UBIQUITINATION 22: HOW DO PLANTS CONTROL THEIR GROWTH PROCESS?

READERS SUMMARY:

1. HOW DO PLANTS DO WHAT HUMANS FAIL AT?

2. HOW DOES OUR SKIN, EYE, AND GUT DETERMINE WHAT HAPPENS IN MITOCHONDRIA?

3. WHAT REALLY CAUSES CONSTIPATION ?

4. HOW DOES LIGHT MAKE WATER A LASER?

5. HOW DOES THIS EXPLAIN LEPTIN RESISTANCE?

In Ubiquitination 21 we began to talk about how plants connect to their environment 100% of the time to generate their energy free of food using water and sunlight and CO_2 from the air as their major source of carbon.

HOW DO PLANTS CONTROL THEIR GROWTH PROCESS?

Plants and trees differ from animals because they can't move fast across tectonic plates. Movement creates a much larger "GPS timing" problem for animals that plants and trees don't have to face. Plants put in these type of fast growth and high light environments (ex: a magnolia tree) adapt the position of their leaves by inclining their leafs away from the sun and reflecting the incoming solar radiations to avoid higher temperatures. Also note how the outermost leaves are dehydrating and browning because they cannot overcome the 102 degree temperature today with stomatal conductance. Note the leaves close to the bark are quite green and healthy. The tree cannot move but the angulation of the leaves can be altered based upon the UV power in the sun's light. This

angulation change also directs water flows directly to the root system when we get our daily deluge’s down here on the bayou.

My Magnolia tree outside my home in August in the French Quarter. You can see leaves browning and falling from tree in summer. This is how a high ubiquitin tree manages intense solar light to control its photosynthetic capacity. Note the direction of the leaves toward the roots.

Higher temperatures = lower photosynthetic capacity and efficiency = less magnetic flux from the root system. These alterations in magnetic flux are controlled by a protein family called auxins. I mentioned them in the last blog. Plants never lose the negative feedback control of auxins creation in the root system, hence they never get cancer or uncontrolled growth in their leaves or woody bodies. Today, in Colorado, artificial blue light frequencies are now driving the high tech pot plant industry in Colorado. They do not have ideal growing conditions for human year round demand so this industry is now using fake light to support the human habit. The “pot industry” is not going to challenge that natural connection in their indoor blue lit growing chambers because it fattens their cash flow, as their plants grow more buds to sell.

Hi tech weed regions are the rage

In this high solar powered environment, lower temperatures are better tolerated, and this is why plants do not get cancer. They are never really disconnected from their solar and water battery totally. Their canopy is always in the sun and their

roots are always in the ground. Animals are always disconnected to some degree because they are not fixed to either part of their environment. Animals can be made to live decades, disconnected by their environments. This is why animals will migrate great distances. Most people believe migrations are dictated by food but most are tied to water scarcity.

The concept of animal migration is typically associated to the wide-ranging movements of flying or terrestrial animals, like the epic voyages of Serengeti wildebeests or the migratory flights of the billions of Passerine birds that every autumn move towards low latitude areas to winter. However, the marine environment also offers amazing examples of long-distance migrations, with a variety of animals that can even cross entire ocean basins to reach profitable foraging grounds, ideal water temperature for their biology, or suitable breeding areas for reproduction. Instances of extended migrations are known in the main groups of marine vertebrates (pelagic fishes, marine turtles, seabirds, pinnipeds, cetaceans)

Humans can really push the “disconnection envelop” furthest of any mammal, and this is why we get more cancers than any other animal. We create our own environment and no longer live in the wild one we evolved in. It drives our rate of ubiquitination quite high when we do not see sunlight or have adequate water. In this way, modern humans mimic the magnolia above, but we don’t have the ability to alter our surface chemistry as the plant does when we are around an environment with chronically high powered blue light and non native EMF. These environmental situations disconnect us from small molecular weight proteins in our gut that monitor our surfaces in our eye, gut, and skin.

Our surface chemistry mimics was happens in leaves. We can

see evidence of this breakdown in the morphology of mitochondria below our surfaces. What occurs on these surfaces drives quantum decisions in mitochondria called fission and fusion. These two processes are controlled by small proteins in much the same way auxins control plants bio-energenics.

CONSIDER THE EYE CLOCK SURFACE:

The reason is because it ruins the GPS like workings of the SCN optical lattice clock. Most undomesticated wild animals do not get cancer because they do not control their own environment. Humans and their pets, however, do control the level of disconnection from their mammalian battery so this is why they get cancers more frequently. Auxins not only link to our mitochondrial capacity and density, but they also link our gut microbiome to our immune system in the gut associated lymphatic tissue (GALT). What are "auxins correlate proteins" in the human gut? Some are short chain carbohydrates, hydrogen gas release, molecular oxygen levels, and the amount of UV light liberated from bacteria and from enterocytes. Hyperlink

What does blue light and non EMF do to mammalian cells on all our surfaces? They cause dehydration and increase positive (lowering pH) charge by eliminating DHA from our surfaces. Anyone who has microwaved a steak to warm it up knows what this does to animal tissues when they try to eat the leathered steak. DHA in cell membranes and tissues allows mammals to maintain their net negative charge in proteins, lipids, and water which allows them to constantly remain charge separated into exclusion zone of water (EZ). The EZ is a function of the dielectric constant of water.

The dielectric constant describes the ability of a material to store energy, whereas, the loss factor defines energy dissipation of a material. Water has the highest dielectric constant of things used in a cell or in blood plasma at 78. When our tissues become dehydrated for any reason, much like

my magnolia tree above, this alters the surface tension in cells. In plants it reduces photosynthetic capacity and dehydration in us also lowers our ability to store and use energy. This is why with every degree our temperature rises our metabolic rate increases 13%. We lose our energy efficiency just as a plant would. Mitochondria and leaves work on the same principles but people rarely observe this homology. In the gut, when dehydration is present, most people correlate that with constipation. Constipation results from a change in surface tension in enterocytes. Any surface chemist will confirm to you that when surface tension changes so does surface free energy. If you look you will find thousands of papers in the literature showing you how light and lasers affect the wet-ability of surfaces. This is measured by the work of cohesion/adhesion. The light that drives this process comes from your microbiome. Bacteria are known to release massive amounts of light energy compared to eukaryotes. This light can alter the surface of the gut to store, transfer, or maintain energy for life's processes. When you consider that the GALT sits right below this layer it should begin to make sense to you why all autoimmune diseases are the result of a loss of optical gate signaling in this quantum dance on your gut surface.

Biochemistry of deeper cells below the skin and our gut is 100% adaptable to the surface interaction of light above with water. I mentioned that long ago in the Exercise Rx blog.

It seems everyone knows water expands when it freezes. *Do you know why it does that, when literally nothing else in the world does?* Life breaks rules, because water breaks the rules of symmetry in nature's laws of thermodynamics with respect to its interaction with light. Just because healthcare and researchers in biology remain in the dark about all this published work doesn't mean you should. Have a read of Dr. Pollack, Del Giudice, or Martin Chaplin's experiments. It also means you have an opportunity to help yourself way before

modern science can. **You don’t need expert opinions on nature’s facts, says Mother Nature!!!**

ARTIFICIAL VERSUS NATURAL LIGHT:

When that light at our surfaces is not full spectrum sunlight but an artificial light of partial spectrum, this results in higher ubiquitin marking rate in cells below that surface. The dielectric constant in water is quite high for a deep reason at 78. This allows water to act as a batter for natural visible sunlight. This is why water is central to all living things. When you microwave yourself or your food and you allow a a toxic amount of blue light to hit your retina, gut, and skin. When you allow this environment to affect his cells chronically simultaneously you are removing potential energy from your life equation. Life pays that toll for energy loss. People do not realize how small the visible spectrum of sunlight is within the entire electromagnetic spectrum. Have a look at the picture below.

SO HOW DOES LIGHT LINK TO THE OTHER SUBATOMIC PARTICLE THE MITOCHONDRIAL MATRIX?

How does light and proton conduction link together fundamentally? The absorption of photons from light frequencies at 1538.5 nm and this increase the probability of proton transfer in cell water. Why? This frequency of light brings protons closer together to make entanglement and tunneling much more likely in the mitochondria. This ability affects mitochondrial capacity and density. We can measure this ability in the ratio of fusion to fission events in mitochondria. It is reflects in the size and shape of

mitochondria. I spoke about this ability in Ubiquitination 5. This has been shown in water research by Emilio Del Giudice, Giuliano Preparata, and many others in the Russian literature. ***Dr. Del Giudice called water a free electric dipole laser that collects its power from natural sunlight.*** When natural sunlight is absent, it also affects venous oxygen levels in blood plasma (drops) and adversely affects CO_2 levels in blood (they rise with a high pH). Light frequencies alone are capable of altering O_2 tensions and saturations in blood without any passage through the lungs. This is why my friend Jeremy Thomley, who has cystic fibrosis, thrives in outdoor suuny environments when he climbs rock formations all over the world. Pollack's experiments have shown us a *lower pH destroys* the EZ in water. CO_2 is another optical signaling compound that gets electrons to the place where they need to go when natural sunlight, and not artificial light is the dominant light source for a living thing.

The EZ allows water to give up its protons to make protonicity, or proton conduction. It turns out that when the EZ and protonicity predominate in a cells water coherent domains are created to allow for massive energy flows in a cell to be done using quantum mechanical means. *This allows for a major reduction in the need for ATP.* ***This is why low level laser therapy (LLLT) produces ATP with no glucose intake, hence why I have concluded that it's all about light, and not about food.***

The key to light is timing and frequency. The right light at the right time of day and year is the critical piece biology is missing today. It never starts with food, it always begins with light.

Why is this a critical difference in eukaryotes compared to

the prokaryotes in our microbiome? Eukaryotes spend 80% of their total energy budget on protein synthesis. That process is controlled by ubiquitin marking. This is why you need to understand ubiquitin recycling. It is a core concept in my Quilt document. It links all 30 levees of the Quilt.

Once you master the ubiquitin process and recapture its energy, you can use that recovered energy to reverse illnesses. Remember ubiquitin concerns itself with protein recycling speeds. Each peptide bond in proteins requires 5 ATP to seal the bond. That amount is 5 times as much that is needed to polymerize nucleotides into DNA!! The cost is massive to a cell which is why we want protein turnover well controlled. Each protein is reproduced in thousands of copies, which are continuously turned over by ubiquitin to repair wear and tear. When water is in EZ form, it makes protonicity explode to drive chemiosmosis (protons) without any need for ATP. *As a result the net requirement for ATP in cells drops dramatically.*

This is why Gilbert Ling has argued with Peter Mitchell for 50 years. He was right, but not with enough scientific precision. Pollack fine tuned Ling's original brilliance. The reason is that the large net negative charge of the EZ can be used to drive the electronics in a cell work on a time scale shorter than a cycle of light. ***This shows you that mammals are capable of creating energy from water just like plants can.*** The process steps are not identical but the ultimate output is. Recently researchers have shown light can travel through solids by driving electrons along multiple paths, reshaping the temporal emission of the harmonics, allowing information to be relayed in one quintillionth of a second. Does absorption of photons from light at 1538.5 nm increase the probability of proton transfer in cell water? I believe it

does, because of non linear optical mechanisms. This is why the MINOS around the respiratory proteins is a key part of the mechanism of energy harvest in us. **The MINOS become's EZ and this excludes protons to create a massive gradient of them in the mitochondrial matrix without any needs for ATP.** *This is how the respiratory proteins in mitochondria work, in my humble opinion.* This is yet, another quantum phenomenon that was thought to be "fragile" in lab experiments, but has been shown to be quite robust. Scientists are finding out that Mother Nature uses all of quantum mechanics tricks to her abilities in things that are living. We are just 'late to her party' in understanding her ways.
Fascinating stuff science can be. Science, the real science of nature usually is. Nature is brilliant in her design. The stuff we used to think is true just needs to be discarded and refurbished with new truths we uncover. The examples are in journals books and video's, but the key is making sure the ideas in you mind also keep up with that pace of discovery. More often than not beliefs lag behind the leading edge of science and in that lag is where paradigms become established. Most people beliefs about their world chains them to paradigms.

SUMMARY

Inflammation = positive charge = lower pH= leptin resistance = lack of electrons = lack of O2 = lack of DHA. When dehydration and temperatures increase, water chemistry changes, pH drops. A lowered pH decreases the charge separation of water in a cell and this discharges the mammalian solar battery. Why? The EZ gets smaller, proton conduction drops and you need more ATP to run biochemistry when your ubiquitin ratio's are kept high for any reason. This process has another name in biology. When all this happens in a mammal it is called leptin resistance. This is where the Leptin Rx came from. The leptin Rx is a light mediated ubiquitin Rx fundamentally to control protein turnover. Eating more proteins actually helps us limit protein turnover to save energy. ***It was never about***

food and has always been about the light. The key to light is timing and frequency. The right light at the right time of day and year is the critical piece biology is missing today. It never starts with food, it always begins with light. Light action is behind the mechanism of the Leptin Rx. Light is always linked to proper ubiquitin functioning to conserve energy for cells and extend life to avoid illness.

Photosynthesis is the key to quantum biologic understanding in mammals. This is the reason why I tell all my members to read Jim Al Kalili's new book, 'Life at the Edge'. Here, he chronicles why physicists like himself could not believe that leaves are nature's "quantum computers" in warm and wet environments. It turns out cytochromes and respiratory proteins in our skin, eye, gut's mitochondria are quantum computers as well. No one in physics before 2007 believed this was possible because all quantum systems before this were studied in cold dry environments. Science evolves, and our beliefs must also. The chemistry at surfaces is revolutionary to biologic understanding.

CITES

http://jcs.biologists.org/content/127/2/388.long
"Real time observation of interfering crystal electrons in high harmonic generations of light, Nature. Vol 523 July 30, 2015

Life at the Edge, Jim Al Khalili 2015

Ling, Gilbert N. (2001). Life at the cell and below-cell level : the hidden history of a fundamental revolution in biology (Original ed.). [Melville, NY]: Pacific Press. p. 368. ISBN 0-9707322-0-1.

Ling, Gilbert N. (1984). In search of the physical basis of life. New York: Plenum Press. ISBN 0-306-41409-0.

Light Sculpting Light, Roeland van Wijk 2014.

The Fourth Phase of Water, Gerald Pollack 2014

Ling, Gilbert (2007). “History of the Membrane (Pump) Theory of the Living Cell from Its Beginning in Mid-19th Century to Its Disproof 45 Years Ago – though Still Taught Worldwide Today as Established Truth” (PDF). Physiological Chemistry and Physics and Medical NMR 39 (1): 46–49.

Ling, Gilbert (2007). “An Unanswered 2003 Letter Appealing on Behalf of all Mankind to Nobel Laureate Roderick McKinnon to Use His Newfound Fame and Visibility to Begin Restoring Honesty and Integrity to Basic Biomedical Science by Rebutting or Correcting Suspected Plagiarism in His Nobel-Prize-Winning Work” (PDF). Physiol. Chem. Phys. & Med. NMR 39: 89–106.

Ho, Mae-Wan (2011). “Electronic Induction Animates the Cell”. Institute of Science in Society (52). ISSN 1474-1814.

Ling, Gilbert; Gerard, R. W. (December 1949). “The normal membrane potential of frog sartorius fibers”. Journal of Cellular and Comparative Physiology 34 (3): 383–396. doi:10.1002/jcp.1030340304. PMID 15410483.

Ling, G.; Gerard, R. W. (December 1949). “The influence of stretch on the membrane potential of the striated muscle fiber”. Journal of Cellular and Comparative Physiology 34 (3): 397–405. doi:10.1002/jcp.1030340305.

Ling, G.; Woodbury, J. W. (December 1949). “Effect of temperature on the membrane potential of frog muscle fibers”. Journal of Cellular and Comparative Physiology 34 (3): 407–412. doi:10.1002/jcp.1030340306.

Ling, G.; Gerard, R. W. (December 1949). “The membrane potential and metabolism of muscle fibers”. Journal of Cellular and Comparative Physiology 34 (3): 413–438. doi:10.1002/jcp.1030340307.