I am glad and excited to contribute to the TKMT 420 knowledge database.

I am a 420 research info collector linking a possible synergy between

- The Endocannabinoid System,
- The Brain Gut Axis
- The Human Microbiome
- Synergistic ECS-Brain Gut Microbiota Species.

My goal was present possible links (crosstalk) between Human Microbiome and Endocannabinoid System via the Brain Gut Axis and 2 examples of synergistic ECS gut microbiota.

- The Human Microbiome Intro
- The Endocannabinoid System
- Endocannabinoids in the Gut
- The Role of ECS and Synergistic Gut Microbiota via the Brain Gut Axis

- 2 Examples of helpful Synergistic ECS-Gut Brain Microbiota
  - Lactobacillus Acidophilus
  - Akkermansia Muciniphila

- Connection between cannabis, mango fruit, synergistic Akkermansia Muciniphila microbiota and gut brain health.
- Vitamin Weed & Life Style, Super Foods, Milk Kefir, Hemp Seed, Raw Cannabis Juice
- Synergistic Probiotics and Foods promoting ECS Brain Gut Health
- Body, Colon Cleanse Detox

Sunny Kwan

https://www.youtube.com/watch?v=mo6w9i69nkw
Our gut bacteria play a critical role in keeping us healthy by:

- making us vitamins
- breaking down complex foods
- energy recovery
- strengthen the gut barrier
- host defense
The next time you look in a mirror, think about this: In many ways you’re more microbe than human. There are 10 times more cells from microorganisms like bacteria and fungi in and on our bodies than there are human cells.

You Are Mainly Microbe… Meet Your Microbiome
https://www.youtube.com/watch?v=4BZME8H7-KU

You are your microbes - Jessica Green and Karen Guillemin
https://www.youtube.com/watch?v=1X8p0vhsWRE

What is the human microbiome?
https://www.youtube.com/watch?v=YB-8JEo_0bl

What is the Microbiome?
https://www.youtube.com/watch?v=G38O7qmQzVI

Mind-altering microbes: how the microbiome affects brain and behavior: Elaine Hsiao at TEDxCaltech
https://www.youtube.com/watch?v=FWT_BLVOASI
The endogenous cannabinoid system, named after the plant that led to its discovery, is perhaps the most important physiologic system involved in establishing and maintaining human health. Endocannabinoids and their receptors are found throughout the body: in the brain, organs, connective tissues, glands, and immune cells. In each tissue, the cannabinoid system performs different tasks, but the goal is always the same: homeostasis, the maintenance of a stable internal environment despite fluctuations in the external environment.

Cannabinoids promote homeostasis at every level of biological life, from the sub-cellular, to the organism, and perhaps to the community and beyond. Here’s one example: autophagy, a process in which a cell sequesters part of its contents to be self-digested and recycled, is mediated by the cannabinoid system. While this process keeps normal cells alive, allowing them to maintain a balance between the synthesis, degradation, and subsequent recycling of cellular products, it has a deadly effect on malignant tumor cells, causing them to consume themselves in a programmed cellular suicide. The death of cancer cells, of course, promotes homeostasis and survival at the level of the entire organism.
[ECS: Endocannabinoid System]

[“An Introduction To Cannabinoids”: The Kootenay’s Medicine Tree Talk]
https://www.youtube.com/watch?v=I1M2gqwHO74

[CANNABIS BASICS - THE ENDOCANNABINOID SYSTEM]
https://www.youtube.com/watch?v=Z-OEpwgv6aM

[Introduction to the Endocannabinoid System]
https://www.youtube.com/watch?v=Zm-HGz9fJ4w

[Your Endocannabinoid System Explained]
https://www.youtube.com/watch?v=PZyJf0t2OQ

[Your Endocannabinoid System - What it is, how it works]
https://www.youtube.com/watch?v=RwTCJkJwOxw

[The Endocannabinoid System - Part 1 of 5: Introduction]
https://www.youtube.com/watch?v=S09JIBVV4Kk

[Understanding the Endocannabinoid System in Autism & Its Implications for Therapeutics]
https://www.youtube.com/watch?v=s8Cblvd8p4Q

[Visualization of the endocannabinoid signaling system]
https://www.youtube.com/watch?v=jznQfMj9RWM

[The Scientists’: the story of Raphael Mechoulam and the endocannabinoid]
https://www.youtube.com/watch?v=oQDJ6Jb8d4

[Cannabinoid System in Neuroprotection, Raphael Mechoulam, PhD]
https://www.youtube.com/watch?v=c8EdQHWhAT8

[Dr. Raphael Mechoulam on the endocannabinoid system]
https://www.youtube.com/watch?v=n3kiwTABag

[Dr Raphael Mechoulam 6 17 14]
https://www.youtube.com/watch?v=QWw9YI_mz6g

[The Endocannabinoid System Scientific Understanding of ECS]
https://www.youtube.com/watch?v=IrM62Y1OdVY

[Cannabis Science -- The Endocannabinoid System]
https://www.youtube.com/watch?v=Axqa4h6BNSg
Gut barrier function and intestinal permeability have recently been studied to improve with administration of probiotic bacteria by increasing levels of certain endocannabinoids while decreasing others. Hence, it is clear that the interactions between the gut microorganisms and the endocannabinoid system can act as either “gate keepers” or “gate openers” for gut-barrier function. Improving this gut-barrier function via both the microbiome and the endocannabinoid system has been shown to improve fat tissue metabolism, blood sugar response, energy balance, inflammatory response and overall health.

While there is still much more to learn about the roles of modifying specific gut bacteria, their metabolites, and their effects on the bioactive lipid components of the ECS, there is irrefutable evidence of a ‘gut-endocannabinoid axis’ akin to the ‘gut-brain axis,’ and it remains clear that any health benefits obtained by using probiotics and prebiotics involve the endocannabidiome. This is yet another example of the complex interplay involving systems biology and the ECS.
About 25 years ago, researchers discovered the cannabinoid receptor 1 (CB1) and cannabinoid receptor 2 (CB2). Activation of these receptors accounts for the majority of the actions of the main psychoactive constituent of cannabis Δ^9-tetrahydrocannabinol (THC). About 25 years ago, researchers discovered the cannabinoid receptor 1 (CB1) and cannabinoid receptor 2 (CB2). Activation of these receptors accounts for the majority of the actions of the main psychoactive constituent of cannabis Δ^9-tetrahydrocannabinol (THC).

The CB1 and CB2, their ligands N-arachidonylethanolamine (anandamide) and 2-arachidonoylglycerol (2-AG), and the enzymes that synthesize and degrade them are the major components of the endocannabinoid system (ECS). Our knowledge of the ECS has increased exponentially in recent years and we now appreciate its roles in the brain–gut axis and gut pathophysiology.

The actions of the ECS appear to be largely homeostatic, contributing importantly to the regulation of motility and inflammation in the GI tract. However, activation of CB1 in the intestinal epithelium also contributes in what appears to be a maladaptive fashion to the development of metabolic disease and obesity. In the central nervous system (CNS), the ECS is involved in the pathophysiology of stress.
[The Role of the Endocannabinoid System in the Brain–Gut Axis]

[The Gut-Brain Axis Demystified]
https://www.youtube.com/watch?v=k7jvaLXXKkc

[Brain-Gut Axis: The Effect of Intestinal Microbiome on Mental Health" - Dr Emily Deans]
https://www.youtube.com/watch?v=taE2HUyHwXg

[Crosstalk between the gut microbiota and the endocannabinoid system]
http://www.clinicalmicrobiologyandinfection.com/article/S1198-743X%2814%2960970-8/fulltext#cesec50

[The endocannabinoid system and gut-brain signalling.]
https://www.ncbi.nlm.nih.gov/m/pubmed/17904903/?i=2&from=/22269477/related

[Gastrointestinal endocannabinoid system: multifaceted roles in the healthy and inflamed intestine.]
https://www.ncbi.nlm.nih.gov/m/pubmed/18671715/?i=6&from=/21481098/related

[Cannabinoids and the gut: new developments and emerging concepts.]
https://www.ncbi.nlm.nih.gov/m/pubmed/20117132/?i=2&from=/17904903/related

[Cannabinoid CB2 receptors in the gastrointestinal tract: a regulatory system in states of inflammation]
http://onlinelibrary.wiley.com/doi/10.1038/sj.bjp.0707486/full

[Cannabinoid receptor 1 in the vagus nerve is dispensable for body weight homeostasis]
The role of the endocannabinoid system in the brain–gut axis

Interactions between gut microbiota and the endocannabinoid system

http://www.clinicalmicrobiologyandinfection.com/article/S1198-743X%2814%2960970-8/fulltext#cesec50

The gut microbiota and the endocannabinoid system: impact of prebiotic-induced changes in the gut microbiota.

(a) Obesity (nutritional or genetic) is associated with changes in the gut microbiota composition. In this pathophysiological situation, the endocannabinoid system tone is found to be overactive in the colon and in the adipose tissue (higher NAPE-PLD mRNA, CB₁ mRNA expression and N-arachidonylethanolamine tissue content, lower FAAH mRNA expression). This phenomenon is associated with the development of gut permeability, metabolic endotoxaemia and with altered adipose tissue metabolism (adipogenesis).

(b) Prebiotic (oligofructose) treatment profoundly changes the gut microbiota composition as described in [14], leading to a decreased endocannabinoid system tone in the targeted tissues (e.g., colon and adipose tissue), thereby counteracting gut permeability and metabolic endotoxaemia.
Abdominal pain is common in the general population and, in patients with irritable bowel syndrome, is attributed to visceral hypersensitivity. We found that oral administration of specific Lactobacillus strains induced the expression of mu-opioid and cannabinoid receptors in intestinal epithelial cells, and mediated analgesic functions in the gut—similar to the effects of morphine. These results suggest that the microbiology of the intestinal tract influences our visceral perception, and suggest new approaches for the treatment of abdominal pain and irritable bowel syndrome.

Lactobacillus has been shown to improve symptoms of flatulence but not pain in a trial with 60 IBS patients given 4 weeks of probiotic therapy. After 1 year, the probiotic group reported significantly better gastrointestinal function. Seventy-seven patients with IBS were randomized in the study from Cork to receive Lactobacillus salivarius treatment, Bifidobacterium infantis treatment or placebo therapy for 8 weeks. The group treated with Bifidobacterium showed an improvement in symptoms including abdominal pain, bloating and bowel movement when compared with placebo.
The scientists also monitored changes in their intestinal flora, a.k.a. the symbiotic, beneficial microorganisms living in their intestines that play important roles in digestion, immunity and obesity. While the intestines of obese mice have a high ratio of Firmicutes relative to Bacteroides microbes, this latest study has found that daily THC administration kept the ratio under control in mice fed the high-fat diet, in addition to preventing weight gain. Interestingly THC increased levels of another microbe, Akkermansia muciniphila, in mice fed the high-fat diet, but not in those mice on the lean diet, highlighting the complexity of factors at play.

The study theorizes that THC may be interacting with the intestinal microbes in a way that prevents weight gain. Obese individuals have higher endocannabinoid tone in their intestines and adipose tissue, meaning higher levels of endocannabinoids, cannabinoid receptors, and their degrading enzymes. Cells in certain tissues in the body produce endocannabinoids like anandamide (AEA) and 2-arachidonoylglycerol (2-AG), which go on to activate cannabinoid receptors (CB₁ and CB₂) which are involved in regulate appetite, body temperature, pain-sensation, etc.

One oxygen-shy type of bacteria that grows in the wound-healing environment, Akkermansia muciniphila, has already attracted attention for its relative scarcity in both animal and human obesity. The findings emphasize how the intestinal microbiome changes locally in response to injury and even helps repair breaches. The researchers suggest that some of these microbes could be exploited as treatments for conditions such as inflammatory bowel disease.

Obesity an infectious disease?

Akkermansia muciniphila is a mucus-degrading bacteria that resides in the mucus layer

Lower abundance of A. muciniphila in leptin-deficient obese than in lean mice

100-fold decrease of A. muciniphila in high-fat-fed mice

Everard – PNAS 2013
Synergistic ECS Gut Probiotica: Akkermansia Muciniphila

[Endocannabinoids — at the crossroads between the gut microbiota and host metabolism]
http://www.nature.com/nrendo/journal/v12/n3/abs/nrendo.2015.211.html
His research interests involve the interactions between gut microorganisms and host, with a focus on specific bacteria (for example, *Akkermansia muciniphila*) or biological systems such as the endocannabinoid system and the immune system in the context of obesity, inflammation and cardiometabolic diseases.

[Prevention of Diet-Induced Obesity Effects on Body Weight and Gut Microbiota in Mice Treated Chronically with Δ⁹-Tetrahydrocannabinol]
https://www.scienceopen.com/document?vid=533f42ec-fdde-47d0-811d-fba73e0d6780
In the current study we observed an increase in *Akkermansia muciniphila* abundance in DIO mice treated with chronic THC. *A. muciniphila* is a mucin degrading bacteria involved in the regulation of mucus in the gastrointestinal tract [39] and its abundance has been shown to increase following weight loss induced by oligofructose prebiotic consumption [40]. Everard *et al.* [40] further demonstrated that *A. muciniphila* controls fat storage and adipose tissue metabolism leading to weight loss. It is possible that the actions of *A. muciniphila* on adipose tissue may play a role in mediating the actions of THC to prevent DIO.

In conclusion, we present data showing the CB₁/CB₂ receptor partial agonist THC, induces hypophagia and prevents weight gain in obesity and suggest these actions may be mediated in part by modifications of the gut microbiota.

[Akkermansia muciniphila and improved metabolic health during a dietary intervention in obesity]
http://gut.bmj.com/content/65/3/426
**Results** At baseline *A. muciniphila* was inversely related to fasting glucose, waist-to-hip ratio and subcutaneous adipocyte diameter. Subjects with higher gene richness and *A. muciniphila* abundance exhibited the healthiest metabolic status, particularly in fasting plasma glucose, plasma triglycerides and body fat distribution. Individuals with higher baseline *A. muciniphila* displayed greater improvement in insulin sensitivity markers and other clinical parameters after CR. These participants also experienced a reduction in *A. muciniphila* abundance, but it remained significantly higher than in individuals with lower baseline abundance. *A. muciniphila* was associated with microbial species known to be related to health.

**Conclusions** *A. muciniphila* is associated with a healthier metabolic status and better clinical outcomes after CR in overweight/obese adults. The interaction between gut microbiota ecology and *A. muciniphila* warrants further investigation.

[Does oral cannabidiol convert to THC, a psychoactive form of cannabinoid, in the stomach?]
http://online.liebertpub.com/doi/10.1089/can.2015.0004
SGF converts CBD into the psychoactive components Δ⁹-THC and Δ⁸-THC. The first-order kinetics observed in this study allowed estimated levels to be calculated and indicated that the acidic environment during normal gastrointestinal transit can expose orally CBD-treated patients to levels of THC and other psychoactive cannabinoids that may exceed the threshold for a physiological response. Delivery methods that decrease the potential for formation of psychoactive cannabinoids should be explored.

[How Imbalanced Digestive Bacteria Cause Obesity & Heart Disease]
http://www.wellnessresources.com/weight/articles/how_imbalanced_digestive_bacteria_cause_obesity_heart_disease/
Obesity is characterised by altered gut microbiota, low-grade inflammation and increased endocannabinoid (eCB) system tone; however, a clear connection between gut microbiota and eCB signalling has yet to be confirmed. Here, we report that gut microbiota modulate the intestinal eCB system tone, which in turn regulates gut permeability and plasma lipopolysaccharide (LPS) levels. The impact of the increased plasma LPS levels and eCB system tone found in obesity on adipose tissue metabolism (e.g. differentiation and lipogenesis) remains unknown. By interfering with the eCB system using CB₁ agonist and antagonist in lean and obese mouse models, we found that the eCB system controls gut permeability and adipogenesis. We also show that LPS acts as a master switch to control adipose tissue metabolism both *in vivo* and *ex vivo* by blocking cannabinoid-driven adipogenesis. These data indicate that gut microbiota determine adipose tissue physiology through LPS-eCB system regulatory loops and may have critical functions in adipose tissue plasticity during obesity.
[Synergistic ECS Gut Probiotica]: Akkermansia Muciniphila

[Adaptation of Akkermansia muciniphila to the Oxic-Anoxic Interface of the Mucus Layer]
http://aem.asm.org/content/82/23/6983.short?rss=1

Akkermansia muciniphila colonizes the mucus layer of the gastrointestinal tract, where the organism can be exposed to the oxygen that diffuses from epithelial cells. To understand how A. muciniphila is able to survive and grow at this oxic-anoxic interface, its oxygen tolerance and response and reduction capacities were studied. A. muciniphila was found to be oxygen tolerant.

[Akkermansia muciniphila mediates negative effects of IFNγ on glucose metabolism]
http://www.nature.com/articles/ncomms13329

IFNγ-regulated bacterial modulators of glucose metabolism

Similar to previous reports, we observed that glucose tolerance is significantly improved in IFNγKO mice (Fig. 1a). To start addressing our hypothesis that gut microbiota is a mediator of effect of IFNγ on glucose metabolism, we first treated wild-type (WT) and IFNγKO mice with a cocktail of antibiotics that has been successfully employed in previous studies to eliminate the majority of gut bacteria to test their role in host physiology. Overall, glucose metabolism was improved following antibiotic treatment in both genotypes (Fig. 1a), which is consistent with previous findings that, as a whole, microbiota worsen glucose metabolism. Importantly for this study, treatment with antibiotics abolished differences between the two genotypes, supporting our hypothesis that microbiota mediate the effect of IFNγ on glucose metabolism (Fig. 1a). Body weight and food intake alone could not consistently explain differences in glucose tolerance.

[Immune system uses gut bacteria to control glucose metabolism]

The bacteria A. muciniphila, was found to play a critical role in this communication process - in their study, the scientists called it a "missing link." Research showed that mice specially bred with reduced levels of IFN-y had higher levels of A. muciniphila, and significantly improved glucose tolerance. When IFN-y levels increased, A. muciniphila levels declined, and glucose tolerance was reduced.

Similar observations were also made in humans. It's been observed, for instance, that athletes who are extremely fit have high levels of the gut bacteria A. muciniphila, which is a mucus-degrading bacteria. The research makes clear that two systems once believed to be functionally separate—immunity and glucose metabolism—are, in fact, closely linked, and the bridge can be provided by gut bacteria.

[Metformin Is Associated With Higher Relative Abundance of Mucin-Degrading Akkermansia muciniphila and Several Short-Chain Fatty Acid–Producing Microbiota in the Gut]
http://care.diabetesjournals.org/content/early/2016/10/19/dc16-1324

CONCLUSIONS Our results support the hypothesis that metformin shifts gut microbiota composition through the enrichment of mucin-degrading A. muciniphila as well as several SCFA-producing microbiota. Future studies are needed to determine if these shifts mediate metformin’s glycemic and anti-inflammatory properties.
We found that Akkermansia can change the endocannabinoid system tone in the gut and improve the endocannabinoid signaling from the gut to the brain. There are very many mechanisms involved in the cross-talk between bacteria and host that have still to be investigated. This is actually a novel field. We have observed some specific effects for some specific strains so far, for instance the reduction of cholesterol.

Interestingly, Cranberry Extract treatment markedly increased the proportion of the mucin-degrading bacterium Akkermansia in our metagenomic samples.

The intestinal bacterium Akkermansia proves to offer enduring benefits for the intestines of overweight mice and diabetic animals. In experiments, the strengthening effects of this bacterium on the intestinal barrier remained even after pasteurisation.

For now, researchers have shown that using the bacterium on humans is safe. However, the scientists still need to prove that the positive effects demonstrated in mice in 2013 also apply to humans.

During their research, Cani and team accidentally discovered that pasteurization has positive effects on Akkermansia.
[Synergistic ECS Gut Probiotica]: Akkermansia Muciniphila
The high-fat dietary treatment with 10% mango (equivalent to 1½ cups of fresh mango pieces) was found to be the most effective in preventing the loss of beneficial bacteria from a high-fat diet without decreasing body weight or fat accumulation. Specifically, mango supplementation regulated gut bacteria in favor of *Bifidobacteria* and *Akkermansia* and enhanced short-chain fatty acid (SFCA) production. SCFAs have been shown to possess a wide range of beneficial effects, such as anti-inflammatory properties.

**[Mango may help maintain gut health, says study]**
https://knowridge.com/2016/10/mango-may-help-maintain-gut-health-says-study/

**[Studies show mango consumption may contribute to protective health effects]**

**[Why Do Mangoes Enhance Your High?]**
https://www.greenrushdaily.com/2015/09/10/mangoes-enhance-marijuana-high/

**[Mango Supplementation Prevents Gut Microbial Dysbiosis and Modulates Short Chain Fatty Acid Production Independent of Body Weight Reduction]**
http://www.fasebj.org/content/30/1_Supplement/1166.6.short

**[Mango Nutrition — Tropical Fruit for Lowering Blood Sugar and Boosting Brain Health]**
https://draxe.com/mango-nutrition/
Clinical Endocannabinoid Deficiency Syndrome (CEDS) was proposed by Dr. Ethan Russo in 2004. CEDS began to be explored as a potential underlying cause of an array of age-related illnesses, along with inflammatory and autoimmune diseases, depression, PTSD, bone loss, diabetes, acute or chronic pain, and cancer. It was also postulated that an overactive endocannabinoid system may be responsible for obesity (a theory which didn’t pan out).

"The Therapeutic Importance Of Myrcene & Other Terpenes": The Kootenay's Medicine Talk
https://www.youtube.com/watch?v=fqekV50Fc54

Probiotics For Mood: Enhancing Gut-Brain Connection with Psychobiotics

Floratrex™
http://www.globalhealingcenter.com/floratrex.html

Latero-Flora™
http://www.globalhealingcenter.com/latero-flora-probiotic-supplement.html
https://www.youtube.com/watch?v=X2lsxbBr3TY

The role of probiotics in ageing and longevity

Maintaining health in older age depends on the appropriate function of the homeostatic systems (nervous, endocrine and immune) and correct interactions between these systems and gut microbiota.
Plants have been the predominant source of medicines throughout the vast majority of human history, and remain so today outside of industrialized societies. One of the most versatile in terms of its phytochemistry is cannabis, whose investigation has led directly to the discovery of a unique and widespread homeostatic physiological regulator, the endocannabinoid system. While it had been the conventional wisdom until recently that only cannabis harbored active agents affecting the endocannabinoid system, in recent decades the search has widened and identified numerous additional plants whose components stimulate, antagonize, or modulate different aspects of this system. These include common foodstuffs, herbs, spices, and more exotic ingredients: kava, chocolate, black pepper, and many others that are examined in this review.

[These Nutrients Will Help Keep Your Endocannabinoid System Healthy]
http://herb.co/2016/12/07/nutrients-endocannabinoid-healthy/

[Clinical Endocannabinoid Deficiency Reconsidered: Current Research Supports the Theory in Migraine, Fibromyalgia, Irritable Bowel, and Other Treatment-Resistant Syndromes ]
http://online.liebertpub.com/doi/full/10.1089/can.2016.0009
[Vitamin Weed Diet and Lifestyle]

[All About Terpenes]
http://kootenaysmedicinetree.ca/all-about-terpenes
https://www.youtube.com/watch?v=fqekV50Fc54

[What is Kefir? The Cultured Drink for a Healthy Colon]
http://www.probiotic.org/Kefir.htm
https://www.youtube.com/watch?v=Nad5kNfRyow
Kefir is a cultured yogurt-like drink that provides natural probiotic properties for reestablishing healthy gut flora. It can be made using raw dairy, coconut milk or other vegan nut milks. As it ferments, it develops a complex matrix of beneficial microorganisms that can provide natural probiotic properties. Learn more about different types of starter cultures, like milk grains, water grains or powdered starters. We'll discuss the beneficial health components, plus how to make your own living enzyme-rich kefir drink.

[Nascent Iodine and Why You Need it For Optimal Health]
https://www.youtube.com/watch?v=oDRd40VK5PY

[How To Prevent Die Off Reaction Symptoms with Ginger Tea - Candida, SIBO, and Parasite Die Off]
https://www.youtube.com/watch?v=9BFPaEtV370

[Is Biotin the Answer for Hair Growth?]

[Bee pollen offers a full spectrum of nutrients]
https://www.youtube.com/watch?v=FuMztZ6T3tk

[What is Chaga? Learn Why It's a Top Superfood Mushroom]
https://www.youtube.com/watch?v=0Q2dGq6tIsc

[LEAF The Health Benefits of Juicing Raw Cannabis]
https://www.youtube.com/watch?v=3Jy5ZJc9_NU

[Juicing Fresh Raw MJ]
https://www.youtube.com/watch?v=GQdLh-1aYt8
Hemp Seeds Superfood

[Benefits of Hemp Seeds, Source of Protein and Omega-3 Fatty Acids]
http://www.superfoods-for-superhealth.com/hemp-seed.html

The hemp seed, comes from the hemp plant, a seedy fibrous species most well-known for its historical use in making textiles, rope and paper. The use of hemp was first documented as an agricultural crop in one of the oldest scientific texts of ancient China, the Xia Xiao Zheng, written approximately 1500 BC.

[Benefits of Hemp Seed]

Hemp is a plant so versatile in its uses, it’s hard to believe there are some fools among us who stifle its uses. It’s a shame, because around the globe, hemp has been used for centuries to make rope, wax, paper, cloth, fuel and as a food source. Nutritionally, the seeds of the plant are one of the most complete sources of vitamins, minerals, essential fatty acids, and potent antioxidant activity.

[5 Health Benefits of Hemp Seed Oil]

Hemp seed oil has a 3:1 ratio of Omega-6 to Omega-3 fatty acids, a balance that has been shown to support heart health and promote proper cardiovascular function. These nutrients play a role in many biological processes and may help prevent a number of degenerative diseases.

[Hemp Seeds, A Source of Protein and Omega-3's]
https://www.youtube.com/watch?v=hb-WE9_yiOQ

[The Health Benefits Of Eating Hemp!]
http://ergogenicsnutrition.com/blog/the-health-benefits-of-eating-hemp/

[The Surprising Health Benefits of Hemp Oil]
http://www.healthfitnessrevolution.com/the-top-8-health-benefits-of-hemp/

[Hemp Protein Powder: The Perfect Plant-Based Protein]
https://draxe.com/hemp-protein-powder/

[Why are Hemp Seeds Considered a “Superfood”?!]
[Hemp Seeds Superfood]

[A new study of Chinese long-lived individuals identifies gut microbial signatures of healthy aging]

A recent study, led by Assistant Professor Jiangchao Zhao from the Department of Animal Science, Division of Agriculture, at University of Arkansas in Fayetteville, Arkansas (USA), has identified new gut microbial signatures of healthy aging in Chinese long-lived individuals.

[Top 5 Places in China Where People Live the Longest]

Located in the northern part of Guangxi Zhuang Autonomous Region, Bama Yao Autonomous County is the home where the most centenarians live, next to none among five homes of longevity in the world. The other four are Hetian Village in China, South Caucasus, Hunza in Pakistan, and Vilcabamba in Ecuador.

[Bama, China: Home to some of the oldest, healthiest people in the world]

A village in Bama Yao Autonomous County, China, is one of five locations across the globe where people are known to live far beyond the global average, with few suffering from health problems during their lifetime. Many of the inhabitants of this village live to be more than 100 years old, and despite the villagers’ environment being a tropical region where ultraviolet rays are strong, women of the area have a pale complexion and are strikingly attractive.

[Hemp Seed-Eating Village in China Holds Oldest, Healthiest People in the World]

While there is a man in Bolivia said to be the oldest living person in the world, at 123 years of age, a village in China is boasting ages far older than the global average, and few suffer from any health problems. Scientists believe the secret is in their diet, which actually includes lots of hempseed.
[Colon Cleanse Body Detox]

[20 Pounds Of Poop In Your Belly...]
http://guthealthproject.com/20-pounds-of-poop/

As this toxic waste builds up, your body becomes a walking vessel of fecal toxicity. Once this happens, you begin to experience excess fatigue, weight gain, digestive issues (like irritable bowel syndrome, leaky gut syndrome, constipation, and diarrhea), skin conditions (like eczema, psoriasis, rosacea, acne, etc.), brain fog, focus/attention issues, mood swings, anxiety and depression... and that's just the beginning!

[Gastroparesis, With Constipation, Common In Parkinson's Disease]
http://www.gastroendonews.com/In-the-News/Article/11-16/Gastroparesis-With-Constipation-Common-In-Parkinsons-Disease/38523

Chronic constipation is the single most common gastrointestinal symptom associated with Parkinson's disease.

[How to Use Papaya Seeds for Parasites]
http://superfoodprofiles.com/papaya-seeds-parasites

[Po Chai Pills]
https://en.wikipedia.org/wiki/Po_Chai_Pills

[Oxy Powder- All Natural Colon Cleanser]
https://www.youtube.com/watch?v=t6qpX5EBck

[Oxy Powder Natural Colon Cleanser]
https://www.youtube.com/watch?v=RTFU5Nti1zQ

[Oxy-Powder review]
https://www.youtube.com/watch?v=cxcQ4z6Zlyg

[Global Healing Center. Kidney Cleanse. Review. (Intro)]
https://www.youtube.com/watch?v=z0wBwON09Ow

https://www.youtube.com/watch?v=p3ZrwAlE5cc

[Global Healing Center, Kidney Cleanse. Review. Day 3]
https://www.youtube.com/watch?v=vvJ7OBq3EE0
[Structured Water Dr Emoto and Dr. Gerald Pollack]

[Dr Emoto Structured Healing Water Research - The Trews Extra 2016]
https://www.youtube.com/watch?v=-MiyQfNi0

Dr Masaru Emoto talks about Industrial Hemp as a solution to Fukushima
https://www.youtube.com/watch?v=FldJS-BHp7M

[Water, Cells, and Life Doctor Gerald Pollack]
https://www.youtube.com/watch?v=p9UC0cfXcg
What does water actually do in the formula for life? Water scientist and biomedical engineer Gerald Pollack

[The Fourth Phase of Water: Dr. Gerald Pollack at TEDxGuelphU]
https://www.youtube.com/watch?v=i-T7fCMUDXU
Does water have a fourth phase, beyond solid, liquid and vapor?
University of Washington Bioengineering Professor Gerald Pollack answers this question, and intrigues us to consider the implications of this finding. Not all water is H2O, a radical departure from what you may have learned from textbooks.

[What is This New Structured Silver? ]
http://www.new-antimicrobial.com/what-is-structured-silver/
https://www.thankyousilver.com/
https://www.youtube.com/watch?v=Ins7855wLtc
Structured Silver liquid is a remarkably simple antimicrobial alkaline solution. It is composed of 0.001 percent pure metallic silver and 99.999 percent pure water.

**Thoughts and Words Affect Water**

After seeing water react to different environmental conditions, pollution and music, Mr. Emoto and colleagues decided to see how thoughts and words affected the formation of untreated, distilled, water crystals, using words typed onto paper by a word processor and taped on glass bottles overnight.

The same procedure was performed using the names of deceased persons. The waters were then frozen and photographed.
Probiotic Farming – In the simplest form, it’s a focus on soil dwelling bacterial and fungal homeostasis in the garden. In practice, this usually means an amalgamation of KNF, traditional organic growing techniques (composting, aerated teas), and either ROLS or No Till depending on how the soil is reused, with a few unique practices, such as anaerobic teas thrown in. Understandably, this can be a bit daunting, but hopefully this site can serve as a bit of a companion in taking in all of these system and consolidating them to what’s needed for you. Why call it probiotic you may ask? Well, you are probably familiar with ‘probiotic’ bacteria, usually in relation to cultured and/or fermented foods (kimchi, sauerkraut, yogurt). When we buy probiotic food, we are buying something with live cultures of beneficial bacteria. Often, the bacteria that are helpful in our intestines, can catch a happy ride into us by being helpful to the soil and plants as well. With probiotic farming practices, we’re reintroducing beneficial bacteria and fungi into the soil, while using growing methods that promote the proliferation of these soil dwelling colonies, using amendments that help them thrive, and in return, the microlife does most of the hard work. Sadly, in more common agricultural practices these beneficial colonies are lacking, which has played a part in our ever rising rate of over farming of agricultural land.

Why Cannabis Grown with the Addition of Lactic Acid Bacteria Serum Might Produce a Superior High

As an organic gardener, and a guy who generally can’t resist reading into why things happen, I’d started using LABS (Lactic Acid Bacteria Serum) in the garden soon after I began learning of its benefits. When greenhouse tomatoes were grown with the addition of a blend of humic fertilizer, produced from vermicompost, and bio-fertilizer, containing Lactobacillus casei, Lactobacillus lactis, Phodopseudomonas palistris, Saccharomices cerevisiae that the total tomato yield was increased by 19 and 21% after soil application and by 13 and 14% after foliar application of bio-fertilizer and humic fertilizer, respectively. Lactic Bacteria have uses beyond just that of a bio-fertilizer though, it can even exhibit antifungal activity. I’d first learned about the benefits of lactic bacteria though, through research into EM1 (Effective Microorganisms). ‘The Concepts and Theories of Effective Microorganisms’ by T. Higa and G. N. Wididana, introduced the concept of Effective Microorganisms (EM / EM1), which described an inoculant of multiple species of beneficial microorganisms, meant to provide a wide variety of uses, including ‘suppression of plant pathogens and diseases, conservation of energy in plants, solubilization of soil minerals, and soil microbial-ecological balance, photosynthetic efficiency, and biological nitrogen fixation’. The blend of microorganisms originally described were a mix of lactic acid bacteria, purple bacteria, yeast, actinomycetes, and fermenting fungi. T. Higa went on to create the brand EM™ Technology, and later revised his mixture, to only include lactic acid bacteria, purple bacteria, and yeast.