in the zero entropy state in the cell, it is then magnetically saved in nucleic acids using the data from the last blog. This mechanism is 100% quantum in nature and is a paradigm destroyer for natural selection, neo-Darwinism and modern biology. The mechanism explains both parts of Darwin’s ideas, namely the “natural selection” and “conditions of existence” he spoke about in the Origin of Species in 1859. This means that evolution is driven by electromagnetic energies in the environment with direct quantum actions of light on electrons and protons around well hydrated proteins in a cell. Every known enzyme in life works via proton tunneling.

This theory breaks the central dogma paradigm of protein folding today. It also breaks Darwin’s theory because he never produced a mechanism for how natural selection worked. It is the giant hole in his theory that has been there for 150 years. He just knew it had to happen in some way because his theory is based upon his observations and the morphology of life. In the mid 1860’s, this was good enough “proof for science”. Today it is not, but science ignores the hole in this theory. Today we have new emergent diseases in the 21<sup>st</sup> century that show up out of the clear blue sky that we can not explain using his theory. This means we must look at the situation in a different way and ask better questions to explain what reality presents us today. That is what this blog is all about. Today, all neuro degenerative diseases stem from protein folding abnormalities in the brain. Today, we have diseases caused by proteins called prions. No one has explained how prion disease manifest mechanistically to my

knowledge. Lewy bodies, beta amyloid, synaptophysin, Kuru, JCD.....etc. Modern neurobiology still has no clue why this occurs. I think I do.

Most people buy beliefs and not the real natural benefits because they are blinded by their own biases. In the 1860's, Darwin had Huxley protecting him from the skeptics of science. Today, Darwin's Huxley is now Dawkins and neo-Darwinist of modern biology. Dawkins has been immensely successful in selling neo-Darwinism. It turns out that parsimony is not in the language of Lady Evolution. This is why Occam's razor "beliefs" persist in biology. Occam's razor is what most believe to be true, but it is not always the way nature works.....when you think something sounds "kooky".....it might be found that "kooky" is parsimonious after all. This is why it took so long for the photoelectric effect, theory of relativity, and the 30 step process of photosynthesis, the fact light can become matter, all to be fully accepted by science. They all break Occam's razor rule of parsimony, yet all have been experimentally found to be true in our universe. They are all based on quantum mechanics, too.

Life and health are not practical or parsimonious. They are quantum. It is time for you to readjust your ideas of how life evolves, too.

Modern dermatology tells us all sunlight is bad for us. In this blog, I am telling you sunlight is what bonds electrons and protons to drive evolutionary change at a very fundamental level. So when you understand this basic issue, consider what the sun is really doing to you. It is altering proteins in you that have already been altered by another opposing physical force and has left you with a new emergent

phenotype. The world is facing a pandemic in Vitamin D these days. When Vitamin D levels are low, you will know that it means only two things when you understand the thermodynamic issue. It means the frequencies of sunlight might have changed from the sun, or the detection system for the spectrum of light is somehow altered in us in a very counterintuitive non linear fashion. Since the frequency of the sun has been a constant on this planet for 4.5 billion years, we are left with the solution to the thermodynamic equation. Might the spectral density of sunlight and cosmic radiation be linked in some way that affect life below on Earth that changes cells? It is the change in our semiconductors to **collect certain subatomic particles** that have caused this pandemic, not the sun rays as the dermatologist want us to believe? When you have eliminated the impossible, whatever is left becomes your new reality.

An extreme example of this emergent phenomena is the function of chaperone proteins, which provide an environment favoring a specific folding. Methylation and acetylation programs are run by chaperone proteins. Therefore, we have the possibility that a single amino acid sequence, such as a peptide, dictated by a gene coding sequence, can fold into more than one protein and, therefore, perform more than one biological activity. This is precisely how virus's and prions act in biology as well. They are capable of altering cell phenotype and function directly. It is also how autoimmune antibodies cause havoc in a cell. Molecular mimicry is a morphologic term for protein emergence after electronic induction by subatomic particles.

I'd also point out this gem: If genes matter so much why is it that most, not all, circadian gene regulation is post transcriptional? This is a huge problem for neo-Darwinians.

Why? A post transcriptional protein results in a non functional protein for life. It has to have all four bends to work properly. So how could life's stage be gene based?

How can you say genes are primordial when all they do is create the first two bends in the final conformations a protein has? Think about it for a minute. If we just use the genetic code, would any of the proteins actually work as they do? The answer is a resounding no. Neo-darwinians just gulped. It gets worse for them. The 2012 publication Transcriptional Architecture and Chromatin Landscape of the Core Circadian Clock in Mammals showed that the circadian transcriptional cycle of the circadian clock consists of three distinct phases: a poised state, a coordinated de novo transcriptional activation state, and a repressed state. Only 22% of messenger RNA (mRNA) cycling genes are driven by de novo transcription, suggesting that both transcriptional and post-transcriptional mechanisms underlie the mammalian circadian clock. This means life is regulated by the final two protein bends after the nucleic code is read. There is no way life happens in the stage of a gene. They also found that circadian modulation of RNAPII recruitment and chromatin remodeling occurs on a genome-wide scale far greater than that seen previously by gene expression profiling. Everything is based on epigenetics of protein modification.

Now I'd like you to think about sex hormone binding globulin (SHBG), lysyl oxidase, melatonin, oxytocin, and serotonin as classic examples of proteins that have many paradoxical effects we can't explain. When they emerge after they have been coded by nucleic acids, they do not work as we observe. They have to undergo post translational modifications called tertiary and quaternary bends to become active. This means proper protein bending is critical for proper cellular



functioning. Proteins get the first two bends' energy free by our nucleic acid code and the last two times by our redox signaling. In fact, the protein that cross links collagen, lysyl oxidase, still has an unknown molecular formula because of how it morphs to act under the power of the redox state of a cell. Here you can see the quantum mechanism in action. Electrons added to lysyl oxidase copper ions gain the reducing power to cross link collagen. The very act of cross linking collagen allows collagen to become piezoelectric. When collagen acquires this new emergent property, it can then alter the ionization of the electrons in copper's D shell found in lysyl oxidase or in collagen types. When electrons are lost, lysyl oxidase no longer works and collagen loses its cross links and its piezoelectric sense because it can no longer move electrons on the backbone of collagen's proteins. When the piezoelectric current is lost or broken, your ligaments, meniscus, or tendons become susceptible to tearing, shearing, or damage because the collagen cytoarchitecture controls your cells' mass and their mitochondrial masses directly. Here you see where mass equivalence exerts its biochemical reaction using the quantum mechanism. **Here you can see that the addition or loss of small subatomic particles leads to massive changes in energy of the system.** When mass increases due to electron loss, the result is poor collagen cross linking. This is precisely how I tore my knee meniscus a decade ago.

It should be no surprise to anyone that lysyl oxidase uses copper as a catalyst. Why? It has a lot of electrons in its D shell. These electrons are static and not active unless other photons or electrons can excite, move, or remove them. Conversely, copper can lose these electrons if too many protons are around as well. This is why all inflammatory cascade proteins carry positive charges. When copper's electrons are moved from lysyl oxidase to the single chains of collagen made from the amino acids from DNA, the DC current electrifies the protein backbone. Electrons induce the

formation of the triple helix of collagen from these three single chains, which brings the piezoelectric current in collagen to its mature form. The continued flow of this DC electron current induces the water hydration shell that surrounds collagen. This electronic induction maximizes collagen's water binding sites on its triple helix simultaneously without any use of exogenous energy. It uses the electric power in the quanta of the electron to make collagen hydrophilic so water binds to it maximally. It does this by making collagen more negatively charged so it gets along better with water. This allows water to naturally bind to collagen everywhere it is found in a cell. When water meets collagen, its charge naturally separates, as shown by Gerald Pollack's recent work. This natural charge separation of water occurs with no energy used. This is what a quantum zero entropy nano machine does as it organizes thermodynamically, not biochemically. None of these mechanisms need biochemical instructions. They use the quantum action of sub atomic particles with water and hydrophilic atoms to gain this effect. ***Here you can see how quantum evolutionary trajectory alters atomic chemistry to lead to biochemical evolution. This is how evolution works mechanistically.***

Any time you see this quantum mechanism in biology (AUGER EFFECT), what else should you expect to see adjacent to the non functional multifunctional proteins? You see transition metals that have a lot of D shell electrons. Why is that? D shell electrons can be used to move the *negative electron charges* to the "proper places" in DNA/ RNA, which allows them to be read and transcribed properly. This also happens in all proteins to get the desired functional effect based upon the electromagnetic signals from the environment. What controls these movements? Recall that electrons and protons are charged particles. The only force in nature that controls charged particles is the electromagnetic force in the known universe. Water surrounds nucleic acids and all proteins in

all life forms. This is where protons (hydronium ion layer next to EZ) come from to control the positive charge in a cell. Pollack has definitively shown that when water is next to any hydrophilic substance, its charges separate into protons and hydroxyl groups. Not all the protons in water are homogenous either. This means they move differently for a reason. It can then build an exclusion zone (EZ) interface around a protein. Collagen is hydrophilic. The negative and positive charges then become plentiful around the main actors in life's play on the surface of all proteins. The electromagnetic force is the conductor that makes them play life's music with the *small additions or subtractions of quanta energies/information to proteins*. It is where form meets ultimate function. This is why we still do not know the ultimate molecular formula of lysyl oxidase or SHBG. They both are ultimate "chameleon chaperone proteins" that are able to alter their action by the addition or subtraction of small subatomic particles to their backbone, depending upon what the redox state calls for. SHBG does this for sex hormone binding in both sexes, and lysyl oxidase does it for all types of different collagens in our tissues. You might be shocked to find out that Ling showed us 60 years ago that ATP is an electron withdrawing protein. That means it helps move the current of electrons. That is what it really does in life.

Remember, the chaperone proteins that control nucleic acid translation are methylated and acetylated proteins that also carry the ability to change their charge with the addition or subtraction of subatomic particles. This is the quantum mechanism in action. They are run by chaperone proteins that work just like lysyl oxidase or SHBG.

All of this leads to an inconvenient truth for Darwin's theory. When you really understand the core of this blog, you'll begin to realize the basic idea that electronic induction changes how biochemistry can look and operate when

the redox potential is altered. When a protein's ultimate function is controlled by a small quanta of energy and information, "new proteins can be formed" by just altering their electrostatic charges to influence protein folding.

Anytime new electrostatic binding is altered by small quanta of energy, a newly created protein forms that has new "emergent properties". Some of these new emergent proteins *will drive evolution forward* as they continue to act with the coexistent electromagnetic force over time if it *raises* the redox potential within a cell. This would limit the cell's size and mass to make it *more energy efficient*. This is a favorable "condition of existence" for the cell, because it lowers entropy and limits molecular chaos. Emergent proteins will cause "neolithic disease" when these new proteins are not favorable to the size or mass ratio of a cell because it will increase molecular chaos and swelling to raise entropy. This is measured by finding a chronic lower redox potential around these "emergent proteins". If these badly altered proteins create too much entropy, mass will increase in the mitochondria and the cell will be extinguished. This is where we are today with modern neuro-degenerative diseases.

If these new proteins lowers entropy, it will stimulate more energy production because of the relationship of mass equivalence for the cell, and this will further evolve new complex traits because more electrons will be liberated to the system. Electrons build complexity. So how do small quanta changes in mass equate to mitochondrial function? When the redox potential is lowered, a cell swells, sending signal to the nucleus to activate apoptosis and/or autophagy programs. This is how quantum evolution acts to alter evolutionary trajectory at the protein level. The amount of time a protein sticks around inside a cell is 100% tied to its energy profile. This is a system controlled by the *ubiquination pathways*. If the redox potential stays optimized around protein, they *will not* be marked down for replacement. If the converse is true, proteins *will be* marked for early removal

and it will cost us more energy and electrons. The change program that controls this process is autophagy. The more order and energy a protein provides to a cell, the more overt structural integrity the cell gains to control its mass. The more favorable this protein becomes to mass equivalence, the more likely it is that the protein becomes a candidate to be magnetically coded and saved in nucleic acids as a microfiche for future offspring. I talked about this magnetic process in [this hyperlink](#).

In physics, energy is power and power comes in many different forms. The quantum mechanism provides proteins with small quanta of energy that can lead to massive alterations in function. This is where evolution gets its power to change and adapt. I think a power to do something is of significant value in biology now. Whether the result is a good thing or a bad thing depends on how the power is used, but the power itself has a huge value. In biology, power is 100% tied to the redox potential inside the cell and within its membranes. It directs what powers you can manifest within your proteins, and, as such, what kind of life you'll live. Small additions or subtractions of quanta from subatomic particles direct the chemical evolution of proteins. This chemical evolution become your biochemical reality. It adapts every second the environment changes.

This idea is foundational to all life on this planet and it also belies why many proteins are conserved across many species. It is because they have sensitive and special quantum abilities to capture the information and energy in electrons and protons. The electromagnetic force that is released by a star back into space controls these charged particles while also bonding all atoms everywhere in the known universe. Light is the 'glue' for all matter. These physical

facts underlie all biological functions everywhere on this planet. Moreover, when you see this quantum mechanism, you begin to realize where evolution came from.

*It is a physical process based in the quantum world of how the electromagnetic force controls charged particles that are quantized with energy and information to act upon proteins.* This allows “emergent physics” to develop in new proteins, which can limit mass and generate more energy to drive complexity. This quantum mechanism can move backward and forward because the laws of physics allow for it. Some drive evolution while others result in new diseases that show up out of thin air. In this way, many of yesterdays diseases become solutions under the physical laws of nature. **Evolution is a physical quantized process, not a biological one.** This scale I am describing is the Planck scale. The Planck scale defines the meeting point of gravity, quantum mechanics, time and space. Currently, we don't know much about this interaction, because gravity is so feeble a force that its influence on things as small as quantum systems is small. These basic patterns are deterministic. They underpin quantum mechanics.

Now you can begin to see how life organized in a cell. Quantum evolution leads to a chemical evolution that dictates how biochemical evolution can proceed. It is extremely adaptable because of how the smallest subatomic particles add or subtract information and energy to what is already built. The cell is designed to “catch” information and energy from electrons, protons, and the electromagnetic forces in nature. Its goal is to then create order from the chaos of this recipe. To catch these particles, you have to have cells to be designed to be ready to read and adapt to the energy and information they contain. Cells have to be ready to react, and this is why life is metastable. To create this type of system, it would need to be designed in a metastable fashion in order to read and react to all environmental possibilities

the universe could throw at it. Metastability is a measure of the capability to read and react quickly as changes occur in the photoelectric effect, water chemistry, and the magnetic field. All three are primordial for life on Earth. If you are missing one element, life cannot exist. Just look at Mars as proof of this concept. The ability to react to all possibilities can also be called a quantum superposition state.

Many of the steps do not require energy initially because they happen naturally based upon Maxwell's laws of electromagnetism, Einstein's photoelectric effect, water chemistry, and the native magnetic field effects on charged particles in nature. Many of the basic processes that are present in a cell self assemble by nature's laws under the bonding power of the sunlight. Sunlight bonds and separates atoms everywhere in the universe together. This includes our bodies as well.

The energies in sunlight is what drives the change in proteins everywhere in the universe and constantly provides new proteins and molecules with emergent properties. This was the fundamental detail I taught you in EMF 2. It does this to water molecules, too. Gerald Pollack's latest book, the Fourth Phase of Water, shows that in detail with experimental detail.

When something is found to *profoundly control* the entropy in a thermodynamic system, it is conserved in our genetic code because these new emergent proteins are useful in collecting information and energy from the environment. **In this way, the system can continue to innovate itself without any energy being added into the recipe of life.** The electromagnetic spectrum, namely sunlight, is the driver of the entire process

of evolution. Sunlight alters atoms' ionization potentials in atoms to cause their attraction or repelling on a protein's backbone. This attraction or repelling is how DNA is read and transcribed based upon the environmental signals it receives in the nucleus. The main function of the electromagnetic force is to bind or separate all matter in the universe. There is no arguing this point with a neo-Darwinian, because it is fundamental everywhere in the universe.

**In this way, one begins to realize that cells, tissues, and organisms are quantized dissipative systems.** This insight, for an engineer or physicist, is quite logical. For a biologist, it is quite foreign. Since biology and physics rarely overlap in our education system, these innovative ideas have remained unexplored by biology and medicine. To understand this process requires a knowledge of both sciences.

When you know both, a new, innovative idea presents itself. That is the story in this blog for the last 3 years. I've been thinking about these innovations for ten years. We know that the world is built on symmetry in time and in most other respects one can imagine. This premise presents us with an innovative idea. What is the purpose of a cell in a totally symmetric universe?

### **WHAT IS THE PURPOSE OF A QUANTUM CELL?**

This all implies that a cell's main purpose, from an evolutionary perspective, is to **break the natural symmetry it finds in nature and its current environment.** This is a fundamental thermodynamic question that is answered in the way life orders the construction of a cell. It does this by constantly collecting electrons and protons that carry bits and pieces of the whole. In the beginning of the universe, all energies had to be one. A single point. Think of this example like holding a ceramic vase in your hand that you will eventually drop. During the big bang, this vase was dropped



and shattered into trillions of pieces. Those pieces of the vase are all the sub atomic particles in the current universe. The particles that carry charge have most of the information and energy that was in the vase before it was dropped. In other words, they tell us the most about the vase before it broke. So this is why a cell would organize to collect these particles in nature. It has to collect these particles to "know what the vase was like before it fell." The process of collecting the particles is the basis of quantum evolution. As you collect these particles, you are adding energy and information back to the system. These charged particles all have these abilities. When a cell does this, you are able to reduce entropy in the system as time goes forward. In other words, the system is constantly receiving an education from Mother Nature subatomic particles.

When you don't have all the pieces of the vase, you can't possibly reconstruct the vase as it was. You cannot really ever truly know the vase because life does not organize around every single one of the quantum particles we know. For example, our cells are not designed to collect neutrinos. They pass right through most matter without ever being felt or perceived. Lady Evolution catches and controls sub atomic particles using an infinitely powerful force in nature. The electromagnetic force is the only force in nature that controls electrons and protons. I wrote about that in EE 11 . When you only collect electrons and protons, you can figure out part of the story of what the vase might look like. This is because the vase is made up of all the subatomic particles. So the cell would need to have the ability to "catch" electrons and protons. The catcher's mit is the proteins it made from the sub atomic elements that have been present on Earth since the beginning.

## **HOW DID QUANTUM EVOLUTION BEGIN AT GENESIS?**

Light, electrons, and protons were all present at the beginning. **Light acted as the glue that bound a single electron and proton to form hydrogen.** From here, two hydrogens were bound by light to form helium. From here, more similar and dissimilar atoms were bounded by light to form all the other elements present on the periodic table. This is how we got water too. This mechanism works in this fashion until we got to iron on the periodic table. Any other atom with a larger atomic mass than iron had to come from the nuclear explosion of a star. When these atoms became available, the quantum mechanism continued to work to bind them together to form more atoms if the energy levels were high enough. This energy is only possible in a star's core for atoms bigger than iron. This mechanism has filled out the entire periodic table. The result of all these myriad interactions was the emergence of small organic proteins. I call these proteins Maxwell demons. They all use solid state physics to work by electronic induction and semiconduction. The Maxwell demons demonstrate their ability to use the energy and information of subatomic particles by conserving this energy and information in our nucleic acids using a magnetic moment mechanism. I covered that in this blog. A "good catcher" of these subatomic particles was needed to carry this vital information and energy at evolution's beginning. This is why cells are organized to catch electrons and protons, not neutrinos or neutrons.

In the beginning, ***there was a quantum joining of an electron and proton by light that led to a chemical evolution. Under further direction of this quantum joining force, proteins were also made from this mechanism.*** They emerged on Earth and became what we call proteins that drive biochemically evolution some 3 billion years ago on our planet. Cells were formed around this quantum fractal progression as the protein

parts evolved from the fractal joining of self similar parts recently made.

**You must be wondering how a cell can achieve this task?**

To break symmetry, you need a molecule that is perfect in every dimension. Since a cell is designed to break symmetry, we should look for the number one molecule found in all life by volume and mass. Guess what that molecule is? **WATER**. It makes up 98% of molecules in a cell. Water also happens to surround all proteins in cells. That relationship should begin to make a lot of sense now. Modern biologists, who believe the same things Darwin and Dawkins believe, homogenize cells and dehydrate them to study the proteins made by nucleic acids. They remove water from cells to study biochemistry.

This is fundamentally why they have no clue how life is organized. This is because they assume that life organizes around nucleic acids at the smallest scale in cell biology. Nothing can be further from the reality of how a cell works.

This is why they are in the dark. They don't understand the quantized fundamentals. Life organizes at an even smaller scale, a truly quantum scale of electrons and protons. These two particles, under the direct control of the electromagnetic force, bind or repel matter. You are made of matter. Proteins are the basic unit of what the matter is. This is where evolution starts and ends within each one of us. In order to see the true effects of evolution, we need to stop looking at morphologic changes in bones and start looking at proteins in 3-D molecular simulations. The photoelectric effect carries the power to bind all charged particles in the universe. This is where quantum evolution began. Gene mutation is not the key to speciation or natural selection.

The transition from chimp to human happened rapidly in the East African Rift Zone. This fact is based upon the data contained in multiple branches of science we have today. Humans appear to be an emergent species of primates. It happened much more quickly than most of the "experts" guessed in the last century. By analyzing modern genomic arrays, we found that only 7% of our genes have been altered in the last 20,000 years. This data has never supported Dawkins, but he uses fancy language to ram "his beliefs" down everybody's throat. When you understand this quantum mechanism, it is easy to see how the universal laws mechanistically sculpt and change life.

You might find this fact more amazing. Only 3% of human DNA contains the instructions for building cells and tissues. 97% of our DNA is not active in building anything normally. Ponder that fact for a minute. Now ask yourself why evolution would collect and carry that much DNA if it were really junk. The reason she does this is simple. This 'junk DNA' is how evolution has quickly adapted to changes in the environment. These are the spare parts she has created to use when the photoelectric effect, water chemistry, or native magnetic field throw her a curve ball.

If you match up DNA genomes from these animals, you can see that, ever since the K-T event, there has been a simultaneous increase in the amount of "junk DNA" in their genomes. This junk is called retrotransposons. Humans have the most of this junk in comparison to all other mammals. This is just another fact that supports my idea that evolution decided to speed up DNA expression in all the animals who survived this event. These reserved proteins must have given our ancestors the ability to innovate the altered environmental signals they faced 67 million years ago, leading them to survival. After

all, we are here today, aren't we? Junk DNA is how this task was accomplished in the primate and homo trees of life. The more junk DNA you have, the more capable you are of adapting to a changing environment. It also allows evolutionary speed to increase as time elapses. These power laws of mathematics, however, are also subject to the mass equivalence relationships because they are tied to the Second Law of Thermodynamics. All of this is quantized in evolutionary biology.

When I was in medical school, scientists labeled this DNA as junk because they had no idea this was fundamentally a thermodynamic problem. Since then, it's name has changed a few times. First it was called non-coding DNA, and now it is called retrotransposons. They now are now realizing that this "junk" is really important to all mammalian evolution. In fact, it is the key to understanding how we evolved from Great Apes so fast. When you begin to see the exertion of these natural physical laws by quantum mechanics, you can embrace the paradoxical results that evolutionary biology stumbles upon. In fact, some things that initially look like a genetic or epigenetic disease, such as a viral/prion infection, might also serve as an essential method of communication when creating a cure or, conversely, an extinction. The key pathway is determined by the resultant redox potential of that 'new emergent' protein inside the cell. If it causes an increase of the redox potential, it decreases entropy in the cell, and makes it an excellent candidate for magnetic banking in our DNA. Jumping genes are exactly what those things are. They are found in many life forms, but the DNA of humans and apes is loaded with them for a really good reason.

We now know that telomere recombination is also tied to the oxidation of guanine in DNA. Telomeres are critical to life. They help determine the **direction of time in the Maxwell demon's proteins everywhere in our body.**

Humans, however, have a lot more of these new emergent proteins in their nucleic acids in comparison to primates. Stop and ask yourself why. Knowing that we evolved in the East African rift over the junction of three adjacent tectonic plates during an epoch that included dramatic climate change, would you now like to venture a guess?

This, to me, was a lot more interesting than bone data or genetic data that modern evolutionary biologists still cling to. Jumping genes know where to jump based upon the magnetic moments and footprints in nucleic acids. This, too, is controlled with solid state physics on a quantum level by the movement of electrons and protons within water hydration shells on the nucleic acids. All nucleic acids emit low electromagnetic signals and they need a hydration shell to work. They also need electronic induction by electrons or photons. This is because they are just larger pieces of protein in polymer form. Many scientists have shown this in real experiments. This trumps the neo-Darwinist 'fancy words' and their more creative beliefs.

Today, genetic and molecular biologists are removing water from cells, the most critical piece of the quantum puzzle, because the prevailing beliefs are based upon the genetic determinism of the neo-Darwinists. It is no wonder we remain in the dark ages of cell biology. This is why most of the newly emergent diseases have no known cures.

You begin to see why life organizes around a cell that is loaded, at its core, with liquid crystalline semiconductors. Semiconductors can hold, and carefully move, electrons and

protons under the direction of the electromagnetic force. They are partially constructed of water, which is the best way to break symmetry in a cell. This is thermodynamic heaven for a cell trying to dance around the Second Law of Thermodynamics.

## **EVOLUTION'S TRUE GENESIS: QUANTUM ACTION OF MATTER**

Matter is what we are made of. The first step in evolution was the joining of one electron and one proton by the electromagnetic force, which is the only force in physics that can bind charged particles. Both of these particles happen to be naturally charged. This means they are primordial. This should not be controversial. It means we did not need organic matter at the beginning. Water was also present at the beginning of life on Earth. Sunlight was present at the beginning, too. The Sun is the electromagnetic force that was originally capable of binding or separating the electrons and protons together on this planet.

When this happened, the result was hydrogen gas (element one on the periodic table of elements). Hydrogen is a new form of matter formed on Earth by the unison of these quantum forces.

These particles are both loaded with energy and information. This is why all organic material has hydrogen in it. As the electromagnetic force continued to bind things, it took hydrogen and caused it to bind to other hydrogen atoms. This is where the **fractal nature** of matter began. Fractal symmetry is self similar in design. Hydrogen and hydrogen = helium. Helium brings about an emergent property that is completely different than what the two hydrogen atoms had intrinsically. Two hydrogens "evolved" and emerged to become Helium. This process continued until we got to Iron. As these elements continued to evolve from self similar joining, they began to

join with dissimilar elements under the power of sunlight. This is where water came from. Hydrogen met oxygen.

Now it's time for a lesson in mass equivalence. Stars that are colder are more organized and, therefore, release less energy back to the environment as light. This is what a red giant star does naturally by quantum laws. Red giants can remain the same for trillions of years because they are very stable in their mass energy equivalence. Did you know that water absorbs photons best in the low photon red band?

Carefully consider the red giant situation. It is precisely the same set of circumstances that life uses for its quantum blue print in a cell. In fact, when life was not as complex as it currently is, life was immortal in our oceans. Sound radical? It's not. The two domains of life that dominated the Earth for 2.5 billion years, Archea and prokaryotes, can live immortally. Don't believe that? Look it up.

These two domains of life also only use protons as their main subatomic particle energy source. Their by-product was oxygen gas. Look up the story about a hydra lifespan. Every cell in their body is a stem cell. All stem cells have telomerase.

Telomerase is an enzyme that allows life to do what a red giant can do. It is how the macrocosm of a star's existence scales to the microcosm of a cell in the original two domains of life. They can do what specialized cells inside you can not do now. They are immortal. The only type of cell in humans that is immortal is our germ cell lines. They are loaded with a protein called telomerase.

Today it is clearly evident that telomerase can be synthesized by nearly all organisms with nucleated cells as well. But for telomerase to be made in our somatic cells mitochondrial signaling must be perfect thermodynamically. The precise makeup of the enzyme can differ from species to species, but each version possesses a species-specific RNA template for



building telomeric repeats. The importance of telomerase in many single-cell organisms is now indisputable. Such organisms are immortal, in that, barring accidents or geneticists meddling in their lives, they can divide indefinitely. Eukaryotes do not have this innate ability in their somatic cells. They only retain them in the germ lines. Why?

The somatic cells stopped using protons to collect energy and began to collect electrons to build complexity. Complexity was the evolutionary trajectory life chose over immortality.

Today, quantum evolution, is trying to re create immortality they once had. The program that they are currently perfecting to do this is autophagy. The more complex you are, the harder immortality is to maintain because it requires a constant source of electrons to maintain. This is built into Einstein's mass equivalence equation. It is a thermodynamic truism. Biology and medicine just do not see the implication of the quantum mechanism.

I chuckle because Lynn Margulis was the first person to point out why endosymbiosis fundamentally wrecks Darwin and Dawkins ideas, she just never uncovered the quantum mechanism behind why it happened. It was all about the electron. Once you can collect an electron you can use it to also collect a photon.

A photon is the key for life because it is a boson that has no mass but carries energy to drive complexity in cells. An electron can absorb a photon, then re-emit it afterwards back into the system to be used as an energy source. An electron and anti-electron neutrino can also become a Z boson but that does not appear to be how life organized.

Life uses the quantum blue print seen in a red giant to form her stem cell line. Mitochondria are prokaryotes at heart.

This is what endosymbiosis has shown us. This means that mitochondria also have an immortal potential. They do, but a mitochondria has been modified under the direction of the quantum mechanism to use electrons to reduce oxygen in eukaryotes. That key is in their only two change programs,

autophagy and apoptosis. ***Autophagy can go on indefinitely if the redox potential stays high.*** The redox potential is 100% tied to electron collection.

Autophagy constantly recycles and refurbishes mitochondria to work well and give us longevity. This implies that the same principles in a red giant are built within us, but keeping this flow up is harder for us than it is for a red giant. The key to mitochondria constantly recreating themselves is maintenance of their redox potential. The redox potential is 100% tied to how many electrons are delivered to the inner mitochondrial membrane. This is why mitochondria input is called electron chain transport.

This is why Feynman famously said, "there is nothing in biology yet found that indicates the inevitability of death." He was dead right. Death can be avoided if we somehow evolve the ability to maintain our redox potential. Conversely, when we look at stars, when we examine the larger blue or white giant stars in our universe, it can be seen that, because of their larger masses, they will have to release more energy into the universe in the form of light. What is the result? They die quickly because it returns more heat and light back to the environment. The same thing happens in a person with obesity. They are losing more energy to their environments than they can store in their tissues.

The funny thing is that mitochondria also live and die based upon their masses too. The change programs autophagy and apoptosis are what controls mitochondrial swelling and mass. The loss of the nearly massless energy, namely the electron leads to increase in mass. I told you weight gain is all because of a loss of electrons in EMF2. This makes the phrase 'weight gain' an oxymoron at its quantum core. You get fat because you lose electrons and have an overload of protons in your cell water. This process causes you to lose a ton of

energy. Too many protons means we become poor at capturing electrons. Today, biology thinks obesity is an excess energy state. The reality is exactly the opposite. Here is how an understanding of quantum mechanics shows you her counterintuitive nature.

Mitochondria use electron losses to signal things to a cell over its collagen cytoarchitecture network. A one-electron reduction of oxygen forms superoxide ( $O_2^-$ ), a two-electron reduction forms hydrogen peroxide ( $H_2O_2$ ), and a three-electron reduction forms the hydroxyl radical ( $-OH$ ). Today, the dominant paradigm in the process of aging is that antioxidants decrease aging. This paradigm vilifies superoxide as the card carrying cause of disease and aging. There is a big problem, however. Superoxide is associated with health and longevity. Why? Superoxide acts not as a destructive molecule, but as a protective signal in our bodies, turning up the expression of genes that help to repair cellular damage during autophagy.

Here we can see the prokaryote lineage in our mitochondrial change programs to keep us alive. This process clears out misfolded proteins that occur when the redox potential is poor. *It is quantum evolution's do-over program when it creates a new protein that does nothing to lower entropy within us. **Most of today's disease result because the process of autophagy is not operating well.***

A rise in hydroxyl free radicals is called a Fenton reaction. Many other ROS species can be derived from superoxide and hydrogen peroxide. Generally, the worse the environmental insult the more hydroxyl free radicals one attains. When this occurs, the mitochondria swell badly. It turns out, non-native EMF causes these Fenton reactions to occur in mitochondria far more rapidly, and in greater quantities, than autophagy can clear in a day. When autophagy is slowed down or negatively affected, electron loss will occur.

**Electron steal syndrome** in the mitochondria is a very bad sign for life because it ruins autophagy. It destroys energy efficiency by causing a chronic swelling signal that becomes amplified all over a cell. The tell tale sign of its presence is a loss of membrane voltage in all cell membranes. When a mitochondria swells, it is surrounded by water. This disturbs the water hydration cell around the mitochondria by creating a larger proton layer. This changed balance of subatomic particles alters the redox potential inside the cell. H<sub>2</sub>O, the atomic structure of water, absorbs heat in the form of infrared radiation better than any other form. Protons are positively, which drives inflammation. Water that is loaded with protons and devoid of electrons has a higher temperature. Why?

As Gerald Pollack has experimentally proven, *hot water has a higher mass than cooler water does*. Protons have mass, and electrons essentially have none. Hot water has more protons than electrons. Cold water has more electrons than protons. This is why cold water has more oxygen as well. Electrons are thermodynamically favorable to all complex life. Prior to the liberation of oxygen in our atmosphere, all life used protons to organize around the two domains of life. Oxygen allows a cell to use electrons. Electrons are more thermodynamically favorable, which explains why there was an abundance of life during the Cambrian explosion. No modern evolutionary biologist can explain the Cambrian explosion. Nick Lane came closest. He knew it was tied to oxygen. He just did not realize oxygen is all about electrons. It was an emergent quantum event because, for the first time on Earth, a cell could begin to harness the power of the electron. The prokaryotes and Archaea remain immortal, yet simple, because their cells work best with protons. This is why they are found in anaerobic environments.

Initially, electrons were not plentiful in their environment on Earth. That's why life in those two domains did not use it. It also explains why, for 2.5 billion years, life on Earth remained simple. ***Complexity needs electron collection to occur, and electron collection allows us to tap oxygen to make even more electrons.***

When a human's gut is working properly, this is precisely what they are doing. We exclude oxygen in our gut so the bacteria can use the protons we give them in food. In return, they have to leave the electrons behind for us to harvest. Our gut is designed to be devoid of  $O_2$  in order for this work. When  $O_2$  is present, maybe because of GERD, it simplifies the gut bacteria. Disease ensues.

This is why Archea and prokaryotes were the first types of life on this planet. Their waste product was oxygen. Eukaryotes evolved to use the oxygen they created. This is a perfect example of the Bénard-Rayleigh cycle. The waste product of the first two domains of life form the basis of the emergent third domain of life. Eukaryotes absorbed a prokaryote during endosymbiosis and changed it to a mitochondria that can use an electron. A mitochondria delivers the electrons to oxygen and uses protons to dictate energy flows in a eukaryotic cell.

$E=mc^2$  is equivalent to  $c^2m=E$

Now consider this analogy

The photons absorbed by green plants split water molecules and reduce carbon dioxide, resulting in the formation of carbohydrates and oxygen. In respiration, the converse takes place: carbohydrates are oxidized to make a stream of electrons to restore carbon dioxide and water  
Photons and electrons.....used in reciprocal processes.

Then we have the photoelectric effect.

Life is organized around the thermodynamic givens present on planet Earth.

You saw how the quantum mechanism began evolution with the joining of an electron and proton using light to become hydrogen. With endosymbiosis, we have an example of two self similar prokaryotes joining together under the same fractal plan to become a new cell called a eukaryote. Once this cell was made, the power of the sun altered how one of the joined cells would act. It turned one of them into a mitochondria for the benefit of energy production. This is just another example of "fractal emergent design". The power to do this was built into oxygen and all of its electrons. Oxygen became more common because it was the waste gas of Archea and prokaryotes for 3 billion years. So how did endosymbiosis begin?

All eukaryotes have a nucleus, and they all capture electrons using a new lipid in their cell membrane design. That lipid is docosahexaenoic acid (DHA). When the cell membranes in these new eukaryotes captured enough electrons using DHA, they created the nuclear structure of the eukaryotic cell. The nucleus is what morphologically separates eukaryotes from prokaryotes. A mitochondria was sculpted and designed under this quantum mechanism to move electrons from foods. These electrons were moved over the inner mitochondrial membrane to reduce oxygen and create more electrons. More electrons meant more building of complex, emergent proteins with new abilities. Complex proteins that were successful in making more energy were conserved in the nucleus if they lowered the redox state of the cell. The interaction between the mitochondria and the nucleus is critical. The more electrons in the system, the more complex life can become. This is because energy is thermodynamically saved. This is all tied to mass equivalence, which is a universal law. This is

nature's law, not my beliefs. This is how quantum physics alters the trajectory of the evolution of proteins by electronic modification and development. The power behind this is the electron because it is a fermion that absorbs photons of light from the sun to move energy through the cell.

What did the nucleus of the eukaryote provide for life? The ability to collect a lot of electrons to build complexity on the back bone of proteins to make a more complex system. The nucleus also created new proteins to control mass equivalence in mitochondria, which, in turn, controlled autophagy. Telomerase was re-designed to recreate immortal life found in the prokaryote and Archea domains. This process continues today.

### **THE BEST ELECTRON COLLECTOR SO FAR**

Right around the Cambrian explosion 600 million years ago, atoms in the ocean were bounded by the power of the sun. This led to the creation of docosahexaenoic acid (DHA). DHA is the main lipid in the marine food chain. DHA was first found in algae. Algae uses photosynthesis to power its lifecycle. It is also the base food of the marine food chain. All marine life is tied to algae. All sea life is tied to DHA. DHA has been the best known collector of electrons on this planet for the last 600 million years. This also becomes a neo-Darwinistic problem, as you will soon see.

What determines the things life reserves in its DNA/RNA code? Mass that has the emergent ability to organize in the same fashion that a red giant does. It uses the redox power in order to decide what needs to be reserved. Anything that provides a quantum leap in energy efficiency is magnetically saved on nucleic acids. There is a corollary to this point. Nucleic acids won't save things found in abundant amounts in

our primordial environment. This is why it does not code for water or DHA. The matter in us is called proteins. Proteins are the only thing DNA codes for.

In 1905, Einstein computed the mass of electromagnetic energy. Einstein then reasoned that all energy must weigh the same because, inside a black box, the energy can be converted to different forms. If different forms of energy weighed differently, the mass of the box could change without any outside interaction. The electromagnetic force is the 'middle man' that controls how masses can organize to gain or release the energy back into the system. **Life is a thermodynamic problem of organization, not a genetic one.**

#### **HOW DID EVOLUTION BEGIN? THE COMPOSITE BOSON**

For life, evolutionary trajectory took a special turn after carbon was made by this constant binding of self similar atoms. Carbon was a new element that formed from the elements below it to become something new on Earth. Carbon is the first atom commonly found on Earth that is a composite boson. It is also abundant on our planet. Helium is a composite boson, but it is not abundant on Earth. It turns out that carbon has some "emergent properties" as an element that make it the next best Maxwell Demon to build a semiconductor for the control of fermion flow. Fermions are electrons and protons. Water was also made with the joining of hydrogen and oxygen by the power of sunlight. These things were all initially present on Earth. They all began to interact with the sun's power to form life's first semiconductor. **Life is not organized around any other element. This is because carbon has a very special atomic ability to maximize mass equivalence in the presence of water.**

Ironically, modern technology is built upon silicon semiconduction chips. Silicon happens to be the cousin of



carbon. They are in the same group on the periodic table. Silicon was not selected for life by Lady Evolution because it does not have the lowest thermodynamic relationship with water. In fact, if you put water and silicon together in a modern tech gadget, it fails miserably. Why? Because atomic silicon requires much higher energy inflows to gain semiconduction power than just the sun and water can supply. Life is all about energy mass equivalence. In fact, silicon semiconduction requires so much energy that it will pull energy out of a carbon based semiconductor because of its own atomic mass energy equivalence relationship. This is precisely why modern technology is toxic to life. **When two dissimilar semiconductors touch or are very close, the lower powered system loses electrons to the higher atomic mass semiconductor due to avalanche collapse.** *This causes an electron steal syndrome in the semiconductor with the lower atomic mass.*

If you don't think it's a big deal, consider this. Apple has quietly installed infrared sensors on their new iPhone 5S and iPad. They understand physics and are betting that you don't. Silicon semiconduction steals energy in carbon based semiconductors because of the quantum relations in Einstein's energy mass equivalence. It also shows you why silicon was not the biological choice to build cells around. It requires more energy to run. Instead, silicon was left on beaches all over this planet. Silicon is not as good of a template for allowing ultimate control of electrons and protons under the direction of the electromagnetic force AT THE LOWEST POSSIBLE energy state, so life did not organize around it.

Carbon and water, however, do have this relationship. And, as such, lifeforms everywhere on Earth are found to be based upon a carbon backbone. The more you can control electrons and protons at low power, the more you can control the creative process and emergent properties that life can attain.

This is why every semiconductor in biology has a carbon backbone.

Water was a given on Earth, and it naturally selected carbon as her quantum dance partner because the laws of the universe dictated that choice. Once again, this is based upon the mass energy equivalence equation. Water selected carbon as her best partner to limit the energy needed for life to organize around. The very same principle is seen in how a red giant can live trillions of years in this stable state. Life emulates the quantum blueprint found in this form of matter. Evolution is the process on this planet that aims to approach a red giant's energy efficiency as time elapses. In this way, you can see why I always say that the driving force in evolution is improving the energy dumps back into the environment. If we want to improve the human condition, we need to look carefully at how a red giant does the things it does, then replicate its thermodynamics. I can tell you this.....it is not using silicon based technology. Anyone who advocates its use is clearly clueless about mass equivalence and the thermodynamic recipes that life needs to persist and thrive.

### WHY CARBON AND NOT SILICON: QUANTUM REASON

Why are life's semiconductors made of carbon and not silicon? Carbon is the first stable **composite boson** that shows up on the periodic table of elements. All known elementary and composite particles are bosons or fermions (electrons), depending on their spin. Particles with half-integer spin are fermions (electrons), whereas particles with integer spin are bosons. Helium is the first composite boson element, but it is not stable in this form. Nor is it common on Earth. So what did Lady Evolution do? She made carbon from the atoms

below it on the periodic table by using sunlight as her binding force. This is how she used the fractal pattern to join likes and create a new element she could use.

Composite particles in this fashion (nuclei and atoms) can be bosons or fermions, depending on their constituent parts. Carbon 12 is the key that Lady Evolution needed to build the most energy efficient semiconductor she could for what the “conditions of existence” were on Earth at its genesis. So what are composite bosons?

Examples include the following:

**The nucleus of a carbon-12 atom, which contains 6 protons and 6 neutrons.**

The helium-4 atom, consisting of 2 protons, 2 neutrons and 2 electrons.

Any meson, since mesons contain one quark and one antiquark.

The number of bosons within a composite particle, made up of simple particles bound with a potential, has no effect on whether it acts like a boson or a fermion. **Carbon 12 has the lowest energy state and is the most stable composite element for life to organize around.** This is why Lady Evolution chose carbon as her blueprint.

*Since carbon is hydrophobic in nature, and water was abundant on Earth, what did Lady Evolution do to solve this early thermodynamic roadblock?*

Since life is organized around the lowest possible energy state that is possible on planet Earth, she stuck with carbon

because the native environment didn't have much helium to organize around. The next atom that can act at the lowest possible energy state is carbon.

All matter, like proteins in us, is made of a carbon backbone. Ironically, carbon does not have a high natural affinity for water, but it has special abilities that would allow life to organize and decrease the overall chaos in the universe. So what did life do given this thermodynamic situation?

Lady Evolution decided to organize and bind atoms around carbon using the electromagnetic force, making carbon hydrophilic. Today, we call this shell a protein molecular array. The quantum mechanism also gave this molecular array an ability to accept or donate charged particles so that they can vary their charges between positive and negative. In this way, amino acids would sometimes love or hate water, depending upon the electronic situation around the new protein array. The electronic induction is 100% tied to the environment that the protein sensed. This is where Lady evolution showed her innate brilliance in design.

This physical property of protein alterations of the atomic carbon contained within it could be changed or 'evolved' to react with water. It could also be used to Mother Nature's advantage in creating new proteins called Maxwell demons. These demons all had one thing in common. They had new properties to control subatomic particles on proteins, which allowed them to vary their charges to do new things. In the beginning, we did not have a lot of oxygen, but we did have a lot of protons in methane gas. The first two domains of life organized around protons. When protein's charges are varied, it can be controlled by the native electromagnetic force that are present on planet Earth. These new things are where phenotype and species variation come from.

This is why DNA only codes for proteins in every genome on this planet. Proteins are how carbon was made to like water.

Carbon containing collagen emerged as the key semiconductor in cellular design for every bit of life on this planet. Collagen is made of amino acids with a carbon backbone. Collagen is in every living thing on this planet. It's also the most abundant protein in all of nature. Water was also present on Earth as a primordial element of design. Lady evolution is quite efficient using the quantum mechanism, and she used what she was given in this thermodynamic problem.

## **THE CONTROL OF THE QUANTUM MECHANISM: POWER GENERATION**

When you consider what power this gives a biological system, you can see why Lady Evolution did it. Confining water, a symmetry breaking molecule, in a complex thermodynamic problem directly impacts Einstein's mass equivalence relationship because it is directly tied to energy distribution on Earth.

Remember  $E=mc^2$ , the mass equivalence equation?

**Let me explain why:** When water is confined to tight spaces, like you would see inside a cell, the distribution of energies that is inherent to its molecular structure is restricted. This is important because, by allowing for this naturally, the water molecules end up with a lower average energy than if they were in regular bulk water from your swimming pool. This implies that, by restricting it to a "tight room", it becomes energetically favorable for the water to enter small space around and within collagen fibrils. This is why water hydration shells exists. It's also why microtubules in your brain are made out of 15 nm carbon nanotubes. We are organized around controlling water in tight spaces, which allows us to take full advantage of its symmetry breaking properties.

Think of this analogy to hammer home this point: in a crowded

subway, people's movements are restricted compared to what they are on the streets above. Therefore the range of their energy distribution is narrowed towards the lower end of the energy scale. Restricting movement gives you control over the protons and the electrons in the low frequency range. Both of these are naturally charged particles. The electromagnetic force only deals with charged particles. The native magnetic field on Earth is in the low frequency range. Here, quantum form meets evolutionary trajectory and results in ultimate function.

Think of the Tensegrity 1 blog now. Think about what I said to Jeremy. Gravity and magnetism are the forces that restrict movements naturally in all forms of matter. We can refine that 'touch' to fine tune the system to meet the variables' requirements. Life is a completely adaptive thermodynamic event.

It turns out that the collagen molecules in us become self organized into a triple helix when surrounded by water that carries direct current. This water is all around the collagen in cells everywhere in our bodies. Then something unusual, but natural according to the physics of water, happens. Water molecules separate charges from one another when touching any hydrophilic substance. All proteins that nucleic acids code for have that ability. Water becomes a layer of hydroxyl ions and protons when it is next to a hydrophilic substance. Collagen is hydrophilic. The electrons adjacent to water electrify collagen and the result is a self assembled triple helix. Nothing else is required. No energy is needed. It is built by quantum molecular design. Gelatin in your bone broth is, in fact, collagen broken into amino acid pieces that are bathed in water with no charge separation happening. If you pass a very low, direct electric current through your bone

broth, guess what happens when you look at it under a microscope? You see triple helices of collagen form everywhere. This happens naturally with no energy needed.

When this quantum mechanism breaks badly in any disease state due to a poor intracellular redox potential, all mammals die faster. This is because of the mechanisms built into Einstein's mass equivalence. It also means autophagy is broken down at the mitochondrial level. It also means if we understand how the mass equivalence equation is tied to the thermodynamic problems present in our own environments and its direct coupling to telomere lengths, we can live way longer than we all think. This is very similar to the natural laws that dictate how a red giant and a blue giant act in the universe with respect to their life spans. These natural laws extend to all scales of matter. Quantum physics controls all biological functions at all scales. When a cell's mass is higher, it is less energy efficient because it must lose more energy back to the environment. This is why change happens faster as volumes or mass increases in a cell. This is why biology organizes its change programs (autophagy and apoptosis) in mitochondria around these energy mass equivalence relationships. When a cell gets larger, it activates the autophagy and apoptosis programs. As a result, cell death comes faster and stem cells are depleted. When the stem cells are depleted, death is inevitable.

*Why is Cold Thermogenesis also an electron story?*

The relationship of temperature to mass is built into mass equivalence. Consider the fact that hot coffee has more mass than a cold cup of coffee. Cold coffee has more electrons in it than protons. What is the difference? Protons have 2000 times the mass of an electron. This brings you right back to Mass equivalence, yet again. All life is built upon a thermodynamic equation to save energy, not a biological one.

It also belies why cold is the primordial condition of all life anywhere. In this state, life can live much longer than it can in its warmer state. This is why inflammation is tied to a positive charge when it is measured. When this positive charge is present to an excess, an early demise is usually what life faces. It also points out why cold thermogenesis is fundamental to the survival of all life. It's because it expands time by lowering mass. It is a very favorable thermodynamic state built in Einstein's mass equivalence equation.

We are all created from the elements that nature is made from. In this way, you can see where Einstein's mass equivalence comes from in the fundamentality of quantum mechanics. You can see how it really operates in all life at a very fundamental level. Biology is clueless about the fact that physics dictates all of its relationships today. All mass has energy locked within the emergent form of matter. Gravity bonds these masses, and electromagnetic energies unlock the key to both heaven and hell of all matter based upon how many electrons it contains.

When water binds to collagen that is energized by the sun's photons, water chemistry does some amazing things. Thermodynamically, mass goes down and energy rises. This makes life live longer. Sunlight tightens collagen by electrifying it with photons. **Photons actually have no mass.** Right next to collagen, an empty space called the exclusion zone is formed. Next to the exclusion zone (EZ), electrons are separated from water molecules. Next to the electron layer, we see a dense layer of protons that come from the hydrogen in water. It appears collagen allows water to separate into its constitutive parts to form groups of charged particles. The EZ absorbs photons best in the 270 nm range. This is in the UVB spectrum. UVB light makes Vitamin D.



You might begin to understand, then, why biology uses the native magnetic field along with the Schumann resonance at 7.83 Hz, and its harmonics, to control how biochemistry works. In fact, I will let you in on something more shocking. The Schumann resonance can control how our nucleic acids work by manipulating magnetic moments in water and our nucleic acids. The magnetic force can stop electron spin enough to harvest its information for use. This information is used to control epigenetic expression.

Here is where the queer world of magnetism plays a role. When you understand this simple example of how molecular crowding acts on charge separation and development, you'll begin to see why restricting water movement in a cell matches perfectly with the way life is organized on this planet. This is because the Earth naturally has the Schumann resonance coming from its magnetic core. To go with that is a ton of water in our mantle and on our surface. The Schumann resonance is only 7.83 Hz, and, as such, resides on the lower scale of electromagnetic forces that exist on the surface of our planet. This is the third fundamental primordial issue found on Earth. This is why evolution uses carbon, water, light, and magnetism to weave her web. "Nature uses only the longest threads to weave her patterns, so each small piece of her fabric reveals the organization of the entire tapestry."

The two physical things are found naturally on Earth and are coupled together in quantized fashion, using sunlight to bond them. This forms a collagen water semiconductor, which serves in building the framework of how a carbon based semiconductor would control the flow of electrons and protons in a quantum cell.

I mentioned earlier that liquid water has perfect chemical symmetry in that, no matter which direction you analyze the water network from, the view is the same from a molecular standpoint. But can water lose its symmetry in nature? Sure it can. How? You can skate on water, you can ski on water, you can drink water. Water is a liquid, a solid, and a gas, and it becomes a stream of protons when it lies next to a hydrophilic substance. Guess what else? Proteins are also hydrophilic, by quantum design. Lady Evolution saw to it that the electromagnetic force would create and save this relationship. This is fundamentally why DNA and RNA code for proteins and nothing else. When sunlight hits this water around a protein, the water separates naturally by physical laws into protons and -OH groups. In between them is an exclusion zone or an edge. This edge also has special, emergent properties that a cell uses to reduce entropy. Sunlight also drives proton flow without any exogenous energy input. Protons carry potential energy and information to all parts of a cell. The energy cost of this movement is free to a cell or organism. It is driven by the sun's electromagnetic force on water at a protein interface.

Because large amounts of energy are stored everywhere in cells and tissues based upon carbon semiconductors, they automatically amplify these weak electromagnetic signals to often cause macroscopic actions that share information in other atoms and molecules within the organism. This information goes to the nucleus, where the DNA lives in eukaryotes. DNA is ultimately interested in "any information" that lowers the redox potential in a cell.

Each phase of water has its own emergent properties, too.

Life uses every last one of them to its advantage when approximating a zero entropy state. This is the same idea that is built into the construction of a red giant. The closer you get to thermodynamic perfection, the longer one can live. Aubrey DeGray won't find longevity in biology. He will find it in the quantum world of understanding. The more electrons life collects, the more emergent properties the organism will possess, and the longer it will live under a zero entropy state. I have mentioned how hydrogen and carbon are tied to this story.

What about oxygen? Oxygen is a powerful medicine for most life forms because of what it does to electrons. Life before oxygen was a collagen/cell wall story. Oxygen use by life began the initial penetration of solving complexity in life. Complexity is enabled by electrons and is responsible for producing more electrons in a system. This is why life boomed after the Cambrian event. There is no other reason. More irony for neo-Darwinists? According to Lamarck, (you know, the guy 'Darwinites' made fun of?) there was a force— the "power of life"— that pushed organisms to become increasingly complex. He was right. That force is the "**nearly massless electron**". An electron can capture a photon and then re-emit a photon and release a quanta of energy in the form of another photon to tissue. This is precisely what happens to electrons in the brain in CSF. It catches electrons in DHA, and within the CSF, electrons are directed into small spaces called microtubules in the white matter tracts of neurons. The confining of electrons in water changes them into photons by using the magnetic moments created in water found in microtubules. Here, the quantum mechanism is used to derive photons from an electron. Why is this a huge thermodynamic advantage? A photon is massless. In a photon, energy and information come naturally packaged without the baggage of mass. Photons allow the most complexity to emerge in quantum

evolution. Humans are the first mammal to take advantage of photon creation because of how their brain uses DHA to capture electrons. Oxygen is an electron and photon story. Why?

We need more electrons to get more oxygen so we can generate more electrons which capture photons from sunlight. When electrons are stripped from proteins, DNA, or other cell structures, the "glue" used by the electromagnetic force, called chemical bonds, weakens. When the hold weakens, the molecules become loose and not as controlled or restrained. This allows them to weaken together, cell by cell, until the organ gets large and weak. Eventually they fall apart or attach to other unwanted molecules to cause further damage in the system. So, staying healthy and "in one piece" depends on your total body charge. Your redox charge is a tally of electrons and protons. The more electrons you have, the more complex you can become. The more electrons you turn into photons, the more complexity one can create. *This is where emergent human traits came from.* The more protons you have, the more mass you have, and the quicker you die. Protons are positively charged, just like inflammation. This is how protons scale to the biological processes. They are constrained by the mass they carry. This is why being connected to spaceship Earth is vitally important for wellness. When you are connected to the magnetic field and the sun, you are getting an unending source of "massless" energy. It also points out that being disconnected from it by modern technology is deadly to humans.

Why is oxygen critical to humans, specifically? When oxygen showed up in the environment as a waste product from prokaryotes, a critical new lipid arrived in the seas. It was called docosahexaenoic acid (DHA). DHA is in every living thing with a neural circuit. They all showed up at once,

according to the fossil record, about 600 million years ago. Since DHA first showed up in the sea, all things in the ocean have used it specifically because of its extraordinary electrical signaling properties. How extraordinary is this? It has never once been replaced by Lady Evolution in the 600 million years since the Cambrian explosion. I just showed you that carbon was selected by Lady evolution to be life's platform because it was the most energy efficient way life could be organized on Earth 4.5 billion years ago. It turns out that DHA's predecessor molecule, DPA, is easier to make, **takes LESS energy to make**, is more abundant, and only differs from DHA by two protons.....yet DPA was not chosen over DHA for 600 million years? Why would Lady Evolution break energy rules? Because DHA had a new property that allowed life to collect electrons from the environment in massive amounts.

**So, why is Darwin fundamentally wrong?** DHA is not coded for in nucleic acids, yet it has been entirely conserved in all life forms for 600 million years across all species. DHA has never been replaced one time by biochemical evolution. Tell me, what else in evolutionary history has that kind of record?

Darwin's evolution is a theory based 100% on change. Here, we have 600 million years of consistency in eukaryotes.

Another irony of DHA is that it is uniquely vulnerable among mammalian PUFA because of its five doubly allylic sites. They make it highly prone to oxidation. Why would evolution conserve something so at risk for decay under peroxidation?

Moreover, when one considers the fact that DHA is at the most critical spots in eukaryotic neural systems, sensory centers, and in synapses, it seems even more odd when considering Darwin's ideas.

DHA is not coded for at all, yet it is highly conserved **outside** of nucleic acids. Might it be that DHA has 'naturally selected' how evolution's trajectory would go in eukaryotes? Did DHA dictate what proteins DNA should conserve because of its intrinsic quantum abilities to collect electrons? Yes it

did, in my opinion. DHA began to select certain proteins that worked best with DNA to collect and move electrons from the Cambrian explosion onward. When DHA showed up in our seas, the game of life changed. **Electron exchange is what makes the world go round. This is why life was first abundant in the ocean and then evolved onto land.**

Evolutionary biologists know that the animal kingdom boomed after the Cambrian explosion, but they have no idea why it happened. The reason was simple. Oxygen unleashed the energy and information buried in the nearly massless electron. Prior to that, the other two life forms, prokaryotes and Archaea, could only use protons. The main difference is that protons have a positive charge and are constrained by mass. Electrons are negatively charged and have 1/2000th the mass of a proton, while also carrying more energy and information than its positively charged counterpart. This ability allowed life to boom.

Lipid development is directly tied to health and disease in the eukaryote domain. In fact, lipid development parallels 3 key issues tied to the Earth's history. The Earth's life history is divided sharply into two periods – an anaerobic and an aerobic phase. The third phase began at the Cambrian explosion, when environmental chemistry drove massive expansion of DHA in the sea. From that point in time, all complexity on this planet arose in the form of 32 phyla in the animal kingdom. It is really not controversial. I think modern beliefs and literature muddy the water. Why modern medicine uses the 'lipid hypothesis' as a measure of illness risk is beyond me when the quantum evolutionary history of lipids is clear. When you have made the basic assumption that plasma lipoproteins cause CVD, you will make many wrong choices based on the modern "lipid hypothesis". ***When you stop chasing the wrong things, you give the right things a chance to finally catch you.***

Starting about 600 million years ago, oxygen tension in the atmosphere rose above the Pasteur point, bringing about the possibility of aerobic metabolism. Because of this one atmospheric quantum effect, biochemistry shifted up eightfold in efficiency with aerobic metabolism giving rise to the 32 phyla. This is why life boomed. This uptick in energy also gave the power of the electron to inflict changes on the earliest proteins that were made in prokaryotes and archaea. This power was used to join two prokaryotes to become a eukaryote that could use electrons even more efficiently.

Electrons from oxygen created the omega 3 class of PUFAs. How they have been handled should be clear from this quantum point of view.

Right after this event, flowering plants and mammals showed up. Mammals immediately began collecting DHA in their cell membranes and brains. This has been a constant for 600 million years, with respect to all PUFAs, across evolutionary history in eukaryotes. In an anaerobic world, there is no way to make long chain PUFAs without electrons. Aerobic metabolism took the world of Archea and prokaryotes from an alphabet of a few lipids to one with over 1200 in a short amount of time. This gave life the ability to respond quickly to the quantum evolutionary environmental change. Lipids are critical in forming "antennas" in cell membranes that can signal changes in the electromagnetic spectrum on Earth. Lipid development of DHA dictated to DNA. DNA did not dictate to DHA because DNA has changed while DHA has not been replaced at all within that time frame. If it had, it would have found a DHA replacement.

Lady Evolution has used one lipid religiously in all neural circuits and in sensory systems since it showed up in Earth's oceans. This has been conserved even today. The influence of environment as the key driver in evolution is seldom given full thought in modern science. This was exemplified by the fact that chimps have the same genome as humans, yet, morphologically, they are utterly different when considering

the amount of omega 3 they have in their bodies. Darwin had no answer for this problem either. Moreover, this example has been repeated in modern western human populations. Humans have all changed in shape, size, and disease patterns in just one century. Yet, our genome remains well conserved in time and in the proteins dictated by the nucleic acid code. This all leads to the logical conclusion that there has to be a non-genetic variable to explain evolution at a quantum level. That quantum change led to a chemical evolution, which gave way to a biochemical change in trajectory at the molecular level. Darwin does not have that mechanism. I think I do.

### **HOW DOES DHA TIE INTO METABOLISM AND INFLAMMATION IN LIFE?**

Peroxisomal proliferator-activated receptors (PPARs), the vitamin D receptors, the retinoid X receptors (RXR), and the retinoic acid receptors (RAR) are all examples of the nuclear receptors. They interact with the brain cell membranes loaded with DHA to control both inflammation and metabolism all over our bodies. DHA selected these protein receptors 600 million years ago. Do you know that PPARs, RXR, and RAR also tie back to the appearance of DHA in our seas? DNA had nothing to do with this set of circumstances. It turns out that PPARs are the receptors that occupy the crossroads of where inflammation and metabolism actually cross. DHA content is critical in both pathways. These are specialized lipid sensors that pay attention to our balance of omega 6 and 3 levels. It took more O<sub>2</sub> in the atmosphere to make DHA in the ocean. This allowed life to take advantage of the electron.

I'd like to explicitly state that, in humans, DHA is not burned for fuel. It is reserved for the most critical parts of our nervous system, namely synapses and photoreceptors. DHA is the most unsaturated of cell membrane fatty acids found in all mammals (Jump, 2002). Dolphins, and other marine mammals, have difficulty in obtaining sufficient amounts of AA (omega 6) from the marine food chain to serve the needs of their brain and reproduction system. This is what constrained their



encephalization quotient. Humans, however, had access to both AA and DHA in excess. They also had the early ability to collect more DHA in the presence of AA than any other mammal. Not only did this set of circumstances drive brain growth, it is critical to human health in every organ system ever studied. The context of how a mammal uses DHA in its neural circuitry is critical to what dietary lipids it should eat for optimal health.

When oxygen created DHA in the seas, all things changed for life. DHA became the master of evolution on this planet and changed the rules of the game. DNA did not. This became the primordial condition of existence that changed evolutionary trajectory away from simple proton based life and its limitations. The mass of a proton is what limited the two earliest domains of life. It continues to do the same thing today.

DHA began its master control of DNA by fostering the beginning of complex animal evolution in eukaryotes. When DHA evolved, proteins were naturally selected to function with the consistency of the benefits buried in DHA's special quantum chemistry. This chemistry is how it catches and handles electrons. Why did the trajectory of evolution change with the emergence of DHA? If Lady Evolution really followed Darwin's theories, we should have a ton of docosapentaenoic acid (DPA) in our heads. DPA is the major omega 3 found in the land food chain of mammals. Why did this not happen? Energetically, DPA is easier to make and found in massive abundance in the Savannah of Africa, the place where most people "think we evolved".

But humans have more DHA than any other animal alive. Humans evolved around the sea. As one ascends in the tree of life, one also sees a concentration of DHA with complexity irrespective of where that life lives. This is why dolphins and humans break the encephalization quotients in the tree of life. This consistency in the conservation of DHA is present

despite the fact that its DPA precursor only differs by two protons in its structure. DPA is more readily available, requires significantly less energy to synthesize, and is more resistant to lipid peroxidation.

Darwin's ideas mean humans should have had DPA everywhere in their nervous system. This is clear evidence of DHA's ability to dictate natural selection and conditions of existence in eukaryotes. **The neo-Darwinists have missed this critical detail.** No other chemical in life has ever been afforded this luxury. DHA was primordial to our oceans when it emerged, and life has loved it ever since because it captures electrons best and allows for complexity wherever it is found.

“Selfish DHA” not “selfish genes” is what began to dictate the evolution of vision, as well as the brain, in life after oxygen boomed in our oceans and atmosphere. Under the direction of the sunlight, protein–lipid interactions began to operate in a multi-dimensional, epigenetic fashion to lower entropy in life. Organic chemists have described how protein on protein interactions can build complexity by the same processes. **These symbiotic relationships grew to be a two way directed system under the joining power of sunlight.** As time evolved, during cell differentiation, the specialist proteins that arrived through the quantum evolutionary emergence mechanism sought a lipid match and vice versa. If the matching lipids were not present, the system may fail.

This is why complex life evolved in and around the ocean, not on the land. This is something that evolutionary biologists also cannot explain. I just did. Homo was the only primate that evolved around water, at the junction of three tectonic plates isolated from their native forests. DHA was abundant for this small group of primates. They were surrounded by this abundance, as well as a powerful magnetic force caused by the 3 plates, for 2 million years. We know all this from the

geology of the East African Rift, where it all went down the last 3-6 million years. This homo primate was isolated, and it began to eat more things with DHA, allowing it to collect massive amounts of electrons to build complexity, and quickly.

A practical point is that any random mutation, or selection for survival, has little predictive power under Darwin's theories. This is why Darwin could never properly explain the chimp to human transition. The quantum mechanism in this blog can do just that. Our species' "conditions of existence" has a powerful predictive power in this case. It predicts dependence of human neural evolution and neuro-immune function on the interaction of DHA and the MHC1 gene product. This is also why, in studies today, DHA intake is directly tied to improvement in human health in every organ system. The irony for me is that no one seems to appreciate the fact that, since the K-T event, DHA has been the master of the mammalian genome. Mammalian proteins are now selected to function with the consistency of DHA in our lipids controlling things in the background.....***the subatomic things***. That is what this blog is all about. This is a radically different take on evolutionary direction because it is based 100% on mass equivalence. This is the law of the universe. Life needs to be as ordered as possible to be thermodynamically viable.

This is why humans are so different than other primates in their looks, or phenotype. DHA allows us to be ultimate electron collectors and photon creators in all our tissues. Every change in us helps collect more electrons and create more photons. Our cells can harness and catch more electrons and photons than primates can. This is also why our genomes are 99.8% identical, yet we are so different. We have a boat load more DHA than they do. It is not the genes that create speciation. It was DHA that did. Since humans cannot synthesize DHA well in their cells, it tells us we had to evolve in an environment with an abundance of DHA. Modern

life is not based around a seafood story either. In fact, the further we migrate from it, the sicker society gets. This is why I wrote my first book, the Epi-paleo Rx. DHA mandates the proper protein changes when the electromagnetic signals on Earth change. In order to properly signal these scale changes in native EMF, DHA needs to be in all of our membranes and cells. This all has to occur, even today, under the direction of sunlight. This properly binds electrons to our current proteins and navigates our current conditions of existence.

Quantum evolution of DHA affects the chemical evolution of atoms in lipids and proteins to create proteins that reduce entropy in cells. Here you can see how the quantum mechanism dictates biochemical evolution using energy as the key metric.

Change occurs not because of DNA mutation, but because of quanta being added or subtracted to the methyl and acetyl chaperone proteins that interact with the nucleic acids. These chaperone proteins control the jumping genes (retrotransposons) to build new proteins that formed our legs, immune system, and our brain. The MHC1 gene codes for that new protein. It led to the joint emergent property we call cell mediated immunity and neurogenesis. This is where methylation and histone acetylation enter the solid state story I am weaving in the QUILT. It also points out where modern neuro-immune issues really come from.....silicon semiconductors constantly stealing electrons from our carbon based semiconductors.

Don't wait for inspiration's shove or society's kiss on your cheek. These days, keen observations and wise strategy triumph in health.

## EXAMPLE TIME:

It seems that, in Scandinavia, the proteins that form eye color have a quantum advantage at this position on our globe.

This is why this advantage is found more in this region than any other in the human population. At the equator there are two seasons: wet and dry. At the poles there are two seasons: winter and summer. There is no in between. So as you move away from one area and get closer to another, your body would have to reinvent proteins best able to capture electrons and protons in these altered environments. The gene frequency of blue eyes may have increased by chance, or it could have been altered by the native electromagnetic spectrum in Scandinavia. Why can I say this in defiance of genetic determinism? The blue eye color maybe just as good as green. Both can see the world, but blue eyes confer a quantum advantage in the northern hemisphere as you approach the poles. This belies why autoimmunity is more likely in these areas. You are losing energy more rapidly and the human body is reacting by altering proteins to become more effective at capturing energy and information in order to offset the loss. The real reason is tied to the energy and mass equivalence information in the system of proteins in us, not the genes. This information is only conserved in the genes if it has been helpful in dumping entropy back into the environment and out of the cell.

**This is why your origin may be tied to your redox potential. My quantum model says that your zip code may be more important than your genetic code.** It also predicts something more ominous. Quantum mechanics prepare for the dramatic events in our environment best. The rule on Earth is that conditions can change so drastically or so suddenly that evolutionary history counts for little. Quantum mechanics are built to

pick up the pieces left over and move them. That means our current plight might also be solvable if we just get out of the way of Lady Evolution's epigenetic toolbox. This may be why HIV, Ebola, and the cytomegalovirus have shown up.

Our retrotransposons carry codes for chaperones, or older proteins, that were once created by the electromagnetic forces. They were useful in dumping entropy back into the environment based upon a change or environmental pressure. This is where methylation and histone acetylation come into the solid state story of evolution. If this change occurred frequently, this protein pathway would be conserved in the DNA for a long time. Remember that every extinction event on this planet has been followed by a phase transition of water resulting in a transfer of energy that led to a colder climate. It has happened 5 out of 5 times. Since life has navigated all 5 to date, it stands to reason that this biological program would be conserved in all life forms. It has been. Cold lowers mass, therefore it is built in to all of life's thermodynamic success programs.

The amount of time the environmental pressure existed will determine when the protein gets added and saved in our the nucleic acids. I have a hunch the mechanism is tied to the redox state and its affect on the telomerase enzyme. Why?

**When mass equivalence is in balance, time becomes a function of mass.** This means that time can be reversible! Telomerase is how all three domains codify time. The laws of quantum mechanics also predict this. Feynman said, "there is nothing in biology yet found that indicates the inevitability of death." It sounds shocking and ignorant until you understand why he said it. He is correct because the laws of physics are invariant to time. The laws of quantum physics can move

backward and forward, and this means we can reverse disease if we truly understand the QUILT document. If you can maintain energy flows in biology, you can live a very long life. Far longer than any of you could imagine right now. I mentioned this to you in EMF 2. It is how I fixed my own redox problem to solve my obesity without counting calories. Ignorance believes calories matter. These people are unaware of what they do not yet know. It requires that you have to maintain good order in your cells' organization and tissues. The redox potential is the best way for a cell to measure this, in my opinion.

When your redox potential is high, you become effective at dumping entropy back into the environment. This creates more order. DHA creates the most order for humans because it makes us sticky for electron collection. Think of the refrigerator example I gave you in Energy and Epigenetics 10.

### **THE FRIDGE REVIEW:**

To make sense of this concept, think of a modern refrigerator. Anything that increases temperature also increases entropy in that matter. The hotter something is, the more entropy it has. It increases Brownian motion in atoms. The colder it is, the less entropy it has. It lowers Brownian motion and decreases mass. This is another reason Cold Thermogenesis is primordial to all life. It creates "free energy" just by reducing entropy and disorder in the environment. Astrophysicists have now shown that carbon monoxide is used in galaxy creation and evolution to cool the gases and dust. Here is cold being used in the biggest macrocosmic stage, and my theory of Cold Thermogenesis occurs on your cells' microcosmic stage. It is built into the entropy equation of physics, not just in the

way life uses energy in its physiologic systems. Your heating bills normally go up in winter, and your electric bills also go up when you use your refrigerator to cool and save your food. Here you can see how energy and entropy are linked naturally. You must spend energy to reduce the temperature, which then reduces entropy according to the laws of thermodynamics. What is not so obvious to most people is that the energy is also required to REDUCE entropy, too.

So, entropy tends to get us both coming and going in life. This is why Schrodinger believed what he did, in my opinion. A refrigerator cools down its interior by reducing entropy. It does this by lowering the temperature inside. Inside the refrigerator is cold, but if you check the backside of the refrigerator, you will find it is very hot. The reason for this observation? The refrigerator is taking the heat from inside the appliance and is dumping it back to the environment of your kitchen. Entropy goes down inside the refrigerator, but it increases in the overall environment of your kitchen. That increase in entropy is actually measurable, and the net increase in entropy is completely dictated by the Second Law of Thermodynamics. It has been said that the Second Law of Thermodynamics is among the most rigid and important laws in nature. Sir Arthur Eddington was the astronomer who proved Einstein's theory of relativity correct in a jungle. He once said any belief that breaks the Second Law is a falsehood. Well then, it seems Peter Mitchell has a problem. Gilbert Ling tried to tell him, and biology, this 50 years ago. Mitchell's chemi-osmotic theory breaks the second law of thermodynamics by a five fold amount. It is not a reality, just a modern belief.



It should be no mystery that humans can also return entropy back to the environment better than chimps can. This is why we evolved from them in the East African rift when seas were rising and tectonic plates were lifting and splitting. This is also why we look so different from them, but retain almost the exact same genome. The answer was DHA. Darwin could never explain it because he was fundamentally wrong about evolution. It is not a "big time" phenomena, as I wrote in EMF 6. **It is a quantum phenomena about the relation of masses to energy content of these particles. This is a universal relationship that exists not only here on Earth, but everywhere a subatomic particle exists.**

In neo-Darwinism, evolution is a process of increasing fitness; in the sense of an organism's ability to both survive and reproduce over time as things change. **In my quantum model, evolution is a process of highly ordering a cell's architecture to become more energy efficient, while also retaining a high ability to collect more information and energy from the subatomic particles.**

**Evolution is the thermodynamic process of the environment using the quantum mechanism to drive progress.**

In this way, evolution is driven by entropy dumps back to the environment, leading to complexity. We tend to believe that natural selection favors one type, but quantum mechanics say there are many possibilities (quantum superposition for the physics geeks) occurring at once, and the best changes should be what an animal evolves into. In this way, we can see why the human immune system, bipedalism, and brain all showed up rather rapidly and in a more emergent fashion using DHA as the key element to build upon. This was accomplished by using the retrotransposons, as I mentioned in Brain Gut 2, to innovate

and to sculpt our DNA with the photoelectric effect, water chemistry, and native magnetism. Darwin was not even close. Nature does, on occasion, change course dramatically, and this happens with changes to her normal circadian rhythms. DHA dictated changes to the mammalian body plan. The quantum mechanism rights the evolutionary ship by reading and reacting, leading to the resolutions of the dramatic transformations that nature brings. The result is a selection of new phenotypes all tied to ionization changes that occur on lipids and proteins in our membranes inside and outside the cell.

Epigenetic changes, such as DNA methylation or histone modification, can remodel the chromatin and regulate gene expression. Remodeling of chromatin provides an efficient mechanism of transducing signals, such as light or nutrient availability, to regulate gene expression. This was clearly shown in the 2012 publication, by Saurabh Sahar and Paolo Sassone-Corsi, "Circadian rhythms and memory formation: regulation by chromatin remodeling" at the Center for Epigenetics and Metabolism, School of Medicine, University of California at Irvine, Irvine, CA. Circadian epigenetic clocks determine the best times for expressions of various genes and coordination of metabolic activities. Failure to respect those times, like insufficient sleep, can lead to disorders and diseases because autophagy becomes inefficient and paves the way for cell suicide. This depletes our stem cell supply, and we are left with senescent cells that are devoid of active telomerase activity to make telomeres longer. When this occurs, the only step left is to invoke telomere recombination using other parts of chromosomes. The result is invariably some sort of cancer because the somatic DNA is changed dramatically.

**I'll make it simple to understand:** Your EMF zip code determines your circadian cycles. Vitamin A and D levels in your brain determine your circadian cycles. Your zip code is more important than your genetic code. Bad zip code = poor circadian cycles = poor autophagy = poor sleep = electron steal syndrome = calcium efflux (EE4) = water cannot stay bound to proteins with a poor redox charges (excess protons) = why humans are all dehydrated despite their actions to drink water = all neolithic diseases.

Chronobiology, seasonal and circadian rhythms, are the main "glue" that holds together all the various ecosystems and biochemical processes. Without precise synchronization to this elaborate dance of energy efficiency, chaos ensues. **Chaos = electron steal syndrome.** The more electron loss that happens in you, the less magnetic sense you have. The less magnetic sense you have, the closer to death you become because that is the lesson that we see on MARS. Without a magnetic field, life cannot properly organize at a cellular level, so it ceases to exist. **You need the Earth's native magnetic field to turn electrons into photons in the brain** if you are a mammal with a lot of DHA in your neural circuits. Electrons have a "small mass" that our brain turns into photons that have "no mass". This requires optimal Vitamin A and D cycles in the brain working with DHA. It provides the optimal optics for the brain tissue to work under. This is a huge energy benefit the human brain derives from collecting massive amounts of electrons. This creates massive energy release to drive further complex development. This is why humans are so different morphologically than the great apes. It is also why the human CNS is completely surrounded and filled with water next to unmyelinated neurons. Water creates life's battery by charge separation.

### **WHY IS DHA SO POWERFUL? PI ELECTRON CLOUDS= QUANTUM MAGIC**

The DHA double bonds consist of a sigma bond and a pi bond. By subtracting 80 kcal/mole (the sigma bond energy) from 145

kcal/mole (the C=C bond energy) we can calculate that the pi bond has a dissociation energy of about 65 kcal/mole. This is much less than the sigma bond energy, and, therefore, pi bonds are more reactive than sigma bonds. This means that, all things being equal, the **pi electron bonds of DHA are more likely to undergo activation by light.** Your brain is just like a star. It works optically and photonically. This is why optokinetics works to change neural circuits. The brain is all about light because 35-40% of all lipids in membranes in the brain are DHA. Förster resonance energy transfer (FRET) is a mechanism describing energy transfer between two chromophores. In the conjugated chromophores, like DHA, the electrons jump between energy levels that are extended pi orbitals. This is created by a series of alternating single and double bonds. A conjugated system is a system of connected p-orbitals with delocalized electrons in compounds with alternating single and multiple bonds, which, in general, may lower the overall energy of the molecule and increase stability. The largest artificial conjugated systems are found in graphene, graphite, conductive polymers, and carbon nanotubes. Most of these are being used in quantum computer design and in artificial intelligence using helium.

## **HOW DOES COLOR AFFECT OPTICS IN THE BRAIN?**

A chromophore is the part of a molecule responsible for its color. The color arises when a molecule absorbs certain wavelengths of visible light and transmits, or reflects, others. The brain is capable of doing this to all wavelengths of the visible spectrum based upon its variable tissue optics. The chromophore is a region in the molecule where the energy difference between two different molecular orbitals falls within the range of the visible spectrum. Visible light that hits the chromophore can be absorbed by exciting an

electron from its ground state into an excited state. An example of a chromophore is **Vitamin A, Vitamin D**, hemoglobin, retinal, bilirubin. Vitamin A and Vitamin D yoke the brain to the circadian cycles found on Earth. The color is usually tied to a centrally located transition metal. A swollen, inflamed brain has different optics than a brain without swelling. A swollen brain tends to have alterations of Vitamin A, hemoglobin and water within it. Moreover, a leptin resistant brain is filled with protons and lacks electrons and photons. This brain is optically different than a leptin sensitive brain loaded with electrons and photons. ***A leptin resistant brain can not turn electrons into photons.*** This makes the brain the best evolutionary example of an “entropy lowering device”. It has developed the ability to rid electrons of their “small mass” to our energy advantage. It uses the optics of the photon, which carries no mass. The concentration of DHA in our brain resulted in a quantum electromagnetic computer. It was not due to the genetic code. This is why the Great Apes, and our genome, cannot predict where we came from. DHA can. BOOM.

The reason this has remained in biology’s blind spot for so long is that biologists could not visualize a quantum mechanism at work as they do in a molecular pathway in biochemistry. Subatomic particles are hard to follow in a conventional biochemical lab. They are even harder to follow when you do not realize how important they really are. Many quantum mechanisms behind epigenetic modifications are tied to electron and proton movements between water and the proteins in nucleic acids. Quantum tunneling of electrons is one such example. This happens in photosynthesis and in our mitochondria. One of the issues that makes tunneling so hard to predict and/or observe directly is that the nuclear configuration changes constantly in biological molecules during life, as do the electronic configurations of the donor

and acceptor states.

Nonetheless, at times of resonance or movement of these particles in our cells, electrons localized on the donor site will tunnel over to the acceptor site. This happens in plants during photosynthesis. This is also what happens in the mitochondrial cytochromes. The key quantum metric for tunneling is that the space between proteins must not be any longer than 8 Angstroms. In our mitochondria, the distance is below that number. In DHA, electrons in the pi cloud are at 6 Angstroms. DHA is the ideal lipid designed to catch electrons in all mammals. This is why it has never been replaced in neural tissues since the Cambrian Explosion. This quantum difference is exactly why DHA dominated DPA in evolution, even though Darwin's theory would have predicted that DPA would have trumped it. Even today, DPA is more plentiful than DHA. This has been true for 600 million years since the Cambrian explosion. *But those extra two protons mean it cannot tunnel electrons well, and that is why evolutionary trajectory changed.* Two subatomic particles changed everything. **In the quantum realm, the smallest things have the biggest meaning for the thermodynamics of energy flow. This is huge in humans and all biology. This is what Avogadro's constant has told us, but we did not explore it to the n<sup>th</sup> degree.**

It turns out that DHA concentrated in tissues wherever electrons were in our environment. The ocean is where more electrons are locked into water molecules. Many falsely believe the difference in membrane fluidity between DHA and DPA is why DHA was conserved. It turns out that advantage is very small on a dynamic molecular basis. This has been simulated on computers and is no longer questionable. There is certainly not enough difference in fluidity to explain 600 million years of conservation of DHA in every animal's neural

signaling systems. Bloom and colleagues suggested that DHA might have “unique electromagnetic properties” of alternating positive and negative charges between its six double and single bonds that create a pi electron cloud. Bloom was right in 1999.

**DHA is the ultimate EMF antenna for the native electromagnetic force.** This is why the human neocortex is un-myelinated and loaded with DHA in these neurons. This allows these electrons to be delocalized, or ‘moved’, under the direction of the electromagnetic force, making us more sensitive to electrons in our environment. None of this has to do with membrane fluidity. Life needs to control all aspects of the quantum actions of electrons to gain complexity, as well as to create photons from electrons that DHA catches. It skates around the second law of thermodynamics because an electron carries the energy, information, and spin without the constraints of the mass of a proton. Photons further improve the relationship of energy to the mass equivalence equation. It explains why the human brain works on 20 watts, whereas your laptop has to be charged every few hours.

DHA provided the “basic membrane” backbone of the new photoreceptors that converted photons into direct current electricity, laying the foundation for the evolution of the nervous system and the brain in animals. Although DPA and DHA are two closely related omega 3 fatty acids, they have a major quantum difference. They have one double bond difference that changes the pi electron cloud lengths. That small change in length makes the largest difference in energy generation. DHA has not been replaced despite some 600 million years of genomic change. Just stop and think what that means. Darwin never realized this. Neither have evolutionary experts. While the marine food chain is rich in long chain omega 3 fatty acids, the land food web is dominated by omega 6 fatty acids. The human brain must utilize optimal omega 6 and 3 fatty acids in a ratio between 1 to 1 and 2 to 1. The

injection of the omega 6, through the appearance of omega 6 rich protected seeds in the Cretaceous Period, would have played a critical role in the advance of brain evolution in mammals. This symbiosis between land and marine food chains in the East African Rift created the perfect "condition of existence" that finally led to the cerebral expansion in human evolution. Ironically, lipids are still modifying the present evolutionary phase of our species with their contribution to a changing panorama of neolithic disease. Contemporary lipid malnutrition is most likely contributing to the rise in brain and autoimmune conditions in the world.

When DHA loses electrons, it is a huge issue for humans. If one electron is delocalized and pulled out by hyperpolarization, an immediately distal electron will take its place, and this electron tunneling would lead to a current flow via semiconduction. The Pauli exclusion principle tells us that no two electrons can occupy the same energy state. If one electron is pulled out for any reason, the loss leaves a hole that can only be filled by an incoming electron of the same quantum status of spin and energy.

In this way, all life seeks to perfect the second law of thermodynamics. This is why the second law of thermodynamics is statistical and not absolute. If you go back and carefully read Schrodinger's 1944 book "What is Life", he correctly guessed that the key to life was in its organization around the physical laws of nature. He wrote this when the laws of quantum mechanics were being developed, so he had no way to prove it. The exact same fates befell doctors Becker, Ling, Pollack, Nei, and Atkins. My formal and professional education hid these truths from me because of biases and a lack of fundamental quantum understanding that the theory of everything is based on Einstein's mass equivalence



relationship. Their "*queer ideas*" caused me to look under stones because of my curiosity. I used what their insights taught me in order to understand the quantum mechanism in biology. I followed all their leads because, instinctively, I knew they were onto something that no one had seen before. When I read their work, I had a quiet mind, and this caused me to be a better a listener to discern what so many have looked at before me. But no one saw what I did. The answer was simple. Biology's stage begins on the smallest stage possible. It is where electrons and protons perform a quantum dance with the native electromagnetic forces on this planet. It is not on genes.

Because I paid attention, I believe the universe whispered its wisdom into my ear. I have been collecting her wisdom now for close to ten years. I began with Einstein's given equation, and I have tried to solve life's problem in thermodynamic steps. It took me 18 months, but I think I got it correct. Schrodinger and Frolich were both physicists who realized it was a thermodynamic problem long ago, and their ideas were my biggest clues to look at Einstein's mass equivalence differently than most. All life is energy and energy is life. Solving diseases is an energy problem, not a biological one.

The problem for us modern humans, too, is that few physicists have a controlling command of molecular biology. Even Feynman was stumped, but mystified, by biology. He took a sabbatical to learn biology. I believe he would have solved it if he gave it a bit more thought, but he had to perfect quantum mechanics first. The second law of thermodynamics is not an absolute law, but a statistical one that we can improve upon or destroy. It is akin to the the space between 0 and 1 in a quantum computer. The end points are well defined, but the

space in the middle of them can keep being subdivided into smaller segments until infinity is reached. This is why there is Heisenberg's uncertainty principle. Nothing in the universe can ever reach pure hell or heaven.....we can just approach it. It confused Einstein for all his life, but it is firmly quantum and parsimonious when you understand what I have written here.

### SUMMARY:

The redox potential surrounding our cells is really what is the driving force behind evolution and what gives time its forward direction. When we lose order in our cell, we lose energy and time can then move faster. When it moves backward we call that a disease state. **The common denominator is the redox potential developed in this "emergent environment" is what controls the direction of time.** Modern life is destroying this relationship for us today because it is contrary to our mitochondrial wiring diagram connecting the environment to our DNA. We live in a world where electrons are being stolen from our mitochondria and DHA in our brain cell membranes constantly. Every person on the face of this planet now lives in an extreme environment; Most of our population dense areas happen to be the worse areas geographically in our country. Today your zip code determines the rate of electron loss the best. We did not evolve on a planet without a magnetic force, but our species has created this situation in the last 120 years because we innovate modern technology using silicon. Today, we live on an alien exoplanet compared to the one we evolved on.

This is why modern humans and all forms of the animal kingdoms are under attack. Humans have done a lot in the last 200 years to ruin how we are fundamentally organized. Human activity has transformed between a third and a half of the land surface of the planet. Most of the world's major rivers have been dammed or diverted. Fertilizer plants produce more nitrogen than is fixed naturally by all terrestrial

ecosystems. Fisheries remove more than a third of the primary production of the oceans' coastal waters. Humans use more than half of the world's readily accessible fresh water runoff. People have altered the composition of the atmosphere by the altering combination of burning fossil fuel combustion and deforestation. This has increased the concentration of carbon dioxide by forty percent over the last 200 years, while the concentration of methane, an even more potent greenhouse gas, has more than doubled. The real problem no one sees is when greenhouse gases become ionized by non native EMF.

The Earth's atmosphere acts much like the glass panes of a greenhouse: it allows sunlight, particularly its visible range, to reach and warm the Earth, but it largely inhibits the infrared radiation emitted by the heated terrestrial surface from escaping into space. Since the atmosphere becomes thinner and thinner with increasing altitude above the Earth, there is less atmospheric absorption in the higher regions of the atmosphere.

At an altitude of 100 kilometers, the fraction of atmosphere is one 10-millionth of that on the ground. Below 10 million hertz (10<sup>7</sup> km), the absorption is caused by the ionosphere, a layer in which atoms and molecules in the atmosphere are ionized by the Sun's ultraviolet radiation. In the infrared region, the absorption is caused by molecular vibrations and rotations. In the ultraviolet and X-ray regions, the absorption is due to electronic excitations in atoms and molecules.

Common to all forms is the fact that electromagnetic radiation interacts with and is generated by electric charges. The apparent differences in the phenomena arise from the question of under what circumstances can charges respond on the time scale of the frequency  $\nu$  of the radiation.

At smaller frequencies  $\nu$  (smaller than  $10^{12}$  hertz), electric charges typically are the freely moving electrons in the metal components of antennas or the free electrons and ions in space that give rise to phenomena. These are related to radio waves, radar waves, and microwaves. At higher frequencies ( $10^{12}$  to  $5 \times 10^{14}$  hertz), in the infrared region of the spectrum, the moving charges are primarily associated with the rotations and vibrations of molecules and the motions of atoms bonded together in materials.

Humans have radically altered, to our detriment, the non native portions of the electromagnetic spectrum in the last 100 years. When we entered the 20th century Bohr and Einstein warned FDR in a letter. They said that when you begin toying with  $E=MC^2$ , you are opening Pandora's box. We might have no way to stop it, and we might not be aware of what we did until it was far too late. The letter was written in relation to the construction of the nuclear bomb. Bohr's and Einstein's focus in that letter was on the "top end" of the ionizing part of the electromagnetic scale, not the bottom end of it. Today, we are suffering from this oversight. It is the alteration of the bottom part of the electromagnetic spectrum where all these new diseases are springing from.

If you think you can grasp Lady Evolution's magic, think again: her story flows in more than one direction on this spectrum of energy and information. Everything in the tech industry came from the science developed by quantum mechanics. They have built modern technology systems all around the semiconductor substance that is most abundant in the Earth crust. The problem is it has more mass in it than the one built in us. And Einstein's law of mass equivalence is clear on these implications. Silicon requires more energy to generate a semiconducting platform. All energy flows based

upon this relationship. This means silicon based technology is sucking electrons from our mitochondrial semiconductors. It is not rocket science or brain surgery when you understand the fundamentals of the quantum mechanism.

Crisis is the only thing that will lead mankind to these insights, and the old framework will give way to a new one because of the explosion of neolithic diseases and the high costs to cover them. So far, misinformation from politicians and scientists who do not understand this science is all the public gets. It's only at the precipice that we evolve, only on the brink do we change. Unfortunately, this is how great scientific discoveries and scientific shifts occur. When people realize that we are talking the fundamental equations in nature, they will realize studying this with a randomized, controlled clinical trial is just a delay tactic for those in control of the older paradigm.

Life is designed to work on the lowest energy scales on this planet because of water. Carbon was the first atom selected to organize life because, on this planet, it was the lowest, most stable way to manage mass energy equivalence. No one seems to see what I see on that periodic table. This is why I am looked at as a maverick. I see something no else has, even though it has been staring them right in the face for 120 years. This is why I believe evolution is driven by improving entropy dumps back into our environment as we catch more electrons and not protons. The more we catch, the more phase transitions we face. Every time this happens, an exchange of energy must occur, as dictated by the second law. Remember, electrons provide life with energy and information for free. There is no cost to the cell in this way. It is a form of almost massless energy. This is why, for three years, I have been telling all of you "sick and tired" people you better pay

attention to the details. When you do, you will live a very different way than most modern humans. To regain time and energy and never gain any mass requires a system built on constantly catching electrons. Once again, electrons have almost no mass. And an electron can be turned into a photon in the brain to truly have no mass. This is how life organizes around the photoelectric effect no matter where you look. This is why the human brain is a quantum electromagnetic computer that works on movement of electrons, and turning these electrons into photons. It moves photons using the magnetic force to change in optical density of the brain parenchyma and requires the lowest power to do so. If the brain was based upon any other semiconductor platform, it would require a hydroelectric plant to power it. If you can dump this energy back into the environment better.....you collect more information about the system you exist in, and you make better choices because you know more about the broken vase.

Water on earth exists in many states. If the water freezes to ice, the perfect symmetry is lost or broken and the property of rigidity emerges in its lattice. Same is true when it becomes a gas, a hydronium ion, or an OH group.

**Symmetry is broken, simply by a phase transition, many times over in the biochemical reactions in cells.** The problem is biochemists do not realize it, and the implications remain unexplored by modern medicine, which relies on these same researchers. If you are following me, all breakage of symmetry requires a transfer of energy. When a brain is injured, or lacks DHA, it is a sign of a phase transition. Symmetry is also broken any time temperature rises or falls, or when electrons or protons are moving in any chemical reaction. Any transfer of energy has the potential to break

symmetry, and, therefore, to give rise to emergent properties in the cells and tissues that remain. These changes can be good or bad. If they are good we call this evolutionary progress. If they are bad, we call this neolithic disease states. Ironically, both conditions still remain unexplained by modern cell biology!!!!

Let us look at one neolithic disease as an example here. Cancer is a state of excessive symmetry breakage for proteins that generate energy in the cytochromes of our mitochondria. It has nothing to do with genes or DNA, as I laid out in CPC #8. What I am proposing here is a complete paradigm shift away from the central dogma of biology. Why?

Today's evolutionary beliefs are not quantized, and as such, they ignore the very basic laws that our universe follows. How electrons work from food, the sun, and the magnetic field seems to offend the "common sense of biology." I find this concept to be a very good thing because the principles of relativity, quantum mechanics, and quantum vortices in black holes also offend biology. This is the way nature works in us, and across the whole universe. As Richard Feynman famously said, "It doesn't matter how beautiful your theory is, it doesn't matter how smart you are. If it doesn't agree with experiment, it's wrong."

Guys like Watson and Crick, Darwin, and Richard Dawkins have "elegant views". But all must be scrubbed by Feynman's own rules for scientific progress. Feynman put the final touches on quantum mechanics and his work tied beautifully to Einstein's master equation for mass equivalence. This is why you must read thermodynamic problems right to left and not left to right. All life is organized according to the

statistical nature of the Second Law and, as such, deals directly with the mass equivalence relationships of energy. These relationships are organized by life around the photoelectric effect, water chemistry, and native magnetic field, **NOT GENES**.

Genes are the sculptures created after Lady Evolution put her magic hands on the proteins created in the oceans at life's genesis. Genes are the blueprints for the Maxwell demons. The real key to all life is the proteins built around carbon atoms to allow water to play quantum magic together as they dance. This is 100% a pure quantum molecular mechanism to life. It all began with carbon and water. They initially hated one another. So how was this thermodynamic problem solved? Lady Evolution came up with a new idea to tap the bonding power of sunlight. She bound other atoms around carbon to alter the charge of the carbon so that a new phenotype could be ascribed to the interaction of carbon and water. Evolution is the process of repeating this simple quantum mechanism over and over again. When she finds something in the new molecule, she can control it with the electromagnetic force she reserves, **magnetically**, in nucleic acids. Sunlight binds all atoms here, and in every aspect of the universe. The electromagnetic force is what binds atoms in molecules. People forget this very basic fact.

As time elapses, the electromagnetic force, namely sunlight, continues to bind atoms of this first generation of proteins she created to create new proteins that come about with their own emergent properties, just like the way carbon was transformed. When you have your own emergent properties, this changes the phenotype and function because of electronic inductive changes that occur on proteins that surround carbon. This improves energy production, thereby lowering the redox



potential in a cell. This is what underpins and belies species variation that we see in all the Kingdoms of life. It is time to set aside Darwin and his protectors. He has had a good run since 1871, but, much like Newton, it is time to set the stage for a new way of looking at a very old problem. I am presenting a completely new way of looking at everything in a textbook of evolutionary biology. This is a kill shot to modern beliefs. Just as Dawkins tears down the religious beliefs of millions, and mocks them consistently with elegant grammar, I must tear him and Darwin down. I won't mock them because they served a purpose to mankind while we were figuring out the quantum mechanism behind life. His penalty is that he has already created his own hell, and his memory will live in it for eternity. Dawkins is as much about religion as those he mocks, he just is unaware of the church he preaches at. His religion is neo-Darwinism.

When it comes to humans, the most complex creature Lady Evolution has built, the view that nutritional conditions had a role in directing evolution seems contrary to the current gene-centric view of evolution. Ironically, it is very consistent with pure Darwinism. Consider what Darwin said time and time again. In "The Origin of Species", Darwin declared there were two forces in evolution: Natural Selection and Conditions of Existence. I have said it several times in my blog over the last 3 years. He considered the latter the most powerful force of nature. This aspect of Darwin's thesis was considered too "Lamarckian" by Weismann, and it was, more or less, abandoned because of this. Marsh emphasizes that in **all six editions** of "Origin of Species", Darwin repeats his claim on the "conditions of existence". Reading anything written by Dawkins, you would never know this. In fact, Darwin spent much of the rest of his life searching for what he called "Pangenes" in the blood plasma of animals, which could translate information from the environment to the

genome. Darwin's 'Pangenes' are now understood as reverse transcriptase that underlies the entire field of epigenetics today. In fact, telomerase is a special reverse transcriptase that controls how long life can go. BOOM!

When oxygen arrived on the scene as a waste product of Prokaryotes and Archea, under the direction of sunlight and electrons in the ocean, DHA was eventually created by the quantum mechanism. DHA is the best collector of electrons Lady Evolution has ever made to date. This extreme conservation implies that the DHA was actually dictating to DNA, rather than the more conventional view of evolution occurring the other way round. She has not been able to find a better molecule to do this job, hence it has never been replaced. It is highly conserved in all species since the Cambrian explosion.

I will take it a step further. DHA is a "condition of existence" that made it the master of DNA since the beginning of all complex animal evolution. Stated another way, it was the "selfish DHA", not DNA, that has ruled the quantum mechanism in biological evolution of complex life. "Selfish DHA" created the sense of vision and the development of the brain in all eukaryotes. Vision and the brain evolved in the sea. In all vertebrates studied so far, DHA is the essential fatty acid constituent of the brain. Absorbance of a quantized amount of the energy in sunlight is precisely that amount which will flip the direction of the bonds polarity to the opposite direction in a molecule of DHA. In other words, no change happens in the quantized molecular structure. In response to a photon, a bond flips in the neural network of the eye. 'Flipping' in response to incoming light is the basis of the photon energization of retinal. From this small action, vision and neural networks become possible. This is how the quantum mechanism works. In DHA, the arrangement of the double bonds with this CH=CH group 'flipped' creates a conformation change similar to conjugated double bonds, and it

turns out that conjugated double bonds can store energy in the ultraviolet to visible range of the electromagnetic spectrum, which is the range of vision across all species. **This is not parsimonious, but it is how nature rolls.**

Evolution is not a RNA/DNA event. It's not even a gene event. It is a quantum event tied to the three variables present on Earth in the beginning. The photoelectric effect, water chemistry, and the native magnetic field.

It is an electromagnetic spectrum affect on electron and proton movement in a symmetry breaking event. Simple. As Einstein said, "when you are out to describe the truth, leave elegance to the tailor."

Just reading this blog should make scientists' heads explode because they have had the recipe wrong for so long. It won't surprise Dr. Nei or Gilbert Ling. They have been saying this for 50 years or more while the believers kept listening to priests, like Dawkins, who were busy carrying on for the pope, Darwin. I just stumbled into their work and deciphered it.

Physics dictates biology at all scales, even the biological ones.

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