

# EMF 8: Quantum Bone

## Readers Summary:

1. How does physics meet biology and chemistry
2. What organ system can we use to show semiconduction in humans?
3. Does bone glow light when it regenerates?
4. What is the Schumann Resonance and how does it work?
5. What is the DC healing current of humans, and where is it located?

*How can the events in space and time which take place within the spatial boundary of a living organism be accounted for by physics and chemistry? –Erwin Schrodinger*

## **How osteoporosis made me understand this complexity**

In our modern world physics continues to make inroads into the organic domains of life. It now places emphasis on non-linear phenomena removed from equilibrium, based upon quantum coherence and cooperativity, which are the hallmarks of the biologic domain.

It is the enigmas, the mysteries, and paradoxes of life, that take hold of the imagination, leading it on the most exquisite dance. The quantum dance of life.

Osteoporosis, for me, was the first and best example to explain to you the basics of human quantum biology. My observations from my clinic were pretty obvious over a 10-year span. It seemed everyone had some level of the disease if we looked for it. No one was normal on their MRI or blood chemistry workups in my clinic, and I wanted to know, was Wolff's law null and void for some reason in our modern world?

The key point of Becker's work for me was that for the first time in man's history a biologic system was shown to use semi-conduction as its main power source of action. Before Becker, we had two types of current conduction ideas, metallic and ionic. Metallic currents were the domain of electricians and solid state physics and well studied. Ionic currents are based upon large ions moving current across a membrane and were well studied in cells, but they suffered from short duration poor propagation distances in cells to be used for signal transduction especially in the central nervous system. The third type was semiconduction which allowed for massive changes in conduction with very small changes in physics and it was discovered in labs in the 1930's but few biologists understood how it worked because it works on quantum field theory which was felt to be too ridiculously difficult to be used in cells. When Becker found bone semiconduction in the 1950's and 60's this was a rather shocking new finding. **It was so new, that no one paid attention to what he found.** If they would have it likely would have altered the manner in which bio-energetics and information transfer in biology were studied even up until today. I learned about his work in the mid-1980's when I was in dental school studying to be an oral surgeon and it continued in my training in neurosurgery at LSU.

This should have stopped all biochemists dead in their tracks when he did but all of them were married to Mitchell's thesis. Semiconduction only occurs in materials having a very orderly molecular structure, such as crystals, in which electrons can move easily from one electron cloud to another around one nucleus to cloud very close to one another. The atoms must be aligned in a precise geometric lattice rather than a random jumbled display of atoms that are found in most liquids and solids. Some of the crystalline materials have spaces in their lattice structure where other atoms can fit. The atoms of these "other impurities" may have more or fewer electrons than the atoms of the lattice material. Forces in this

lattice structure hold the same number of electrons in place around each atom. The extra electrons of the impurities then become free to move across the crystalline structure at the speeds of light especially when very small currents are placed across this molecular arrangement. This is where grounding and light photons from the photoelectric effect affect liquid crystalline structures in cells. The number of electrons in the "impurity atom" also determine which structure will act as a positive or a negative (PN) part of the semiconductor. Semiconduction is not explained using the math of ATP hydrolysis or modern biochemistry.

In fact, it does not use ATP hydrolysis as its main action. This should have made biology ask better questions back then, but they did not. In fact, when this was published in the late 1960's, no one paid much attention to it because the biologic community was not ready for the thought of semiconduction. The idea of diodes in living bone seemed completely ridiculous. Maybe that is why so many in the paleosphere cannot believe what I am currently pointing out in this very series too? Most people who heard about Becker's work ignored it because it seemed so far-fetched. Becker and Bassett actually never bothered to publish follow up experiments because of the response they got from the literature of their day. Here is another reason to beware of the literature that, some in paleo, hang all their knowledge on. In my opinion, it's not a good idea to get to Optimal.

In the mid-1960's solid-state devices were only beginning to hit the marketplace and none of the initial designs had used PN junctions most interesting properties for industrial exploitation. When the tech industry did, they began to pass current through the PN junction and found that the current made **it glow**. These junctions today are called LED's, or light emitting diodes. They are in every tech product built now. Becker found bone worked precisely like an LED does when no LED's existed yet! Like any PN junction, it required an

outside source of current to release its own light to generate an endogenous photoelectric effect. They could not see the light but they felt its heat in experiments. They checked on the heat generated and found out that bone gave off a blue UV light signal when they used proper instrumentation. This is why kids with **osteogenesis imperfecta** have blue bone, sclera, and teeth when you see them at surgery or in a dental chair. Bone was blue colored and collagen flickered a dull brick red in their experiments. This is when they did something cool because they found an unusual discrepancy. They combined the fluoresced light from collagen with that of the apatite; they were expecting to see a fluoresced light from the whole bone **but did not**. They knew right away that there had to be something else in the bone matrix to block this light for a reason. For three years they could not explain it. Then the semiconductor industry found there to answer, in static state electronics in a process called **doping**.

## What is doping?

Tiny impurities in a semiconductor can change its characteristics enormously. It does this by altering the number of electrons in the electron cloud in the crystalline lattice. That is what doping does. You can alter electromagnetic properties of semiconductors by altering the atomic lattice with ions. It changes the **dielectric point** of the semiconductor in some fashion. In general, the polarization of a dielectric material is a microscopic electrostatic strain in response to a macroscopic electrostatic stress. An external field applied to a dielectric can't make charges move macroscopically, but it can stretch and distort them microscopically.

They looked first at the trace elements in bone. Copper, lead, silver, and beryllium were all known to bond to the bone then. Beryllium miners had a high rate of osteogenic sarcoma, a deadly bone cancer because beryllium removed the normal cell

control of the p53 gene. This unleashed the osteocytes growth potential to cause cancer. Strontium 90 did the same by strongly binding to bone and slowly releasing its ionizing radiation into the bone. They knew some ion was incorporated into the bone to change its electrical properties to convert the bone light to an electromechanical signal in the periosteum of the bone. Basically, photoelectricity (photoelectric effect) went into bone was rectified via "p" and "n" semiconductors and light is remitted to the environment around the bone semiconductors. When they saw light in the bone they were surprised. They used electron paramagnetic resonance spectrometer to find if any mineral was washed out. Once they found the mineral was **copper**, they found it fit into a tight little pit in both collagen and apatite and it caused the component parts of bone's living matrix to change its vibrational resonance to change the physiologic effects capable in both materials. This formed a mortise and tenon joint on the surface of the bone.

**Key Quantum Point:** Electrical forces held the copper in place and they were **subject to the Earth's magnetic field**. In reality, what they discovered was the atomic location of the PN junction of the semiconductor. The P is the positive side of the semiconductor and the N the negative side.

This turned out to be important to me because no one knew how apatite fixed to bone back then. This was the way Mother Nature did it. It explained osteoporosis in a new light to me, in which, the apatite falls off the collagen and the bone degenerates by losing its collagen latticework. This is called decalcification. It appears the magnetic field controls the electrical binding of apatite to collagen and nothing else. **This explained why the cosmonaut lost his bone in space on MIR, and why my patients in the clinic were also getting osteoporosis.**

There was no magnetic field to hold the copper in its electrical binding spot in space. This is also why we see

these effects in osteoporotic bone here on Earth. **So the real cause of osteoporosis is a loss of copper in the PN junction of the semiconduction system.** This implied to them that as one ages the bone must lose its electromagnetic binding forces to allow the copper pegs to fall out. This meant there had to be a change in the electromagnetic system of the environment for this to occur. For the cosmonaut the answer was easy, he was in space. For my patients in clinic, it meant our world had to be quite different electromagnetically. It appears pulsed EMF blocks the normal magnetic field of the Earth. No mention was made of ATP in any of these experiments to power this system.

**Everyone Unite:** Becker instinctively knew this would be a problem in long-term space travel because humans could lose up to

20{a7b724a0454d92c70890dedf5ec22a026af4df067c7b55aa6009b4d34d5da3c6} of bone quickly, but once you got past that amount, the calcium released into the blood would cause neural and muscular deficits in astronauts. He believed this is what killed 3 cosmonauts in June of 1971. There was also the effect of zero gravity of space, on blood, which makes the heart "heavier", and as a result, fluid, ions, including calcium, are removed from the blood and deposited in cells, causing massive inflammation, disease, and death. Exercise only made it worse in space because this was an electromagnetic effect. **This told me that exercise in humans on Earth with the same effects would have the same effect.** This is why the Leptin Rx has no exercise in it initially until you regain the ability to account for electrons/protons once again at your leptin receptor. This will allow your ATPase to spin again.

In space, they lost close to 7{a7b724a0454d92c70890dedf5ec22a026af4df067c7b55aa6009b4d34d5da3c6} of their bone even with exercise. The Russians "thought they solved" the problem in 1977 by replacing the magnetic

field of the Earth in the Soyuz 26 mission as they orbited Salyut 6 space lab for 3 months. Becker and Bassett's work on copper doping was never followed up by biology until I made my clinic observations in 2008. This is when I began to read a lot of Russian literature on pulsed EMF and space travel.

When I noticed just about every patient I was seeing had some degree of osteoporosis on Earth's surface, I knew right away it was due to the electromagnetic field on Earth directly affecting the loss of the copper doping in our bone. If you go to the national osteoporosis website you will never see this mentioned. It is like modern medicine is oblivious to this. I changed how I treated osteoporosis on a dime after this insight in my clinic.

This is when I began to look at how artificial pulsed EMF could affect semiconduction in biology in a new light. I had made a big link to why I was seeing what I saw in the clinic, and I knew it was tied to quantum field theory because semiconduction, the photoelectric effect, and PN junctions could not be explained by static physics, biology or chemistry. Moreover, this process did not use ATP as an energy source. I could not get away from this foundational paradox in biology because of what I was taught in med school. That clued me in that Mitchell's idea for ATP uses in overcoming the energy of activation were dead wrong for biology too. Today, there are still no common therapies for osteoporosis using proper pulsed EMF's coils to reverse it. The PEMF's that are being used today are in non-healing bone, however.

These bone experiments clearly showed the intricacies of nature in real time are still more than a match for our finest spun hypothesis. ***Becker's and Bassett's bone experiments showed that collagen matrix of bone acted as the N-type of a semiconductor of bone while apatite crystals were the P-type semiconductor.*** When they broke the bone down to its component parts they expect the apatite to be the P-type semiconductor

because it was the crystalline structure of bone. **Remember piezoelectric currents use crystals to generate currents in semiconduction.**

## What is a piezoelectric current?

It is the electric charge that accumulates in certain solid materials (notably crystals, bone, DNA, certain ceramics, and many various proteins) in response to the applied mechanical stress of compression or stress placed upon it. Virtually all tissues of the body generate these piezoelectric currents.

This information is then harmonically or electrically conducted through a living matrix of nanotubes that connect every part of every cell in the tissue syncytium (interstitium). The goal is to connect the system electrically to allow the body structure to completely remodel itself to loads placed upon the organism.

Becker believed that apatite would be the crystalline lattice for semiconduction in bone because it was a “hard crystal”.

Most people fall prey to that line of thinking when they visualize how biology would use a semiconductor. Their experiments showed their hypothesis was dead wrong. It was **collagen** that was the **P-type semiconductor** instead, that was the crystalline lattice. It meant that **the protein in all of our cells acts as semiconductors** in organ systems! This means they re-emit light just like an LED diode. The protein in bone is collagen. Collagen is formed as chains (short pieces of thread) which twists into triple helices (strings). These lineup and are bonded together into ropes (fibrils). The fibrils then are arranged in layers, and apatite mineral crystals (calcium hydroxyapatite) will deposit between the layers, only if **“structured water” from the perineural currents** and **copper ions** are present in a precise mortar and tenon construct to form a biologic semiconductor called a **SQUID**. Bone even uses a technique called **doping** between its positive and negative nodes using copper ions as pegs that

bond the two sites to make electron conduction almost 100% efficient for energy transference. All this was worked out by Dr. Becker in the 1950's and 60's on bone regeneration and its piezoelectric current. No one has bothered to look to use his work to reverse osteoporosis until I came along in 2008.

## **What is a SQUID?**

This is an acronym for superconducting quantum interference device. A SQUID is a very sensitive magnetometer used to measure extremely subtle magnetic fields, based on superconducting loops containing Josephson junctions. Copper acts as the Josephson junction in bone. Josephson junction allows for quantum magic to occur in cells. It is here that two paired electrons can move across an insulator to pass through it unimpeded. This is impossible to do in classic static state physics, but quite possible in the quantum world of biology. See in quantum conduction electrons can act as both particles and waves and can do things solid particles cannot do. What allows this? The magnetic field the paired electrons find themselves in. These junctions are weak links can consist of a thin insulating barrier (known as a superconductor-insulator-superconductor junction, or S-I-S), a short section of non-superconducting metal (S-N-S), or a physical constriction that weakens the superconductivity at the point of contact (S-s-S). The Josephson effect is an example of a macroscopic quantum tunneling phenomenon.

SQUIDS are now being applied to many aspects of medical research map out all the biomagnetic fields produced by physiologic processes in the body. SQUIDS are also now being applied in a global network to monitor moment to moment fluctuations in the geomagnetic field of the Earth. What we are finding out is that humans and animals are sensitive to Earthquakes before they even happen. Some scientist is even

working on how human behavior on one side of the planet can have a cause and effect relationship to events in another country. SQUIDS are being used in cardiology and neurosurgery much more frequently now because it becomes clear that all tissues generate bio-electromagnetic fields that are better representations of their physiology than surface electrical records like ECG's and EEG's. Moreover, internally generated magnetic field penetrates the surface layers of the body without noise and can go on for infinity into space. The detector sensitivity is the key to finding them in people.

The same is not true of surface electrical discharges that are affected by the electrical noise of the environment.

When Becker found the piezoelectric current in bone, we had a game changer moment in biology. The analogy I like to use is to think about when Neil Armstrong landed on the moon and made his famous statement about mankind, and then visualize or make believe that no one bothered watching TV that day in 1969. This is precisely what happened to Becker and Bassett's work in the 1960's. Becker's work went virtually unknown until the mid-2000's. The implications of his work were realized by me when I saw the incongruity of the MIR astronaut and Einstein's relativity that I mentioned to you in EMF-2. This is what should have brought quantum field theory into the mix, **but still has not**. It did for me, in 2006, because of what I was seeing daily in my spine clinic. When I realized bone was a quantum system, then I had to find out where the electric currents came from to power this energy of activation of this quantum biochemistry. I also wondered why these things were no longer working in my patients here back on Earth.

Soon I found out that this new quantum super conduction physiology **cannot** be replicated outside the milieu of the cellular environment, yet, that is precisely how bench top **modern day static chemistry and biochemistry** is done worldwide for the last 200 years. So if they could not simulate it how could they study it? I realized then I need to find

observations of this effect that everyone would know and make them aware of it. That is what I have been doing for two years on this blog. Today, I am bringing it all together for you in a human biologic condition for you to understand in all its dimensions.

Researchers work, is the cornerstone of what doctors are taught, even today in medical school. If they can not model it they can not understand it. Every physician needs to go back and rely on what Sir William Osler warned us. We would lose if we relied on machines for healthcare. My clinic observations are what got me interested in seeing if Wolff's law was really null and void. Observation and curiosity remain the cornerstone of all sciences, no matter what anyone believes.

## Let's talk current

The direct current of the body comes from the central nervous system and carries a very positive charge that can be measured. In each species of animal, we see potentials **on their skin** that are reflecting the arrangement of their central nervous system. Could this be a fingerprint of how the sun connects wirelessly to living things? Every photoreceptor in man is coupled to opsins. Sunlight builds Vitamin D3 levels. The sun seems to be imparting information to the systems in life but we ignore them. For example, in worms, there is only one area of a positive potential by its brain. In humans, the entire head and spinal region are strongly positive because of the massive amount of neurons present. In humans, the greatest positive potentials are in the brain, brachial plexus, and the lumbar enlargement because this is where neuronal density is greatest. Becker also found a direct current flowing from back to front coronal planes in the CNS in all vertebrates. It appeared that this current was coming from the animals brain stem.

# What is the Schumann Resonance?

So where does the **electric perineural system current** come from? The answer was surprising for me. The micropulsations of the geomagnetic field that come from the Earth's magnetic field **called the Schumann resonance is their source**. It is called a resonance because it is a vibration. In physics, this is how they have decided to describe it. Often it goes by the term oscillation as well because this can be used to alter a molecular bond in biochemistry. Schumann described the space between Earth surface and the ionosphere as a resonant cavity like you would see on a guitar. Standing waves are produced in the cavity when they are reflected in its boundaries. The energy for the Schumann comes in a cloud to ground lightning. On average there are 40-45 million strikes on Earth daily. These lightning pump energy into the earth-ionosphere cavity and causes it to vibrate or resonate at frequencies in the ELF range (1-40Hz). The reason it varies is that the Earth-ionosphere varies in size due to the magnetic field strength and the effect to extraterrestrial forces like solar storms, lunar cycles, and distant ionizing radiation and EMF's from space. Lightning creates standing EMF waves that circumnavigate the globe at the speed of light. They circle the entire planet 7.86 times per second. Hence, an observer on the surface will experience both a high-frequency EMF from the lightning and an ELF pulsation generated by the atmospheric standing waves. This is how things on one side of the planet immediately affect the other side of the planet. The high-frequency waves are reflected from the Earth to the ionosphere and back. This skip phenomenon is how long-distance radio communication is possible. Most EMF cannot escape the ionosphere because they are not strong enough. As electromagnetic waves go, the low-frequency Schumann vibrations can be either an electric or magnetic fields in their action. This is why we can use grounding or artificial magnets to replicate its signal. The

average frequency of the Schumann waves is 7.83 Hz. Technical reviews of this physics can be found published by Sentman in 1995 for those who find this hard to fathom.

From the Earth' magnetic signal to visible light in the EMF spectrum, the filling in of the electromagnetic spectrum is astounding as we laid out in EMF 5. In 112 years it went from close to zero to overstuffed. I had my smoking gun for the "real cause" of osteoporosis in my clinic.

## **How does semiconduction really affect us?**

Our modern electrified gadgets expose us to a variety of frequencies of EMFs. Each device emits a variety of signals and when it is plugged in and these energies are radiated into biologic tissues constantly. Some of the energy goes back into the power grid but much of it goes into and through us. Each device has on-off switches that set up transient EMF currents, pulses, or spikes that give off complex harmonics. These signal are also sent to our bodies. They must be de-modulated or their energies can affect the cells by altering calcium channels and cause molecular swelling a leptin resistant state. This alteration is what caused the osteoporosis I was seeing in every patient in my clinic. It was cause alterations in their HS CRP, Vitamin D, and sex steroid hormones when I looked. The result is random and not ordered in a population because biology de-modulates this radiation depending upon body composition. The younger and older are most affected because human life cycles offer different body compositions as it goes from infant to elderly adult. For this reason, the effect can be different in people. Moreover, the person's body composition, levels or myelin protection, hormone status, age, and surface content can affect the molecular structure and interactions and resultant biochemistry. This can give us uneven results in a

population when it is studied in a small sample size. This is how industry who sells EMF has skirted these issues so long.

These are reasons why an RCT is also a useless waste of resources because the very nature of the radiation will lead to confusing and ambiguous results.

In my clinic, I had a large representation that cut across all age groups and body sizes. I saw massive amounts of poor bone and obesity in the 5 years I watched for it closely. This is how the electromagnetic field is presently altering bone and fat cells in our modern world. One of the main tenets I got from reading Becker's work on the bone, **is that small bioelectromagnetic current could cause big harm in a short time.** He found altered mitosis in cells with very low pulsed EMF's in several animals and cell lines. This got me quite concerned about a lot more than bad bone.

It appears with pulsed EMF's that less, is often more in terms of biologic effect. Here is what most scientists and the lay public fail to realize that small changes in this system lead to massive effects. In semiconduction, small deficits in electron flow, lead to massive biologic effects. This is why Intel has to have clean rooms to limit impurities. The devil is in the details. Maybe this will explain to you know why so many of my Rx is detailed for a reason. A small increase or decrease of current leads to a massive impact in possible abilities for life. This is why altered quantum time leads to defects some of us choose not to ignore, even today. See everyone understands easily that computers can do amazing things using semiconduction. Just look at the ability of an iPad today compared to an IBM mainframe in the 1960's.  $1+1 = 4$  using the new semiconductors. The same effect happens in life. The reason Mike Phelps can do what he can is explained  $100\{a7b724a0454d92c70890dedf5ec22a026af4df067c7b55aa6009b4d34d5da3c6\}$  by coherent energy in a semiconduction circuit. You are just finding that out in this series.

This is why a loss of the photoelectric effect and the

grounding effect begins the process of physical degeneration in a biologic system. In humans, that process began when culture began telling us (meme) to wear clothes, shoes, and leave our homeland, thousands of years ago but the change was too small to notice. As the effect of culture grew, the environmental mismatches grew. What beliefs culture gave us became the beginning of our demise because we are the only mammal who can control our environment. Modern life has now added electronic pulsed EMF and fake light to the mix, and the effect is massively cumulative. This is akin to Intel allowing their clean rooms become infested with hoarders today. The biologic system is very sensitive to alterations in any small changes in the electromagnetic field. This is your new, inconvenient truth. In fact, to show you how sensitive a biologic system is to a change in the field consider what happens to a nonliving mass in our world today.

What if I told you a nonliving thing that does not eat a thing could have its mass changed just by a change in the electromagnetic field these masses exist in? Would you believe it?

Why don't you really perceive this change of nature? Why do you still think diet and calories matter? You never considered quantum field theory, is the short answer. This is why every obesity researcher on this planet is dead wrong because what they believe is false in a quantum world of biology.

Could it be the mass of the Earth has increased over the last 100 years from dust or is it something more counterintuitive? Gravity is a property of mass, mass is a function of time, and what controls both? The EMF field that both find themselves in, is the short answer. As the field changes masses change. When EMF signal strength increases in a system it forces masses in it to also change to gain weight, density, and gravity. As this EMF field continues to increase as it has on Earth over 112 years, mass is further tied to quantum time.

This is why I figured out mass had to be a function of time, as I laid out in EMF-2, pulsed EMF changes time, masses increase for life and the nonliving objects and so does the gravitational effects of life. These effects are caused by the neutrino, a quantum particle few know about. As the neutrino is altered by a field's electromagnetism, quantum time is altered for anything found in that field. Now we are back to the EMF-6 blog post for those who want to follow how I connected the dots in this riddle.

If you still think leptin resistance is only caused by diet alone, you'd be sadly mistaken. Quantum field theory can explain fully, why a change has happened in 112 years that most scientists can not. Your beliefs about the world are clouding an inconvenient truth of how the world really operates by the laws of nature and your biochemistry is part of this new EMF field. Why you get fat and lose bone is determined

100{a7b724a0454d92c70890dedf5ec22a026af4df067c7b55aa6009b4d34d5da3c6} by the electromagnetic field you live in presently.

As pulsed EMF rises in our resonant cavity here on Earth, the mass of everything on Earth will rise including "non-living" things. This is proof that the laws of the universe are at play and **not the dogma linked to diet** for living things. When the electric or magnetic field changes in our ionosphere, mass is capable of changes. This is why we would weigh differently on the planets in the solar system. The forces on those planets vary.

## **The importance of the field analogy**

Every electromagnetic field has its own vibrational (oscillations) pattern that dictates fluxes, kinetics, and biochemistry. This means how the EMF field interacts with proton, electron, and neutrons in our cells. Once the EMF changes from its base state, the Schumann vibration, then it

means all biochemical behavior must also change. This change causes molecular chaos in a system. We call that inflammation. This is complex enough and I do not want to move there until we get the foundations of just what an altered electromagnetic field does to all biochemistry. It is quite simple if you use this analogy. We all know how baseball is played at Yankee Stadium in NYC. There are 4 bases and they are at right angles to one another and there are four lines that run from home plate thru third and first base until they reach the outfield fences. So the limits of the park are well defined. This is precisely what the Schumann resonance is for life and biochemistry. It is the park that biology on life must play. When you alter that park the game changes substantially. So if we were to remove first and second base and extend right field 500 feet and place a huge sinkhole in centerfield would the game of baseball in Yankee stadium be the same as it was before these changes? I think the answer is intuitive. This change is precisely parallel to what modern pulsed EMF does to human biochemistry today. What we used to expect we no longer can expect, and when we treat people in this new realm we need to think about how the game has changed to explain what we are observing clinically. What we are observing today is now known, and quite abnormal over the last 112 years. Then we can look at the current playing field and make experiments to model what we think has happened. The Russian cosmonaut experience from MIR and his osteoporosis is such an example. My weight loss and use of CT are other examples of this observation, and the fact I have reproduced it in many people shows us we need to question our beliefs about how biochemistry now acts when quantum space/time is distorted on the surface of our planet. When the field has changes it changes everything for biology.

**So where do the currents come from**

## for our bone semiconductors?

The DC current in the perineural Schwann cells comes directly from the Earth's magnetic field. This current does not come from the brain's cortex. Becker showed this in his experiments, but few have actually read them all. His paper on piezoelectric current was one of the six papers I was given when my journey began. Moreover, Frank A. Brown a Northwestern biologist also showed how circadian signaling was ubiquitously tied to wavelike changes in metabolic functions such as wakefulness and sleep. He also claimed that the Earth's magnetic field served as the main timers for the rhythms of circadian life. Each gene in the mammalian genome has a circadian clock-regulating gene in front of it on our DNA code. This directly links quantum time to biologic time. For me, when I reviewed all this science, I knew I was on to something quite big.

This current found around the brain is massively negative in polarity in wakefulness. When an animal sleeps, exercises, or undergoes a general anesthetic it reverses its polarity of current in its semiconductors. This reversal is called the "Hall effect." **The polarity of the current is determined** `100{a7b724a0454d92c70890dedf5ec22a026af4df067c7b55aa6009b4d34d5da3c6}` **by quantum time and by the electromagnetic field the current exists in.** The Hall effect also works differently for the three different currents we find in nature. For any given magnetic field strength, the Hall voltage is proportional to the mobility of the charge carriers. Why is this big? Iron in solution (ionic current) are big ions and barely deflected by the field. Electrons in a wire (electrical current) are constrained by the wire and nature of the metal. Electrons in a semiconductor are free to move coherently anywhere, while they produce a measurable Hall effect with a much weaker magnetic field. Electrons in this system are able to move with `100{a7b724a0454d92c70890dedf5ec22a026af4df067c7b55aa6009b4d34d`

5da3c6} degrees of freedom. This is why semiconduction is so efficient for energy transfer. We call this ability to be a current in "coherence" with its surrounding field. It makes energy massively efficient.

Becker realized that the Hall effect experiment could be disrupted by a weak pulsed external magnetic field. He found in salamanders, a strong magnetic field had no effect on general anesthesia in his experiments, but that a pulsed EMF had a massive effect on it. When he really increased the magnetic field to massive levels, he could awaken a salamander from a deep anesthetic in seconds! Their EEG completely became normal, as well! After reading this, I have wondered why someone has not built a massive magnet to use this to perform anesthesia on humans with no side effects? I think the answer is money!

In surgery, I have shown anesthesiologists and CRNA's how I could disrupt semiconduction in them after one of my surgeries just using their iPhone or iPad. When you put the phone above their median nerve in surgery it blocks their own nerve semiconduction and we can use their nerve stimulators to prove it to them right then and there. This is how the Hall effect works in humans. It shocks most of the anesthesia folks when they realize that a pulsed EMF from their phone can cause anesthesia, but it can and does. This is the real reason airlines don't want you using cell phones in airplanes. I have even used my cell phone to suture up a horse's nose once without local anesthesia. This is also why anyone who says non-pulsed EMF is safe is sadly mistaken. **Simple observations in life lead to massive inconvenient truths in your knowledge base.**

Since Becker only used the small magnetic field to generate these effects in his experiments, I wondered how the Earth's magnetic field could impact circadian signaling? The Earth's field is only about 0.5 gauss in strength and it varies in seasons. Then Becker did something amazing. To see how his

work and Brown's connected, he froze the nerves with the liquid nitrogen they were studying. Here is where cold thermogenesis was born in my mind. He theorized if you froze the nerve, you could prove it was not the ion conduction in nerves responsible for the DC current. In cold, ionic currents go to zero voltage. In semiconduction, cold increases semiconduction current! If cold increases conduction of energy in semiconduction, and we are made of semiconductor, then this is precisely how life survives at extinction events.

This meant I needed to learn about phase transitions in things that provided life with the ability to semiconduct.

This is why CT is not hormetic in an environment with an altered magnetic field.

When you hear a "leader" say it, it means he does not realize we are quantum beings. You must begin to question a lot of what they believe too. **The environment of the Earth's magnetic field controls our DC current that is found in the perineural tissues of our Schwann cells.** These nerve fibers run to the periosteum directly and provide our bone's covering with its current. So that covers the periosteal perineural DC current and it explained completely why the cosmonaut lost his bone so quickly on MIR. You had to understand semiconduction and quantum field theory to understand what happened to him. You now understand how **Quantum Bone** works in humans. Next, we dive into the "structured water" in that perineural system, that is where the quantum dance of bioenergetics happens that powers all biochemical reactions.

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- [EMF 6: Quantum Time](#)
- [Vitamin D: The Sunshine of Your Life?](#)
- [Cold Thermogenesis Protocol](#)
- [The Osteoporosis Rx](#)

## Cites

- [Becker, Einstein, Schrodinger, Bohr, Bassett, Marino, Russian space program, NASA, and my curiosity.](#)