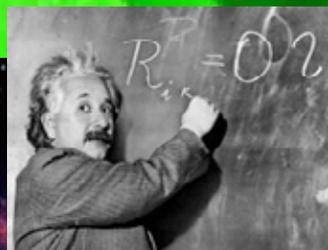


Adaptogens:
Ancient Mysticism
Universal Intelligence
Quantum Field



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Preface

Adaptogens are part of a wave of transformation in the twenty-first century that will bridge modern science with ancient wisdom. As the authors began to research this book they were struck by the amazing range of benefits these botanicals offer and decided to take a unique approach to their explanation. The result is a bridge that spans thousands of years of ancient traditions and crosses into the next century of quantum science.

There are expanding volumes of scientific data and clinical studies to support the amazing properties of these adaptogens. We strongly urge you to refer to these studies that are reported in detail by the authors of the books we mention in our bibliography. The research is profound and there is no need to repeat within these pages what has already been more than adequately presented. While we will often refer to this research, our intention is to go beyond the data and delve into the subtle mechanics of how these herbs do what they do. We urge all interested parties to read these and other books and articles rich in content that provides modern scientific validation of adaptogens in general and specifically jiaogulan, noni, and amalaki.

This book embraces both sides of the bridge between subjective ancient intuitive wisdom and modern science. Modern experimental science

objectively explains the miracles of life that our spiritual heritage(s) describe. There is no contradiction between the two. In fact, we strongly believe that they support one another. We must be careful not to disregard knowledge that has not yet been supported by science. The history of modern science is replete with example after example of theories and practices that were once rejected and are now accepted or, conversely, once accepted and now rejected.

There are subjective sources of knowledge used by the ancient Masers whose validity and value are no less relevant than contemporary objective scientific sources. There are ancient sciences that, when put in their proper perspective, are as valid as modern science. We now stand at the confluence of modern science and the wisdom of the ancients. When one supports the other, there is a pretty fair chance that we have discovered the facts of the matter and uncovered the truth. The explanation of adaptogens necessarily requires both views to come to an adequate understanding of these amazing botanicals.

As modern science continues to develop and merge with the metaphysical sciences practiced by the ancient masters (such as in the case of quantum physics) we will find that these paths lead us to the same destination, differing only in their language and methodology. We invite you to journey with us along these paths giving each its due respect.

We view adaptogens in the same way as we view the nature of the universe – imbued with and directed by a universal intelligence that becomes increasingly credible as modern science unravels the amazingly complex nature of our being. Adaptogens are extraordinary substances in that they are in tune with this natural intelligence that works extremely efficiently through them to maintain nature’s balance. This makes them an excellent tool to retain the health that was intended for us. Together with eating well, proper exercise and life style, like meditation, like yoga and other paths to good health (physically, mentally, and spiritually) adaptogens can be an important part of your daily health regime.

Their effectiveness over centuries of use is being substantiated by modern science and clinical studies. The bottom line is that they work albeit differently for each person. It’s up to you to decide for yourself just how well they work for you. Listen to yourself, and trust only in the results they provide for you.

Here’s to your health!

Bob Fickes and Daniel Foxman

Section 1

Adaptogens:

Ancient Mysticism

Modern Science

Quantum Field

Chapter 1

Knowledge and Experience

Complete Nature believes that it is important to understand the unique characteristics of adaptogens. Knowledge and experience go hand in hand. One is not complete without the other. Knowledge without experience is blind. Experience without knowledge can lead to misconceptions and may, therefore, be faulty. Complete Nature wants to deliver both the experience of these wonders of nature and the knowledge to understand how and why they work. Put the experience and the knowledge together and we have found something we can embrace and share with others.

You don't need to understand adaptogens in order to experience them. The effects of our super-adaptogens are clearly noticeable even within the first few weeks. The results they produce speak for themselves. After you experience their extraordinary benefits, it's natural to want an explanation of how and why they work.

Our inquiry into adaptogens takes us far back into human history to the great visionaries and masters of ancient cultures that were distinctly different from our own. They blended worldly life with spiritual life so fully that there was literally no distinction between the two. The purpose of all knowledge, including scientific knowledge, was to support spiritual beliefs. Mundane,

practical daily matters were firmly rooted in and subject to spiritual/religious authority. There was no separation of Church and State, they were one and the same.

The herbs and natural remedies prescribed by the ancient sages were accepted without question based on their spiritual authority and its practical application in their culture. When the results were found to correspond to what they had been told to expect, these remedies became integrated into traditional medicine and passed down from one generation to another until today.

The dichotomy between spirituality and religion on one hand and practical every day life on the other hand is a relatively modern development. In this present age of science and technology we need to understand how everything works in order to value it as part of our modern life. This even applies to the things that have consistently demonstrated that they produce valuable results.

In our efforts to understand the working mechanisms of adaptogens we have touched upon some far-reaching subjects that take us beyond the biological and into the realms of the philosophical, metaphysical, and quantum field theory. Adaptogens, like the ancient cultures that recognized and used them, blur the line between practical and spiritual, between contemporary science and quantum field. As we penetrated the deeper truths about these remedies, we realized that strictly scientific explanations are insufficient to unlock the mystery of how they work.

Our vision for Complete Nature was clear to us from the very beginning. Our prejudice is obvious. We honor the universe and its inherent ability to provide everything that is required for life to sustain itself. Our goal is to regain the paradise nature has always intended. The universe/nature supports all forms of life and natural resources in balance with one another. We hope to reclaim this natural balance that has been lost due to misguided focus and forgotten wisdom. This journey leads us in the direction of a unified understanding of the wisdom of the ancients, the discoveries of modern science, quantum physics, and the relationship between our physiology and our consciousness.

Chapter 2

History/Definition of Adaptogen

A wide variety of adaptogens have been used for centuries throughout every part of the world. They are central elements in ancient wisdom and a keystone of traditional systems of medicine. Their use is well documented in India and China and less well documented, but just as important throughout Asia and in tribal societies throughout the entire world from Siberia, to South America, Africa, the Pacific Islands, and Native American cultures to name only few. Botanical medicine was the essential element in most health care systems throughout the world. In fact, most of the world's population today still depends on natural botanical remedies. The modern Western World has only recently begun to understand and embrace the use of medicinal plants.

The term, “adaptogen” and the concept of adaptogens were introduced to the Western world via Russia, which has a long history of herbal remedies uncovered as a result of trade relations with neighboring tribal ethnic minorities. In 1947, Russian scientist, Dr. Nikolai V. Lazarev first coined the term “adaptogen.” The root word is “adapt” which refers to their ability to help our bodies adapt to stress. Dr. Lazarev's student, Israel I. Brekhman, a medical doctor and renowned research pharmacologist provided a definition of adaptogens in 1958, that is still used today. Adaptogens must:

- be innocuous and cause minimal side effects in the physiological functions of an organism
- have non-specific action of immune enhancement
- have a normalizing action on various bodily functions irrespective of the direction of the pathological state

It is now a well-known fact that Russian Olympic athletes, cosmonauts and the Soviet Party elite used adaptogens. Research into adaptogens was spurred by their desire to excel and Russia kept this early research and their use of adaptogens a well-guarded secret until the mid 1960's when the USSR began exporting their already well-developed herbal remedies. The identification and study of adaptogens became a major emphasis for Russian biomedical research scientists for several decades (early 1960's to mid 1980's).

Adaptogens both decrease and increase various biological functions as needed to normalize them. This bi-directional function of adaptogens has no equivalent in conventional medicine. If you're lacking energy (lethargic) adaptogens will increase your energy level. If you're hyperactive they will produce a calming effect. If your blood sugar level is too high, an adaptogen will lower it, and if it's low it will raise your blood sugar level. Likewise, blood pressure will be raised or lowered. Your natural systems adjust to come into proper balance.

Keep in mind that adaptogens don't directly provide a cure, but empower your body with the capacity to produce the cure through your own natural biological functions. Adaptogens stimulate or assist your body to produce an appropriate remedy when it's needed, where it's needed and in the quantities needed. Adaptogens assist the body to adapt to stress by normalizing our physiological functions thereby allowing our natural internal processes to achieve homeostasis (natural equilibrium) and, in doing so, allow the body to produce its own balanced cure. "Homeostasis" is the natural tendency of the body to adjust so as to maintain a state of overall balance or equilibrium. In homeostasis the body performs with maximum efficiency.

Every system works in harmony and balance within homeostasis. In this way the body can holistically adapt to internal and external stress factors without negative side effects that result from increasing one system at the expense of another. Adaptogens help us to respond to stress by inducing a heightened state of nonspecific resistance that produces normalizing effects on every system in our body.

The ability to adapt is so essential that it is literally a defining condition of life. Nothing could be more central to our existence and the basic instinct of survival that exists in every living organism (as well as the living Universe). Adaptogens respect and work with the body's innate intelligence and natural balance rather than command the body to do as we wish. This is a natural process. The human mind cannot work as

efficiently as our body's natural intelligence and innate self-healing mechanisms. Adaptogens wake up the natural self-healing potential of our body and work with all the systems within our body to create homeostatic efficiency.

Scientists have criticized the definition of adaptogens as being too broad to be of scientific value. The present limited definition of adaptogens is due to the inability to see into the deeper mechanisms of the active intelligence that functions within our body and the inherent gifts that adaptogens offer through the catalytic actions they produce within us. In fact, adaptogens differ greatly in their chemical makeup and in the ways they work not only from one another, but from all other forms of ingested foods and herbs. For this reason, we have relied on a unifying clinical definition based on their performance and effectiveness. Their effects and the activities they induce in order to create their remarkable results have defined Adaptogens. We hope, in the pages to follow, to come to a broader understanding and a clearer definition of adaptogens that captures their true essence.

Chapter 3

How Adaptogens Work

Adaptogens don't work on one specific part of the body or another. They don't focus on only one particular health problem. They don't work in the same way and don't produce the same benefits for different people. They will begin to work on what's given and different for each person to bring that person into balance.

Certain parts of the body may need to be cleared before they are healed or, to put it another way, the process will begin by preparing certain parts of the body to adjust so as to perform sequentially and in balance. This can sometimes result in discomfort as the body begins to respond and adjust. The processes of cleansing and detoxification can cause reactions such as diarrhea, rashes, bloating, joint pain, etc. These mild responses are rare and should last only a very short time as you come into balance.

Adaptogens may create the illusion that they are aimed at a specific result (lower blood pressure, decreased blood sugar level etc) because they are so effective in their results, but, in fact, they are treating the body as a whole. Each individual is receiving what they need. This lack of specificity helps to explain the remarkably wide range and long list of health benefits attributed to adaptogens.

Different adaptogens work in different ways that will be further detailed when you read the information provided for each of the super- adaptogens provided by Complete Nature. What they have in common is their ability to assist the body to naturally come into balance, and through the balance of your physiology they affect the natural cures that your body in homeostasis can produce.

There are a number of theories derived from modern scientific research that seem to hold the key to what physiological mechanisms adaptogens utilize to bring about this balance. We will discuss both modern and ancient views on this subject in the pages to follow, but purely physiological explanations leave us lacking a full understanding of how adaptogens work. How do they perceive what a particular person requires to be in balance? How extreme is the imbalance and to what extent quantitatively is a given adaptive response required? Rita Elkins, M.H., in her book “The Noni Revolution” uses the term “intuitive” when referring to adaptogens. David Winston and Steven Maimes in their groundbreaking book “*Adaptogens*” acknowledge, “We are humbled by the innate power and wisdom of these herbs...”

We will expand upon these thoughts and say, without hesitation, that adaptogens are part of an intelligent process. “Intuitive” implies that adaptogens perceive and know spontaneously by direct apprehension through their being part of the infinite healing power of natural intelligence. This natural

universal intelligence can perceive, understand and exhibit wisdom, awareness and insight that lead to valid courses of action and solutions to problems. Without acknowledging the wisdom and the intuitive quality of the natural universal intelligence displayed by adaptogens we cannot fully understand them or how and why they work.

Universal intelligence understands the balance of nature. Adaptogens guide all living systems toward homeostasis. Modern science is now in the early stages of discovering the physical manifestation of universal intelligence that constituted an essential element in all ancient practices.

This holistic naturopathic approach is very different from most conventional medical practices that supply us with specific remedies for specific maladies without an understanding of the complete picture. We've become expert at making our problems more comfortable by treating the symptoms rather than root causes of our ailments. We need to align with the forces of nature and allow the intelligence of nature work for us. In this way we open the door to healing that goes beyond the limits of our mind. What was once thought to be impossible now becomes available and demonstrable.

Healthy people who eat well, exercise regularly, live right, and may even make a substantial commitment to good health such as meditation, yoga etc. are still subject to excessive stresses beyond their control. These stresses gradually weaken the body's natural

equilibrium and negatively impact our health. The normal aging process itself decreases our body's natural ability to fight stress. We can all be greatly assisted by the use of adaptogens.

We previously mentioned the use of adaptogens by the Russian elite in the heat of the Cold War in the 1970's. It is also a little known fact that Chinese athletes smashed Olympic and World records with the help of adaptogens. The huge success of the Chinese athletes in 1994 drew the attention of the sanctioning bodies of world sports that, despite their best efforts, could find no evidence of the use of illegal steroids. It has subsequently been reported that Chinese Coach Ma Juren utilized natural adaptogens. Adaptogens such as Jiaogulan and Noni have chemical structures very similar to steroids (hormones) but have none of the negative side effects of the illegal anabolic steroids that are banned from professional athletics and are considered controlled substances. Professional athletes and common everyday folks in general good health or with health problems can benefit greatly from the use of adaptogens.

Even when we encounter problems that are too severe to resolve given our present level of knowledge, these problems can be compensated for if you are otherwise in good health. When one system can't be healed, if the other systems are healthy you can still have an extraordinary life that is balanced, healthy and peaceful.

Chapter 4

Stress

Adaptogens help us deal with stress. Leading authority on stress, Dr. Hans Selye explains that we encounter stress when the body is suddenly overloaded. For example: A flashbulb goes off and provides much more intense light than the optic nerve is accustomed to handle. The optic nerve malfunctions as a result. (Blue spots may appear.) If this overload is repeated over and over again it can cause permanent damage. The reaction to stress involves three basic stages:

Alarm stage: Recognition of a dangerous situation prepares us to deal with the threat. We produce hormones such as adrenaline and cortisol that are associated with the flight-or-fight response and prepare the body to mobilize energy. Adaptogens' tendency to normalize the release of these hormones acts like a safety valve since overproduction of these hormones can be harmful to the body. If your balance is maintained, adaptogens can make best use of the body's natural resources.

Resistance stage: The body adapts to control stress. This requires adaptive energy that is limited in supply. The hormones released can have negative side effects if this stage is prolonged. Adaptogens increase available adaptive energy.

Exhaustion state: If stress and our reaction to it continue our energy supply becomes exhausted and we lose our ability to adapt. The stress then exercises its negative effects and can lead to exhaustion, dysfunction, and disease or permanent damage. The use of adaptogens to prevent stress, regulate our stress response and preserve our adaptive energy helps to reduce the frequency of the exhaustion state.

We live in a world that is filled with stress. The human minds' tendency to dominate and control nature in the exercise of free will creates friction and resistance that are the source of most of our problems – physical, mental, and emotional. When nature is out of balance we experience environmental stresses such as electro pollution, chemical pollution, global warming, noise pollution etc. These stresses are substantially a result of man's inability to see the whole of nature.

The human mind has limitations, one of which is the fact that we can perceive only one thing at a time. It is practically impossible for humans to provide solutions that reflect the harmony of nature because we can't see nature as a whole. There will always be things we didn't see. These things that we did not see result in incomplete and unbalanced responses that will inevitably produce negative side effects. The human mind simply fails to see the full implications of what we are doing today and how our actions will affect

us in the future. We choose methods and courses of action to accomplish what we want to achieve and, in this focus, we fail to see the broader effects that our actions have on others and on ourselves. Humans are subject to pride – when we think we know, we cease to see all other points of view. As man's technology and capacity to dominate nature increases so do our levels of stress.

If we focus on one problem or only one system, the result may be weak because the other systems are not supporting our effort. As we focus too intently on healing one problem we often create problems in other areas. A classic example of this is constipation that is a side effect of the use of antihistamines, antacids, codine, antidepressants, and medications prescribed for high blood pressure. The avoidance of these drugs by making use of more natural remedies makes constipation less likely. This is just one of many examples of the negative side effects produced by synthetic man-made drugs.

Added to environmental stress is internal stress that inevitably takes its toll. If you're emotionally stressed, every organ in your body and every one of your biological systems will be stressed. Your body tightens and your bio-rhythms malfunction. The barrage of environmental and internal stress factors creates toxic conditions that alter the molecules that comprise our fundamental building blocks. Our bodies break down due to molecular dysfunction.

Biologically we are in constant motion directed by Universal Intelligence to provide maximum efficiency of each of our biological systems interacting all together in homeostasis. This innate intelligence supervises all of our biological activities including the systems that initiate and complete the self-healing process. The healing ability of this innate intelligence has been blocked over time by the build up of toxic elements due to environmental, physical, and emotional stress. Our natural healing ability has been immobilized by this toxic build up which has accumulated to the degree that we have lost sight of our natural healing ability and focus instead on how to manage the negative effects of the toxins, stress, and interference. We must understand that all afflictions are due to incomplete, transient, erroneous perception. Instead of focusing on the symptoms we should be addressing their root causes.

Modern psychology recognizes that we are using only 4% of our potential. Another way of saying the same thing is that we are seeing only 4% of reality. There is another 96% of reality that is hidden from our view. Ancient (and modern) sages, yogis, rishis, mystics, kahunas, visionaries, geniuses etc. are distinguished by their ability to realize or cognize much more of what there is out there to see. They use a substantially larger part of their consciousness and perceive realms of reality that others have overlooked. Despite our understanding that this is the case, we stubbornly continue to rely on the inherent fallibility

of the human mind (which has created our problems) to solve our problems when, in fact, nature has the answers complete in all details.

When the intelligence of nature conceives a remedy, this is a perfect solution. Nature has an intelligence that sees all reality as a whole. While the human mind focuses on the parts rather than the whole and pushes against nature to get what it wants, nature finds those extraordinary solutions which re-establish homeostasis. Nature creates a remedy for every malfunction. In balance, your body will naturally produce the physiological changes that you need. The intelligence in nature sees the body as a whole and as part of nature, while human intelligence can only focus on parts and respond to those specific parts screaming “give me now!”

Adaptogens also help affect a normalized metabolism that would include:

- antioxidant levels sufficient to control the damaging effects of free radicals
- cellular integrity that supports energy production (krebs cycle) to maintain our strength and the proper cellular functioning of essential vital systems such as our enzymes
- cardiovascular health to supply all the cells throughout our bodies with adequate nutrition and oxygen.

- support the immune system by countering immune cell depletion, increasing the production of specialized cells such as the T cells, the activity of the immune system, and immunity as a result of their non specific reduction of stress and cellular integrity

Control of stress has many facets some of which we can consciously control. Certainly among these are the lifestyle we choose to lead, the food we eat, exercise, the music we play and the prayers we offer. We must not rely on adaptogens alone. They are only one essential part of our overall health and well being.

Chapter 5

Modern Science

The traditional folk remedies that have proven to work over centuries have been subjected to intense scientific investigation to support their validity and explain how and why they work. Since adaptogens are different from one another we will discuss these scientific studies in our discussions of each of the adaptogens. At this point, however, we would like to provide a basic understanding of the scientific methods used to demonstrate the effectiveness of adaptogens or any other substances.

The procedure is basically the same whether the scientific experiments are performed in China, Europe, Japan, U.S.A. or anywhere else.

1. *In vitro* tests: These are laboratory tests performed in test tubes. *In vitro* literally means “in glass.” For example: carcinogenic cells from human liver, lungs, uterus, and skin showed that the saponins in jiaogulan inhibited the growth of cancer cells. This is only the first step and can be used to conclude only that these saponins might be useful treatments of cancer in humans and justify further testing.
2. The next step will be “*In vivo*” -- testing in live organisms. These will normally be performed

on mice, rats, or other lower organisms. Healthy organisms will be tested for possible negative side effects. The absence of negative side effects will be an indication that the substance tested is non-toxic. There are several steps to this process:

- a. Acute tests will involve subjecting the test animals to doses substantially in excess of the recommended dosage for humans. For example, rats and mice were given doses of Jiaogulan that are 100 times the suggested human dosage for weeks and it was concluded that Jiaogulan is non-toxic.
- b. Long term toxicological tests are conducted over a time period for anywhere between three months and many years. Normal doses are provided to the test animals over time to see if there are any negative side effects including, but not limited to mutations of the chromosomes or DNA and any abnormalities of embryos or newborn of the animals being tested. When testing for the results of a substance as it affects a specific disease or condition, animals with the same disease or condition would be used as the test subjects.

Assuming these acute and long-term tests provide results that indicate that the tested substance are safe and effective the next step will be:

3. Clinical tests on humans. This step is required to suggest that there are benefits of the tested substance for humans. The scientific procedures regarding clinical tests are also structured:
 - a. Double blind tests are those in which the subjects don't know what they are being tested for or what results are anticipated. This isolates the "placebo effect" which means basically that subjects demonstrate the desired results because they think they should. The results of these tests are supported by the tests on lower forms of animals that clearly are not subject to the placebo effect. However to control the factor of expectations by the human mind determining the results, the double blind tests are used.
 - b. Control groups are used to isolate and identify the variable producing the test results. Some groups may be given a placebo (sugar tablet) while others are given the substance under investigation. Still other groups are given other substances altogether. The results are compared to be sure that the variable producing the changes is, in fact, the tested substance.

Tests results by other independent scientists must be compared. We must duplicate the experiments to eliminate flaws in the methodology used, or bias by the investigator or any vested interest they might represent as a factor that affects the outcome.

The entire process of scientific experimentation has been greatly simplified, and requires long and intense study to understand completely and in all its complexity. With this said, the basic procedures followed allow us to come to a conclusion based on the scientific method as it applies to the testing of substances to improve our health.

There are several important inherent limitations of the scientific method as they apply to the testing of adaptogens. It is important to keep in mind that in the case of adaptogens, in vitro testing of human tissue or cells isolated from the live human body can not demonstrate the adaptogenic activity of the herb in the living organism.

Another limitation is that science tends to isolate the chemical compounds that they are testing. In the case of adaptogens these chemical compounds may not induce the same reactions when they are extracted or isolated. The classic example as it relates to adaptogens would be the ground-breaking research into noni by Dr. Heinicke who after years of research and huge amounts of funding attempted to isolate noni's active ingredient (which he later identified as proxeronine) and concluded that the "active ingredient" was inactive when isolated.

Science allows us to understand the biophysical operations of hearing a sound. We know that the motion of the sound waves hit the eardrum causing it to vibrate. The bones in the cochlea pick up these vibrations and they, in turn, vibrate a membrane that disturbs sensitive fluids in the inner ear creating a motion of filaments that generate electrical impulses carried by the nerves to the brain where the electrical signal induces electrochemical responses which the brain registers as sound.

Science, however, cannot explain how these complex physical interactions create the mental event – the sensation of sound. Furthermore, science can not explain how this triggers a sequence of thoughts that interpret the sound and result in a specific action or response which will differ from one situation to another or from one person to another subject to free will.

Modern science tends to take things apart to analyze their components. In the physical sciences this is known as scientific reductionism. Likewise behavioral sciences may find it a valid exercise to examine the most simplistic elements of behavior to understand the basics. Co-author, Dan Foxman, had the great pleasure to associate with Gregory Bateson during his tenure at the School of Asian Studies at the University of Hawaii. Dr. Bateson was working with the Marine Research Facility to study learning behavior in crustaceans. The concept was to study learning behavior in its simplest form to disclose its essence. These are valuable exercises that produce highly useful knowledge.

But life is holistic. The true working of nature requires that we examine the higher levels of structure found in the patterns of association and encoded information in the structure and function of the components. Is modern science “wrong?” No, it is a valuable and correct analytical system, but it does not operate at all levels of organization and is not the one and only correct source of knowledge. Analysis of our components exists together with and compliments the holistic approach. To understand how computers work we must have knowledge of the hardware composed of electrical circuits and switches that operate based on the laws of physics, as well as the software, the intelligent programs which determine the operations performed. Neither one of these view is, by itself, adequate.

Purposeful behavior and organization appear at the collective level of structure. A Beethoven symphony is surely more than its’ musical notes. It is a symphony only at the collective level that involves the intelligent (brilliant in this case) arrangement of the notes. The sum is greater than its parts.

For a more biologically oriented example that makes the same point, let’s look at a colony of ants. Each individual ant has an innate limited behavior, purpose and function with no concept of the grand design reflected in the elaborate, complex and highly organized pattern of the colony. The collective behavior can’t be understood only in terms of its constituent parts. While each ant is a living organism, the colony

as a whole can also be viewed as a living system that displays natural intelligence. Certainly it's much more than just a collection of ants. Likewise our bodies consist of billions of cells operating in collective organization. Order, information, and communication are essential ingredients of biological systems and must be looked at not only as they apply inside our bodies ("bound by the skin"), but in the relationships and interaction with other biological systems with their environment.

Beyond these inherent limitations there lies the fact that purely scientific research is not yet at the stage of development where it can uncover the underlying natural intelligence that we will employ to define adaptogens and describe how they work. Many intuitive ingredients in adaptogens are too subtle to be isolated and recognized.

Nevertheless, the value of our expanding base of scientific knowledge on how the body works as miraculously as it does is essential to our understanding of adaptogens. An ever-expanding volume of scientific research already supports the validity of adaptogens.

Many scientists and conventional medical researchers are of the opinion that noni, jiaogulan, and amalak and other adaptogens have not been scientifically studied thoroughly or for a long enough period of time to be scientifically validated. This must be taken in the context that these substances have produced repeated verifiable results for centuries. Continued research will reveal exciting scientific

breakthroughs in our understanding of the both the body and adaptogens. Science must accept the valid results as they are demonstrated and strive to explain why they occur.

The history of modern medicine is replete with example after example of medical discoveries that have taken many decades to move from highly speculative theory to accepted practice. Nevertheless, it is, politically correct to provide you with a disclaimer to the effect that scientific investigation of these herbs is preliminary, the evidence is inconclusive, and that these adaptogens should not be relied upon as medications or be used as a substitute for any medications prescribed to you by your medical doctor. You should check with your physician before using any of the adaptogenic remedies we have suggested. 'nuff said.

Chapter 6

Naturally Adaptive Systems of the Body

The human body has natural adaptive responses to stress that can be enhanced by adaptogens. This research will help to explain how adaptogens function. We will review some of the more important research into these systems in the following sections.

Hypothalamic-Pituitary-Adrenal Axis

The most current research on adaptogens has recently focused on their ability to stimulate the body's nonspecific stress response via the master glands – the hypothalamus, pituitary, and adrenal glands and the sympathoadrenal system.

“Our conclusion is that various active constituents found in herbal adaptogens work to stimulate the neuroendocrine and immune systems via multiple metabolic pathways. They affect the brain, nerves, endocrine glands (pituitary, thyroid, parathyroid, adrenal, thymus, pineal, pancreas, ovaries, and testes), and immune system by helping re-regulate, normalize, and enhance function. There are multiple theories as to what is occurring, and even scientists are unsure. We leave it to them to unlock the mystery of how these substances work.”

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The limbic system within the brain registers stress and directs the hypothalamus (the keeper of internal balance), located within the brain, to send out endocrine signals that activate a complex series of stress response hormones. The hypothalamus controls all endocrine glands and thereby regulates blood pressure, adrenal levels, and all aspects of our metabolism.

The hypothalamic-pituitary-adrenal axis and the sympatho-adrenal system and adrenal glands release hormones into the bloodstream that control the body's stress response to restore balance. The endocrine gland system secretes hormones into the bloodstream carrying distinct chemical signals that fortify specific target cells in response to stress.

One among many such hormones is cortisol known as the "stress hormone" that is released by the adrenal gland in direct proportion to the level of physical or psychological stress. Cortisol initiates a complex process whereby the balance of energy in the body adjusts to deal with stress.

Another stress hormone is adrenaline that responds to stress by preparing the body for physical exertion by stimulating the heart to increase blood flow to the brain and muscles, releasing sugar stored in the liver to provide more energy, and controlling involuntary muscles for maximum performance.

The hypothalamus sends neural signals to the sympathetic nervous system, the central regulatory

mechanism that responds to stress and maintains homeostasis. Adaptogens enhance the transmission of these neural signals.

Adaptogens normalize the production and release of stress hormones and thereby help the body adjust to stress. Through their natural adaptive responses to stress, adaptogens support the adrenal function and exert a biochemical influence on the hypothalamus that signals the stress response. The adaptive mechanisms of these adaptogens triggers a bi-directional response that helps maintain a balanced system.

“Adaptogens help to modulate and regulate the use of cortisol, allowing the body to maintain a healthy stress response. They also help regulate and support the interconnected neuroendocrine and immune systems allowing the body to maintain optimal homeostasis.”

Adaptogens pg. 72

Cellular Integrity / Catalytic Enzyme Functions

It's not logical to suppose that the *only* effect of cellular integrity is its effect on enzymes, nor is it sensible to attribute the condition of our health solely to enzymes. That being said, it is nevertheless a fact that our cells produce and use enzymes to perform almost every physiological function. The life- sustaining role played by enzymes in the overall function and balance of our body is established scientific fact.

Our enzymatic systems provide a critically important common thread in the complex fabric of life. They provide an excellent example of how adaptogens work, and explain the wide range of health benefits adaptogens produce.

The biological mechanisms that synthesize enzymes and regulate enzyme activity occur within our cells. Efficient and well-coordinated enzyme synthesis and activity is dependent upon healthy and properly functioning cells. If we improve the function of nearly every cell in every tissue and organ this should be expected to sustain and improve all facets of human health.

Enzymes are the organic catalysts necessary for all biochemical reactions required for every life process. Enzymes are proteins with long linear chains of amino acids. The amino acid sequence and chemical configuration determines an enzyme's specific catalytic function. Enzymes (based on their unique structure) bind to very specific molecules ("substrates") and lower the amount of activation energy needed to create a chemical reaction. By lowering the required activation energy, they act as catalysts to speed up the reaction.

Functional cells are essential to produce functional enzymes. The synthesis of enzymes, the cellular conditions required for the enzyme to bind to the substrate, and the mechanisms that regulate the activity of the enzymes already present within our cells are all crucial factors which enable enzymes to function

efficiently. In good health, these chemical reactions occur within the homeostatic constraints of balanced biological systems.

Tight control of enzyme activity is essential to maintain homeostasis. Any malfunction of even just one critical enzyme can result in lethal illness. Every biological function in our entire body requires properly functioning enzymes. Without their catalytic action, the chemical reactions required for our metabolism to function would not occur at a life- sustaining rate.

The specific components of various adaptogens differ and, therefore, contribute to cellular integrity in different ways. It is for this reason that we recommend jiaogulan, noni, and amalak. The effect of the various compounds found in these three super-adaptogens work synergistically to produce effects that would not be as likely if they were isolated. Our discussion of each of these super- adaptogens will provide more detailed information, but we can generalize by saying that adaptogens support cellular functionality in a variety of ways and at various levels.

The Golgi Apparatus – The Heinicke-Solomon Theory

How does the body utilize adaptogens? What is the mechanism whereby specific compounds are synthesized and transported to our cells to allow them to function normally? In his book, “The Noni Phenomenon” Neil Solomon, MD, PhD proposes a brilliant explanation developed in conjunction with Dr.

Heinicke. The “Heinicke-Solomon Theory” may not yet be attributed the respect given to a fully tested and proven scientific theory, but is most definitely a fascinating hypothesis or (to the more conservative among us) a very exciting notion. While this hypothesis comes from research done with Noni, it has universal implications.

The Golgi Complex was discovered by Italian scientist, Camillo Golgi in 1898. This cell structure (organelle) had no known function and only recently has become recognized for performing the critical role of forming what cytologists refer to as “vesicles” and Dr. Heinicke prefers to call “assemblages.”

The Golgi Apparatus (the term used by Dr. Heinicke) assembles different molecules, packages them together, and delivers this package into the bloodstream. The bloodstream carries them to the target cell where they wait until a signal opens and activates them to perform the specific tasks for which they were designed.

Pro-xeronine, inactive proxeroninase (enzyme), and an energy source such as ATP as well as other molecules are in the xeronine assemblage that can be combined as a component of larger assemblages. These assemblages perform tasks that require xeronine. Serotonin, prostaglandin or other signal molecules are also included in this assemblage.

When the signal is received to activate the assemblage, xeronine will be synthesized where and

when it is needed. Xeronine has a very short half-life and so must be used by the body as soon as it is synthesized.

It has been difficult to isolate and identify proxeronine because it normally occurs only in assemblages and when the assemblage is opened, it almost immediately is synthesized to xeronine. Proxeronine creates no direct biochemical reaction in the body other than it being the precursor for xeronine which gave scientists no reason to search for it. It exists in very small quantities and does not fall into any of the usual classes of biochemical compounds such as vitamins, proteins, carbohydrates, lipids etc.

While plants and lower life forms synthesize their own proxeronine, humans obtain proxeronine from the foods we eat and noni is the richest known source of proxeronine. Xeronine is also difficult to detect or isolate to analyze because immediately upon being formed it is used by the cell. There is essentially no free xeronine available for chemical and physical analysis.

Dr. Heinicke developed his theories over many decades of research into the commercial uses of bromelain at the Pineapple Research Institute (Dole Pineapple Co.), various drug companies, and the University of Hawaii. During this process he developed techniques of opening assemblages and uncovering clues that allowed him to deduce the physiological properties, structure and function of xeronine. While these conclusions still remain in the realm of theory they suggest that further research is appropriate.

Details of Dr.Heinicke's ground breaking research can be found in his book, "The Xeronine System", which should be read by anyone interested in this subject. The following is a synopsis of the Golgi Apparatus as it applies to Noni. The unique assembly and packaging characteristics are applicable to many, if not all, adaptogens:

1. The adaptogen (Noni in this case) is consumed and assimilated.
2. Proxeronine (present in Noni) travels to the cytoplasm of a specific cell where it accumulates in the Golgi Apparatus. Here it combines with other bio chemicals including hormones, proteins, enzymes, serotonin, vitamins, minerals, antioxidants, and various others. These combinations are specific and varied depending on the needs of the intended cell to which it will be sent. The Golgi Apparatus assembles a "package" of chemical compounds custom made for the intended cells.
3. This "package" is delivered via the bloodstream to the intended cell by being coded with a "zip code" for its destination.
4. Once delivered, proxeronine combines with the enzyme proxeroninase to catalyze a chemical reaction by which it is converted to xeronine.

5. Xeronine combined with the other bio chemicals create the required adaptogenic compound for the intended cell.
6. The cell repairs or regenerates itself to normalize its function and create homeostasis.

Fantastic! Yes it is. As our scientific knowledge about ourselves grows we come to understand more and more just how fantastic we are. In fact, this is too fantastic to be an accidental result of random mutation or anything less than universal natural intelligence in action. These intuitive intercellular communications occur with no conscious awareness on our part, but just as surely as our heart beats and our lungs breath, some intelligent process must be taking place for us to function as we do.

In 1999, just prior to Drs. Heinicke and Solomon expounding their Golgi Apparatus Hypothesis, the Nobel Prize in medicine was awarded to biologist Dr. Guenther Blobel (Rockefeller University) for his work involving a delivery system whereby proteins are sent to specific cells due to coding very similar to the “zip code” described in the Golgi Apparatus.

To take this one more logical step we need now to ask ourselves how particular cells in the body communicate their needs and location to the Golgi Apparatus. We would like to suggest a comparison to the pain response.

Pain is an electrochemical response - a warning signal that something is wrong and needs to be corrected. Under healthy conditions every cell and every system in the body exists within an electro-communication network.

Every biological activity is emitting electrical waves that are coherently bound and homeostatic under normal conditions. When a cell malfunctions, the electrical waves coming from that cell are distorted and interfere with the coherent electrical field around it. This interference induces a distress signal that we experience as pain. The reason the message is sent is clearly to create an acute conscious awareness of the problem so as to elicit an appropriate response. Our cells in response to a dangerous situation send out this electrical message.

It seems plausible that a similar bioelectric communication mechanism is at work in the operation of the Golgi Apparatus providing news on the cellular level that a particular problem exists at a particular location that suggests a specific remedy.

If we can receive distress signals from our cells that register as pain, why should we not also receive distress signals from our cells informing the Golgi Apparatus that there is cellular malfunction with directions to assemble and deliver the needed remedy?

The concept behind the Golgi Apparatus is supported by many other biological systems that also receive intercellular communications that trigger the

synthesis and direct the delivery of elements needed to maintain cellular integrity. Among these we will briefly mention our immune system and the Krebs cycle (production and distribution of energy).

The Immune System

Healthy cells have markers and invader cells have markers. The body recognizes its own markers and can distinguish whether or not a cell is from your own body. The body detects the cellular markers that are not its own – bacteria, viruses, etc. The marker cells of the invader send a signal our immune system to take action. This signal creates a series of responses to isolate and destroy the invader.

This is another clear example of cellular communications that identify invader cells and stimulate the appropriate biochemical responses to alleviate the problem. These marker signals provide information to the immune system as to the nature and location of the problem. We then formulate an appropriate response.

If an invader such as bacteria comes in small doses our immune systems' response may be at a level that most people can't feel. We don't sense this imbalance until it reaches a threshold where it appears as a physical condition recognizable as an illness.

Long before we become conscious of the problem the natural intelligence of our body is responding and, in most cases, solves the problem before we are too far out of balance. A healthy body with a strong immune system will resolve the condition long before

it emerges as an illness. A weaker body or someone under extreme stress cannot combat the invader as effectively. That person is more likely to get sick.

Cells that are not functioning correctly may not be transmitting their marker and, in this case, may be identified as an intruder and attacked by the immune system. If a previously healthy cell malfunctions to the point where it becomes dangerous and its marker is also not functioning correctly it may be identified as an intruder and attacked by the immune system. Cancer would be an example of this phenomenon. If the malfunctioning cell is brought under control before it reaches the threshold, cancer does not have to be the next step.

The Krebs Cycle

The principals behind the Golgi Apparatus are also supported by the mechanism by which the body produces energy known as the Krebs cycle. Each cell contains structures called mitochondria that convert fats and sugars into energy to be used by the body. Enzymes within the mitochondria act to convert adenosine triphosphate (ATP) to adenosine diphosphate (ADP) that converts back again to ATP in a continuous cycle in which energy is released by the splitting of the phosphate bonds. Without ATP/ADP conversion the body could not perform even the most basic functions. Our body is taking raw materials, converting them in the mitochondria into useful packets of biochemical components to produce the energy that maintains life.

The Golgi Apparatus, the immune system and the Krebs Cycle each involves matter transformed to energy (with intelligence) converting back to other matter that can be intelligently used by the body. Cellular communication describing the problem and its location, and instructions for the assemblage and delivery of the specific elements that address the particular needs of the cells seem incomprehensible without natural intelligence as part of the process.

Adaptogens enhance communication and organization in each of the major biological systems that are necessary for optimal health.

Chapter 7

Quantum Physics of Adaptogens

The researchers at Complete Nature wanted to find one unifying principle to explain how and why adaptogens do what they do. There is a huge body of scientific evidence describing the various chemical components and the healing properties they induce. There are more than sufficient clinical studies and extensive surveys that demonstrate the strong results adaptogens provide.

Our search for this unifying principle led us to the conclusion that we can't use the physics and chemistry of the body to fully explain the workings of certain deeper realms of natural intelligence. Adaptogens seem to cross over the threshold of the normal laws of physics and into the more coherent state of quantum field. So we stepped back to look at adaptogens from another perspective, taking into consideration the difference between physics and quantum physics.

Quantum physics is both a practical and highly conceptual branch of science. It's practical applications have given us the laser, electron microscope, transistors, superconductors and nuclear power. It explains chemical bonding, electrical conductivity and the structure of the atom and its sub-atomic structures. At the same time it's metaphysical implications have turned reality upside down.

Until the advent of quantum field, scientific observations have been conducted in the field of friction and resistance governed by cause and effect. In fact, we do live in a world of friction and resistance, control and fear. This is because when the human mind sets its own priorities it gets lost in its own focus and loses sight of the harmony of complete nature. Quantum physics replaces this mind-induced friction with the deeper reality of infinite coherence/cosmic order. It provides scientific evidence that consciousness is the essence of physical reality.

As the atomic age dawned, the study of atomic structure and behavior led to events that defied the normal laws of physics. Atoms and sub-atomic structures appeared spontaneously out of nowhere, and could not be pinned down to any specific motion. Atomic uncertainty is intrinsic to their nature.

The concept of an atom with a definite location and movement is meaningless. You can know one, but not both at once. Position and motion form two mutually incompatible aspects of reality. The sub-atomic world materializes only when it is observed and the observer can determine reality based on what he looks for. Look for motion and you find motion. Reality is a function of observation and chosen measurement strategy.

Sub-atomic particles such as electrons and protons may act like a particle (a lump of physical “stuff”) in some cases and like a wave (an amorphous disturbance) at other times. The particle aspect can be compared to physical computer hardware and the wave

aspect corresponds to software (mind or information). This demonstrates the inherent uncertainty and unpredictability of the quantum factor. The particles and waves can overlap and combine to create complex patterns.

Valid scientific experiments indicate that the mind of the conscious observer is responsible for the creation of reality, even reality that existed before the observer was present. Entry of the patterns of information from the quantum system into the observer's mind collapses the quantum wave and converts this information into a sharp and definite state of concrete reality.

One of quantum field's most distinguished theorists, Hofstadter refers to creation occurring within the "whirling vortex of self reference". Every thought is a wave of energy directed by intelligence. The vacuum state (quantum field) detects these subtle intelligent waves and responds to them coherently. The vacuum state of quantum physics has demonstrated the ability to produce physical results that respond to thoughts of the observer. The scientists' observations were a function of what they expected to observe. Keep in mind the very first line of the Dhamma Pada (the first lecture of Lord Buddha) says that all that you are is a result of what you have thought. According to ancient Vedic science, thoughts are the building blocks of all molecules and everything that exists in a universe that exists within a field of fully conscious universal intelligence. Quantum physics would call this a function of the "vacuum state".

The ancient enlightened masters attributed the healing effects of adaptogens and other methods of healing to the spiritual authority of their own direct perception during heightened states of consciousness in meditation. Verification was therefore dependent on the repeated perception of other enlightened masters. Their observations were passed down and verified by countless enlightened masters throughout time. The normal mind did not have the training to perceive such subtle observations and therefore called it “unverifiable.”

The modern industrial paradigm required purely physical explanations and scientific proof (once again by specialists in the field). As we now shift to the model provided by quantum physics, explanations shift again to homeostatic principles governed by consciousness and universal intelligence. The masters of quantum field meet the masters of ancient spiritual science.

In traditional physics everything is in a relationship held together by resistance governed by incoherence. Gravity, the universal law of physics, determines that if we drop an object it will fall down. However, if we place water into a vacuum state chamber the water literally climbs up the sides of the container.

When the researchers were looking into vacuum state they found phenomenon that couldn't be explained by physics. Gravity literally disappears when there is no friction – no push or pull between the objects. In this quantum field, physical objects line up in a coherent

and coordinated relationship as their efforts enhance the efficiency of every part without depriving any one part at the expense of another.

Alternating current is based on fluctuation between positive and negative ions. The electrically coded message must travel from positive to negative to positive to negative, on and on until it reaches its destination. This alternating field necessarily creates time and distance. In quantum physics there is no incoherence.

When you introduce an incoherent field into the vacuum state there is a phase shift. All the positive ions become aligned with one another, and all the negative ions align - they do not alternate. What was once a system of disorder is transformed into homeostatic infinite coherence.

Modern science is already beginning to use Infinite Coherence. Digital electronics is a first step, but physicists are now working on superconductivity also known as coherent electricity – electricity without friction. When they succeed, all machines will operate in perpetual motion without the consumption of energy (or fuel).

Adaptogens create a similar phase shift that enhances all the systems of the body. This phase shift is coherent, long lasting and has no negative side effect. This is a phase shift from the human-induced destructive forces of imbalance to the reality of the homeostatic flow of nature. Adaptogens work due

to the fact that they consciously endeavor to create coherence and efficient functioning without friction. In perfect balance, if a person is sick the body heals. If the body is healthy it performs more spectacularly.

Common sense notions about the nature of reality such as cause and effect, subject and object lose their meaning. In their place we find a holistic world view of an undivided wholeness in which the observing instrument is not separate from what is being observed. The division between subject and object, mind and matter, inner and outer worlds, body and soul dissolves. When we look at the universe as a coherent, balanced living system we understand that the continuous process of conscious creation occurs not only at the level of the individual but in nature as a whole and constitutes what the ancients recognized as universal intelligence.

Quantum field helps to explain the principle of adaptogens and their ability to provide homeostasis without negative side effects. Our adaptogenic herbs exhibit elements of universal intelligence (higher consciousness) that can't be explained fully by purely physical, biological, and chemical research.

Adaptogens are linked to this universal intelligence because they function by assisting nature's intelligence to achieve balance. They induce and maintain homeostasis. While they may *seem* to be targeting a particular problem (because they produce such strong results) when you observe how they function, they are

clearly operating from the perspective of homeostasis to bring the whole body into balance in accordance with natural intelligence. The key to the function of adaptogens is that they work homeostatically to reduce resistance and friction. These are exactly the principles that govern quantum field.

Given this perspective, science can no longer be assumed to be objective – it is essentially subjective and conscious. Dr Brian Josephson, Nobel Prize winner in astrophysics said “You tickle the universe on one side and the universe will laugh on the other side in the same instant.” This communication occurs instantaneously without regard for the boundaries of time and space.

When we look at adaptogens from the point of view of quantum theory we see a phase shift toward a coherently functioning physiology without friction, resistance and interference. There is no chemical solution that will create coherence in the body and keep it permanently free of disease. The medicine of the future must go beyond present chemical applications and investigate the friction-free principles of quantum field – the very same principles recognized by ancient spiritual science.

The manner in which adaptogens consciously induce a phase shift to homeostatic coherence will be further discussed in Chapter 12, Creation and the Origin of Natural Intelligence.

Chapter 8

Ancient Knowledge: Back to the Future

Traditional remedies are coming to the surface now because they are needed. Despite the lack of knowledge of how these natural solutions work or why they work, people have relied on them because they felt the difference and experienced the results. For this reason, the knowledge passed from generation to generation and has withstood the test of time. These traditional remedies based on ancient knowledge are re-surfacing to assist mankind in re-discovering our true nature and put us back on the path to become fully developed organisms in harmony with nature, i.e. homeostatically vibrant good health.

The Ancients long ago recognized that there was another chemistry – rare and highly valued. In some cultures this was called “soma”. In other’s “mana” or “divine elixir.” All cultures in the world recognize that “divinity” exists – that there is some intelligence in the process of life, and that we are more than just our physical bodies.

These ancient cultures identified certain herbs that created a rejuvenating effect on a different level of reality. These herbs were, of course, physical and provided amazing noticeable physical results, but they were also given mystical and spiritual significance. While some of these herbs have been lost like the soma

plant, others have been preserved – the Polynesians identified noni, the Chinese identified jiaogulan, the Indians identified amalak; all of which were called herbs of immortality, all of which had a spiritual aspect beyond physical reality, and each of which comprised the most highly valued herb in their respective cultures.

We like to refer to our super- adaptogens as “meditation in a capsule.” The National Board of Physicians on Anti -Aging lists meditation as one of the four pillars of reversing the aging process. Meditation increases metabolic efficiency. Physiologically, metabolism drops by 16% to 20% as measured by oxygen consumption. Cardiac output (the work load on your heart) drops by 30% while blood circulation increases at the same time. Lactic acid levels (a measurement of stress) decrease by 30% during meditation. If blood pressure is too high, meditation reduces it to normal levels. If blood pressure is too low, meditation raises it to normal.

Meditation induces homeostasis by increasing the overall efficiency of the body. Our bodies work less to accomplish more when we enter a meditative state that reduces stress. The parallels between the function of adaptogens and meditation are truly remarkable.

Traditional shamans (curers) and medicine men enter deeply absorbed states of consciousness during which intuitions arise spontaneously. Their knowledge is gained through intuition and direct perception. In this deepened state of awareness their mind becomes

acutely alert and functions much like a microscope to observe the minute details while simultaneously connecting with the infinite healing powers of universal intelligence. They were the first quantum physicists.

Yoga is described as the complete science of life and comprises much more knowledge than just the physical exercises. Real Yoga begins with deep meditation and trains the mind to attune to universal intelligence. Universal intelligence is the trunk of the tree while the exercises and purification procedures comprise the limbs.

During the yogic exercises called asanas (meaning comfortable posture), the yogi is trained to send life force and universal intelligence to every part of the body. We bend and twist the body to allow life forces to go where they were previously blocked. The practice of yoga provides resilience. Where the yogi must be trained to send this universal intelligence and life force to the body, the adaptogens do it automatically.

Yoga purifies and cleanses the body to remove toxic elements of stress – the same as adaptogens. The word Yoga means “union”. Union is another way to describe the state of homeostasis. Yoga is a specific form of meditation that employs a mantra to restore alignment with universal intelligence thereby creating union with Infinite Silence (the Infinite Coherence of Quantum Field).

Both yoga and adaptogens treat the body as a whole encouraging the body to achieve balance.

Yoga increases vitality by increasing the distribution of life force (“prana” or “chi”) in the same way that adaptogens assist in cellular transmission (the passage of information from one nerve cell to another) as well as provide the conditions whereby nutrients are transmitted throughout the body. This life force (found in both yoga and adaptogens) is highly charged with universal intelligence and energy.

Yoga sutras are concise formulations of words that when taken into meditation produce an extraordinary result called a “*siddhi*” (meaning perfection) – a much larger and significant result than the package that went in. Yogis use these formulas to perform supernatural physical feats. At first glance this looks unscientific and difficult to believe, but Yogis have demonstrated these powers in every culture in Asia.

The guiding principal of the *siddhi*’s involves energy input being guided by intelligence to express results in a more useful, more extraordinary form. The degree to which the results are extraordinary are in direct proportion to the degree of the energy and the level of universal intelligence applied to the energy by the yogi. Thought converts to energy and becomes expressed physically. Like the yoga sutras, the natural intelligence of adaptogens activate the resources within our bodies to perform amazing feats.

Adaptogens express the same natural intelligence and high energy as yoga sutras. The greater the intelligence and energy that goes into the equation,

the faster and more extraordinary is the response. The body is, in fact, applying intelligent energy to convert raw materials into useful components needed by our cells. The adaptogen intuitively knows what is needed and in what proportion and stimulates the cells to produce what they require. This is the same principle described by ancient yoga.

The Ayurvedic tradition recognized a class of herbs called "*rasayana*" which refers to those herbs that improve the blood and thereby promote the health of all the tissues of the body. Rasayana herbs rejuvenate the body and increase resistance to stress. They can be taken regularly over a long period of time without negative side effects and restore the body's natural balance. These were, essentially, adaptogenic herbs.

When Buddha traveled throughout Asia and China, he brought Ayurvedic medicine with him. Ayurveda transformed over the years to form what is now known as Chinese medicine. The two medicinal sciences are very similar in their principles and in many of the botanicals that they employ. Many of the super adaptogens travelled long distances and became central ingredients in various systems of ancient medicine.

The Chinese sages were essentially yoga masters who discovered and utilized jiaogulan. The Hawaiian Kahunas (high priests), who were attributed with the spirit of the gods, treasured noni as one of their most valuable resources. The Ayurvedic doctors likewise

treasure myrobalan (amalaki) fruit to which they ascribe mystical qualities that translate into terms we use to describe adaptogens.

All of these super adaptogens possess a unique quality of universal intelligence and life force. They were treasured by the most revered sages of many cultures. As we come to a deeper understanding of the merger between quantum physics and ancient wisdom, these adaptogens will again be placed in a high priority by the wise minds of the future. History repeats itself. That knowledge that is most useful and closest to the Universal Intelligence, lasts longest in time.

Chapter 9

The Source of Ancient Wisdom

Without today's scientific capabilities, how did the ancient masters obtain this knowledge and reach this level of understanding? What was their source of knowledge?

In the Vedic tradition, the ancient masters were called rishis – which means “seer”. They learned to fine-tune the magnificent mechanism that we call our nervous system as their instrument of perception. No instrument designed by man is as complex and efficient as the human nervous system. It stores more information than any computer. It detects and adapts to the activity of the smallest sub-atomic particle.

The rishis used meditation to refine their instruments of perception – the human nervous system. They would remain absorbed in a state of total coherence and inner alertness for long periods of time during which natural intelligence operating in quantum field revealed itself to them. They connected directly to the universal intelligence that corresponds to what we would call the vacuum state in quantum field. In this way they developed a dynamic experiential relationship with universal intelligence.

The ancient masters in all traditions mastered sciences such as meditation, yoga, and the science

of sound (Mantra or Nama-Rupa) that placed them in direct communication and in an experiential relationship with universal intelligence. As a result of their observations of universal intelligence they understood how it operated, and they applied this knowledge to all aspects of life including the human healing process.

The rishis were able to identify the vibratory quality of every perceived object. The vibration or “sound” of an object became its name. In Sanskrit this is called “*Nama-Rupa*” – “name and form.” The molecular vibration of the name is equivalent to the molecular vibration of the form.

Every line of Rig Veda (and other Sanskrit scriptures) is, in fact, a vibrational replication of an observation of the mechanics of universal law, i.e. the laws of physics. The words in the text are therefore an exact duplicate of the actual observation recorded in its original molecular vibration. Translating these ancient names usually sounds like an analogy, but it is not. The stories are, in fact, detailed descriptions of every vibratory object in the universe and how it performs according to the natural laws of this universe.

The ancients developed a utilitarian science that made use of these observations so that they could consciously activate specific laws of nature by chanting the sounds of the molecular vibrations contained in the words. Pandits were trained from generation to generation in the ability to transmit currents of light and

energy (“shakti” or “prana”) into the Sanskrit words in order to activate and influence the molecular vibrations of objects as well humans. By chanting the hymns of the Rig Veda they could call on the rain, alter the energy of an energy field, bring out the sun on a cloudy day, etc. This practice is still in use today throughout all of Asia and India.

The Knowledge of the vibrational record of the laws of the universe (also known as the Living Word or Word of God) is the source of all ancient healing and spiritual science. This is source of the astounding healing powers and abilities displayed by the ancient shamans, medicine men, yoga masters, Jewish Hassidik masters, and Jesus Christ.

The ancient masters developed the capacity to apply the transference of matter into sound energy and then back to matter in a greater form with the intervention of universal intelligence. Instead of using an electron microscope they used their consciousness and nervous system to make their observations of subtle particles of physics.

Through “*shakti*” or “*prana*” (intelligent Life Force), they were capable of influencing the behavior of the world, as they perceived it. In fact, today, there are still practitioners of these ancient spiritual sciences revered by their constituents, ridiculed by those who feel threatened, and ignored as anomalies by most who simply can’t integrate them into their reality dominated by concrete modern science.

Today, the results these ancient masters achieved would most likely be attributed to “super normal powers” and/or magic only because of our lack of understanding. In truth and fact, these events might be more accurately described as the application of the principals of quantum physics by people who never heard of quantum physics but are, nevertheless, capable of directly perceiving those principles and making practical use of them.

To think that we can understand this spiritual science of *shakti* or *prana* completely without achieving the degree of direct perception needed to validate it is as ludicrous as it would be to expect the ancient masters to discuss molecular biology without the electron microscope or the scientific language associated with it. We need to understand that when we translate the words of the ancient masters we are not accurately reflecting what they perceived. Accurate translation is necessarily dependent on how well we understand what was originally said. We have to realize that with different tools of perception and using different vocabularies we can come to understand and explain the same basic truths.

If we were able to time travel back only two hundred years with a fully operational version the latest model 45-inch LCD television (2.1 mega pixels at the time of this writing), we would be as equally misunderstood as the ancient masters are today. We might have been burned at the stake, or conversely worshiped as gods (depending on where and when we touched down).

Certainly we would have been attributed as magicians with “super normal powers.”

In the 21st century, we are moving towards an understanding that represents a merging of modern science and ancient spiritual science. We have a long way to go before we fully understand the details of either, but research and progress are ongoing. We must continue to refine our understanding of how this universe and our bodies work. We believe that a merger between these ancient and modern approaches will result in the best of both worlds.

In the meantime we need to be very careful not to discard information just because it can't be proven by modern science. We can't deny the validity or discard the observations and conclusions of the ancient masters without having achieved their level of perception. Unfortunately this is already happening. The ancient truths are being discarded as fiction and lost to future generations. Much of the wisdom of the elders is not being passed down to the next generation. This is particularly true with botanical medicine. What a tragic loss for humanity.

At Complete Nature we are encouraging the knowledge of the ancients and the modern scientific community to merge their understandings and preserve this precious wisdom before it is too late. We encourage the young people of these ancient cultures to study with their elders and understand the deeper truths through the advanced knowledge of Quantum

Field that they are learning in school. This wisdom must be brought into the modern world where the people can make use it in the increasingly stressful world we live in.

Adaptogens are accurately defined by both subjective and objective criteria. They are, in fact, validated by both ancient spiritual science and modern science. In this sense our super-herbs form a natural bridge between traditional medicine and contemporary medicine. We hope this bridge will open the door to many “new” discoveries and take all of us into a greater more healthy life for all future generations.

Chapter 10

Adaptogens: The Missing Link to Soma

The ancient masters must have had a profound cognition of these herbs in order for the herbs to attain such a high status that was consistently honored and verified over such a long period of time. This realization encouraged us to look more closely at their observations and explanations. The language the ancient masters used was poetic, allegorical, and metaphysical. At the time these brilliant masters lived the technical language of science did not exist. If we translate the poetic words that they used in their scriptures, literature, and oral tradition into modern scientific terms, amazing parallels become apparent and a more complete understanding of adaptogens emerges.

The gods and devas of the ancient Veda were actually descriptions of innate impulses of natural intelligence operating in the Universe (the macrocosm) and within our bodies (the microcosm). The ancient masters developed a clear picture in intricate detail of how these forces operated and they personalized these natural forces to explain their function in the Universe. The gods and devas, were, in effect, personified principles of physics.

In the scriptures of the Veda, the gods and devas drink the juice of the Soma plant to enhance their

performance. The descriptions of the soma plant and its effects sound remarkably similar to our super-adaptogens. If we look at the performance of the gods before and after drinking the Soma, we see activity that corresponds to the difference between Newtonian physics and Quantum Field. Suddenly the activity of the gods becomes coherent and friction free. A reality is created that goes beyond all the normal conditions of physics. Every organ (god) in the body becomes infused with highly intelligent and super-conductive activity free of any friction or resistance.

According to the ancient scriptures on yoga and meditation, as the body is trained to come into balance and becomes fully attuned to Universal Intelligence, the body itself begins to produce the Soma to enhance its performance and increase the level of its own innate intelligence. This enhanced performance explains what we call the super-normal functioning of both their bodies and their consciousness. The Soma produced by the body essentially served as a catalyst for massive transformation of the entire being – physically, mentally, emotionally, and spiritually.

The most complete descriptions as to how the body can produce Soma is found in the Ninth Mandala of the Rig Veda. This scripture is oldest in the world and forms the basis of all Indian Knowledge. Behind the poetic language are scientific mechanisms. What follows is our interpretation and explanation of how the Rig Veda's story of Soma translates into modern scientific terms.

Soma is described as a green tinted or golden liquid that stimulates intelligence (the gods). The green tint is an obvious reference to the plant matter that contains the vital phytochemicals that are the essential active elements in adaptogens. The Soma turns golden color when it is used in sacred ceremonies. These sacred ceremonies can be seen as the activation of the adaptogens as they work with the natural intelligence of the body to heighten our performance. The sacrifice of the Soma is actually the transformation of its chemical makeup to produce the elements in the body that the body requires for homeostasis. We see this principle over and over again in every adaptogen.

There is a third phase in which Soma is no longer called "Soma." It transforms into something else that the Rig Veda calls "Indu." Indu behaves like Soma, but with divine intelligence activated by the king of gods named "Indra." Indra is the Universal Intelligence that supervises and synchronizes all the gods (impulses of intelligence guiding the cells) and their activities. This third phase of Soma has its parallel in the modern scientific paradigm wherein the adaptogen, acting within the field of natural intelligence, induces the body to produce bio chemical reactions that bring the body into equilibrium. One chemical contained in the adaptogen serves as a catalyst to produce another more useful chemical in the body. This new chemical is imbued with Universal Intelligence and gets the job done effectively and homeostatically.

The Rig Veda says the body produces Soma as it is being pressed between the two grinding stones. These are the two hemispheres of the human brain. Cranial-sacral medicine refers to these two hemispheres moving when they are stimulated by brain activity. The Rig Veda further mentions “ten sister fingers holding the two grinding stones.” The ten fingers of the Veda correspond to the five organs of action and the five organs of perception. Both our perceptual apparatus and the actions that they trigger stimulate brain activity in specific locations along the surface of the brain. An EKG registers and measures this brain activity in terms of electrical impulses. The massaging of the two hemispheres of the brain is analogous to the pressure and movement of the two grinding stones described in the Rig Veda.

Just beneath the center of the two hemispheres of the human brain are three glands: the pituitary, hypothalamus, and pineal glands. The hormones secreted from these three master glands regulate essential biological elements. The hypothalamus gland controls all major endocrine glands. The pituitary gland produces hormones that control our muscle contractions and water balance among other vital functions. The pineal gland secretes melatonin that controls essential body rhythms. These three glands work together to produce the Soma. In the Rig Veda they are called the high priests responsible for the ritual, i.e. the pouring out of the Soma after it has been pressed by the two grinding stones.

There is a remarkable correlation between this ancient description of the production of Soma and modern research that suggests that adaptogens stimulate the hypothalamic-pituitary-adrenal axis and sympatho-adrenal system to create the nonspecific stress response.

The Rig Veda says that once the Soma has been pressed, it flows down the wooden planks into a straining cloth. The wooden planks represent the spinal column that carries our cerebral spinal fluids. The straining cloth is analogous to the porous membrane in our large intestine through which the vital constituents are, in a real sense, “strained.” Foreign substances are rejected and not allowed to pass through while naturally produced vitamins, minerals and other vital compounds pass through to be transported by the bloodstream. At the cellular level the selective permeable membranes of each cell allow only certain substances to pass through.

We have come to realize that we are observing innate universal truths. The validation process of these universal truths must incorporate both subjective and objective criteria. The function of Soma is analogous to the functioning of adaptogens. With the help of natural universal intelligence they assist the body to produce natural endogenous bio chemical responses that promote bio-directional balance. This balance allows our bodies to maintain homeostasis by natural means. Although we may not be able to provide a literal translation of Soma that accurately reflects the

direct experiential perception of the rishis, we can draw comparisons that suggest that the knowledge of the rishis and modern science share common ground.

Adaptogens bridge the ancient wisdom of traditional cultures to modern science. The remedies of these ancient cultures have withstood the test of time demonstrating results that can be repeated and verified over generations. Modern science is now providing explanations to help us understand what the ancients already knew. They were just as wise as we are (and perhaps a lot more). Only the language is different. The observation is the same. Under the umbrella of science, spiritual explanations seem suspicious and fictitious. Under the umbrella of spiritual experience, scientific explanations seem cold and antagonistic. In the 21st century we are now crossing the bridge between scientific validity and spiritual mysticism and realizing that they are not opposed. One merely helps to explain the other using a different perspective and different vocabulary.

Chapter 11

Spiritual Science/ Modern Science

The term “spiritual science” may seem to be an oxymoron, a contradiction in terms, but we assure you that this is not the case. The scientific community recognizes the mind-body-spirit trinity.

“Mind-body and/or spiritual energy are integrated with, not separate from, our physical body, and many believe that good health includes nourishing this connection.”

Adaptogens p. 109

Many other authors of scientific books on adaptogens refer briefly to the spiritual element in overall balance. We feel that this is a key element to understanding the working of adaptogens and having no scientific credentials or *professional* reputation to protect we will borrow a phrase from Captain John Kirk of the Starship Enterprise: “and boldly go where no man has gone before” in our discussion of adaptogens.

The scientific facts, laws of physics, and principles of quantum state existed long before the scientific method and the ever-expanding scientific vocabulary that we employ today. The basic truths have always existed. Before what we call “modern science” these basic facts of life, existed as they do today and were understood and perceived from a different perspective

that we have called “the wisdom of the ancients”. This ancient wisdom described what we know today as scientific principles in the spiritual vernacular of their day and which we now propose to call “spiritual science.”

We have come to realize that we are observing innate universal truths. The validation process of these universal truths must incorporate both subjective and objective criteria. When the subjective and intuitive criteria of spiritual science come to the same conclusions as the objective criteria of modern science there is a very good chance that we have stumbled upon the truth.

Scientific knowledge must be clearly seen and demonstrated through physical experimentation. In this sense, modern science is firmly rooted in observation. Observation restricts us to the limited perception of the human mind that due to its limitations, is the source of all friction and stress. Universal natural intelligence resides beyond observation. As long as our analysis is only in the finite field of observation we will miss these universal truths. It is for this reason that modern science alone does not provide full and adequate explanations.

Through meditation the mind can experience consciousness alone, free from any observation. The human mind, absorbed in the infinite silence of meditation, spontaneously experiences the source of all the laws of the universe because consciousness is, in fact, the source of these laws. This introspective,

subjective source of knowledge has existed as part of the tradition of the masters since the dawn of time. It is the key to unlock the mysteries behind the very same natural phenomenon that science struggles to understand today.

Consciousness is within every observation, but observations alone cannot perceive the consciousness contained within them. The higher states of consciousness achieved in meditation, chanting, prayer, shamanistic trances constitute valid subjective sources of knowledge that provide direct perception of universal intelligence and its expression in the laws of nature. The most creative scientist of our era, Albert Einstein, provides proof that there are, in fact, intuitive paths that penetrate to the truth. Profound knowledge, regardless of its source, is aligned with science. It is well-known that Einstein knew the theory of Relativity long before he could develop the formula to prove it. He intuited it from a highly alert state of mindfulness.

“Religion without science is blind. Science without religion is lame.”

Albert Einstein

Science and all physical perception focus on ideas expressed in words. This provides an extremely valuable and useful perspective in our everyday lives. The concrete nature of our physical perceptions has a strong impact on our experience of life. Our thoughts, ideas, and our language provide a framework for the mind to organize and understand what we perceive. We

utilize words to describe and organize these concepts and ideas, but are these concepts reality or do our thoughts expressed in words produce illusions in our mind? Our attachment to our perceptions, concepts and ideas can and do create confusion or result in destructive behaviors when they don't correspond to the actual experience of life. We commonly experience this confusion as our mind becomes restless and filled with fluctuating and conflicting thoughts.

Meditation provides a technique that liberates our conceptual mind from the illusion of words. In the practice of meditation, we use a mantra to absorb our attention until our attention dissolves and our focus is lost. With loss of focus, we experience the difference between consciousness and the things and events that our consciousness perceives. The images and impressions in our mind are seen as something distinctly different and separate from our true nature yet, it is only when the concepts of science are aligned with our true nature, that science can adequately explain the natural balance that governs our existence. The meditative techniques used by the ancient masters allowed them to escape the illusion of observations expressed in words and directly perceive the natural balance in our true nature. All wars are fought over words. The reality that the words describe must be derived from the same observation.

On a meta-level we would hope that scientific research will understand the importance of extending itself to encompass serious research on spiritual

experiences to bring about a reconnection of modern science with its ancient metaphysical roots. From a spiritual point of view, man's scientific knowledge is ultimately of no use if it doesn't help us to progress spiritually.

If you're still reading this, it is likely that the complimentary nature of the spiritual significance of science and the scientific significance of spiritual knowledge has hit a chord and has the ring of reality. The world around us and the world within us both are based on timeless universal natural truths perceived at different times by different means. We find ourselves at a point in human development where we can accept both worldviews. At this time modern science and traditional medicine can and should work together hand- in- hand.

Chapter 12

Creation and The Origin of Natural Intelligence

If you are convinced, as we are, that there is a natural intelligence that guides the basic processes of life embodied in adaptogens then the next logical question becomes: Where does this intelligence come from? Hold on to your seat: Light. The phytochemicals from which adaptogens are formed require light. Photosynthesis is fueled by sunlight. The basic life forms such as plants and algae, upon which the entire food chain is based, require light to produce energy. These super-adaptogens effectively carry the energy provided by the light that formed them into our cells.

If you have ever experienced intense meditation, you will recognize the power of light. Light demonstrates the most basic living currents of energy upon which all life depends. Waves of light are the first physical expressions of the pure energy that comprise the basis for all creation. These light waves carry the correct vibrational intelligence needed to re-organize the chemicals, molecules, and atomic structures of our physical existence in homeostasis or what quantum field refers to as infinite coherence.

Let's take a closer look at what modern physics has to say on this subject. The nucleus of the atom consists

of protons that carry a positive electrical charge, and neutrons that are electrically neutral. A cloud of less dense particles called electrons that carry a negative electrical charge surrounds the nucleus. This creates a harmonious structure existing in a balanced and stationary energy state.

“Transitions may occur between the levels of energy is absorbed or emitted in the form of photons (packets of light energy). The existence of the levels therefore shows up in the energy of the light, which is deducted from its frequency (color).”

Page 146

The arrangement of energy levels within the atom is a response to quantum light wave vibrations in the same way that frequencies of a musical instrument are a response to sound vibrations.

According to the quantum theory of the electromagnetic field, energy is transmitted in discrete lumps (“quanta”). Photons (packets of light energy) are the quanta of the sub atomic electromagnetic field. They act as messengers moving between charged particles telling them that the other charged particles are present, carrying information on the nature of the electrical charges, and indicating a response. Photons make excellent messengers, since, as packets of light, they have no mass and move at the speed of light. These packets of light embody the intelligence that carries the information and determines the patterns

of association that define the structure and function of nature's most basic components.

Shortly after the Second World War, nuclear scientists found that with nuclear accelerating machines they could induce high-speed subatomic particle collisions that resulted in the discovery of newer and yet smaller sub atomic units. At present this search has identified the smallest known and most elementary particles from which all matter is constructed called "quarks." They are the fundamental building blocks of nature with no internal parts or structure. Quarks reside in quantum energy fields and can be excited by energy carried by colored gluons similar in function to the photons that carry life's most basic messages encoded in light.

Lets now move from physics to the most current scientific biochemical theory of the creation of life on earth. Science has searched for the principles that control the appearance of collective order in inanimate systems such as in the study of fluids forced away from thermodynamic equilibrium as well as certain inorganic chemical reactions that result in organized chemical behavior. While this impressive research recognizes patterns that resemble the appearance of order in living systems, they fall far short of providing a common explanation.

Scientists researching the origins of life postulate that the presence of water enriched by chemical compounds formed in the Earth's atmosphere could

have resulted in chemical processes that, over many millions of years, formed organic molecules of increasing complexity from which life emerged. The classic experiments conducted at the University of Chicago by Stanley Miller and Harold Urey in 1953, duplicated the chemical conditions of primeval Earth and found that their “pool of water” developed amino acids and other chemical compounds essential to life.

This “primal soup” theory must be viewed in terms of the mathematical probability that, even given millions of years, this combination of chemicals could spontaneously assemble and organize DNA together with many other such incredibly complex molecular components of life. The number of possible random combinations of molecules is so huge that the correct combinations by blind chance are statistically absurd. There would have to have been an external influence that acted as a catalyst that upset the thermodynamic equilibrium thereby setting the stage for self-organizing reactions.

The most probable outside disturbance would have been the powerful radiation of the sun that provides the negative entropy (organizing effect) upon which all life on Earth depends. Although this is still very much in the realm of unproven theory, and the origin of life on Earth remains an unsolved mystery of modern science, the most favored scientific scenario leads us back to the sun – to light as the catalyst for the origin of all life.

Modern science is slowly approaching the same conclusions perceived by the ancient masters and

contained in almost every cosmology in almost every spiritual tradition from the Aztecs to the Egyptians, the Polynesians to the Hindus who identified the light from the sun as the source of all life on earth.

This takes us full circle back to the spiritual descriptions of our creation contained in the ancient knowledge expressed in the Kabalistic tradition of Judaism, the Vedic tradition of India, the teachings of Buddha, Socrates, Jesus Christ, Mohammad and a host other less know “enlightened” masters. It is almost universal to say that creation began with light. The spiritual significance of the sun is almost universal.

The entire blueprint for creation, present at the very beginning of time existed (and still exists today) as transparent seeds of light that are, in effect, impulses of universal creative intelligence. When this intelligence becomes expressed in conscious thoughts, all creation follows. Adaptogens are simply extraordinarily effective embodiments of this universal intelligence that we can use to assist us to live healthier, fuller, and more energetic lives.

If all of nature is imbued with natural intelligence what makes adaptogens so special? First they must come from the plant kingdom to be able to carry the energy from the light that formed them. The authors seriously doubt that bear bile, rhinoceros horns or other animal by-products, despite whether or not they have substantial health benefits, qualify as adaptogens.

Within the plant kingdom there are relatively few species that create adaptogenic phase shifts by inducing the body to normalize its own functions. Just as at the subatomic level there are specific subatomic structures (protons and gluons) that function as parcels of light, so in the plant kingdom there are extraordinary plants that have this same capacity. Adaptogens are the protons and gluons of biological homeostasis. Their behavior is analogous to the universal intelligence that functions within Quantum Field and they spontaneously and naturally act to assist our body to achieve its highest potential.

Chapter 13

Food for the Soul

“The importance of life is that it is a stepping stone to and a vehicle for mind....”

P 71

The mental world does not consist of physical or material objects, but is populated by thoughts. The Dalai Lama has said that if you honestly analyze the perceptions in your mind (both mental thoughts and images) you will ultimately discover that they only exist in empty consciousness. That is to say they have no substance other than thought. Our senses experience the world around us and send this information to our mind. The mind then creates a story about what it has just experienced and attempts to understand it. These thoughts shape our understanding of the world and in turn, determine how we act upon the physical world. Chapter 13 is the magic number that penetrates all illusions. We are now embarking upon the greatest journey of life: the discovery of universal intelligence that operates within us all.

“The thoughts in your mind trigger physical activity via the intermediary of your body which then rearranges material objects in your environment. Indeed, nearly everything we ordinarily see in our environment is the

result of mental activity realized through physical operations.”

P. 73

For every mental activity there is a corresponding physiological activity. The correlate to this is also true: for every physiological activity there is a corresponding mental activity. Mind and body are intimately interconnected. What affects one also affects the other.

Deep inside the mind/body is a more intelligent operator: the soul. The soul functions within the quantum field of universal consciousness and guides the activities of our life. Mind gathers the information, soul chooses what to do with it, and body carries out the decision. The more open the soul is to universal intelligence, the more consciously and competently we react.

If our body is performing in homeostatic harmony with universal intelligence, then our soul can more easily accomplish our goals in life. The only thing interfering is the malfunctioning of mind and body. As the body/mind begin to clear we can live in greater harmony and homeostasis with our world. There will be less stress and fewer mistakes. When our bodies function in a more efficient way, the desires of the soul are expressed more quickly and clearly because we remove the physical impediments that have held our soul hostage. The physical structure and functioning of the body under stressful conditions produces resistance. Eliminate the stress and resistance and our true nature unfolds.

Perhaps we are discovering that adaptogens are basic components, allowing the intelligence of our soul to communicate with our physiology. Like photons and gluons on the subatomic level, they are the messengers by which the communication takes place. Our soul provides us with a divine template of perfection, our true desires and goals. Our minds and bodies may not want to cooperate, even with the best of intentions, but using tools such as meditation, yoga, and adaptogens we come closer to achieving our intended perfection. The master Jesus told his disciples to clean the temple daily. The temple he referred to is the body/mind. When the temple is clean, then the universal intelligence within it can function without friction and error. We refer to this state as heaven on earth.

Adaptogens express universal intelligence and act as a vehicle by which natural intelligence communicates and functions physically. They are a key to unlock the biophysical manifestation of a natural homeostatic force that is the expression of natural intelligence. In this sense, adaptogens can assist us in achieving our vision to regain our correct place in nature.

Let's take this one step further. The ancient yogis described states of extraordinary power wherein the body/mind could function miraculously. The state was encouraged through the achievement of physical/mental homeostasis. In this homeostatic state, the body begins to produce Soma. As the body begins to transform amazing gifts begin to unfold in the form of super-normal perceptions and abilities.

Could it be that the super adaptogens are a link to the creation of a super human being? While this statement might sound outrageous by modern scientific standards, it is not uncommon among the great sages that first discovered adaptogens and recommended their use. All of these gifted masters demonstrated gifts that were termed miraculous and super normal. Were these countless stories of the lives of various masters around the world elaborate exaggerations or was there some tangible scientific basis for them? This is truly food for the soul. The best answer the authors can give is to try it for yourself. You have nothing to lose and everything to gain.

Chapter 14

A New Definition of Adaptogens

In the early chapters, we suggested that we would attempt a broader definition of adaptogens that encompasses their subtle mechanisms and deeper truths. Our research has taken us through the scientific studies, into the past, and into the far realms of Quantum Physics. We now have a more comprehensive view of Adaptogens and how they do what they do.

Adaptogens act at both the physical level (comparable to the computer's hardware) and at the level of information, organization, and communication (comparable to the computer's software) to normalize physiological functions and bring the body into homeostasis. Adaptogens are more than just their chemistry. The definition of adaptogens, must, therefore, encompass both their physical qualities and their intuitive intelligence.

The reason that science has stopped short of explaining the mystery of the intuitive nature and wisdom clearly displayed by adaptogens is that they have been analyzed only at their biophysical/biochemical level. We cannot define the computer by its hardware alone. We cannot understand the intricate nature of the ant colony by analyzing the physiology and behavior of any one ant. And we certainly cannot understand the complex nature of how adaptogens function by looking

only at their chemical compounds (components) and the biochemical reactions they induce.

If we avoid a definition that includes the communication skills, organizational capacity, and natural intelligence they display simply because modern science cannot fully explain these functions (yet) we've missed the boat. It's for this reason that we have emphasized the subjective knowledge encompassed in ancient mysticism, and the metaphysical components of quantum field to broaden our perspective.

Our limited mental concepts and words are inadequate to draw a complete picture and can even be misleading if not understood in the context that all aspects in the definition of adaptogens are interrelated and merely different points of view of the same thing.

With this in mind we shall proceed.

A. THE BIOPHYSICAL LEVEL

At the biophysical level we will distinguish three features of adaptogens that result in their impact on homeostasis and life-sustaining functions. These are not in order of importance as the importance is relative to their holistic perspective that handles the needs of any specific person at any point in time.

- 1. Heightened State of Non Specific Resistance:**
Adaptogens control the negative consequences of stress by normalizing the physiological functions that promote homeostasis. If we

maintain a state of normalized metabolism and natural balance, our biological systems will, by themselves, resist and control the negative effects of stress and keep us in good health. The following are examples of how adaptogens heighten non specific resistance:

- a. The ability of jiaogulan to regulate the contractions of our cardiac muscles optimizing the pumping function and circulation that delivers oxygen and nutrients to all parts of the body.
- b. Adaptogens strengthen our immune system by increasing and preserving our adaptive energy levels.
- c. Regulation of the HPT axis that affects a wide range of hormonally regulated activities leading to a more youthful vitality and resistance to stress.
- d. Neuro –endocrine regulation and its bi-directional affect on the central nervous system that includes brain functions and the sympathetic and parasympathetic nervous systems to normalize a broad spectrum of physiological, mental, and emotional responses.

2. Cellular Integrity: Super adaptogens impact cellular structure and the environment in which the cells function. If the structure and function of

our cells are not balanced and normalized, they cannot provide the normal cellular functions that maintain our health. When we maintain cellular integrity, we create a balanced and healthy environment conducive to the proper synthesis and function of our enzymes, proteins, amino acids, nitric oxide, and a host of other life supporting compounds that are produced at and/or function at the cellular level.

- a. In this category we include the action of xeronine (stimulated by noni) that provides physical support for the cell walls preventing them from collapsing and malfunctioning.
- b. Stimulation of endogenous antioxidants to control free radical cellular damage and thereby prevent a broad spectrum of illnesses.

3. Bio Chemical Building Blocks: Adaptogens contain specific phytochemicals that contain or induce the synthesis of biological compounds, which directly affect the structure and function of proteins, amino acids, enzymes and other essential bio-chemical building blocks. These have a synergistic effect that helps to explain the wide range of health benefits of adaptogens. These are specific to each adaptogen and are discussed in greater detail in our discussion of jiaogulan, noni, and amalaki, but some clear examples include:

- a. Bio chemicals with anti-inflammatory, anti-fungal, antibiotic, anti-viral, and anti aging properties.
- b. Promotion of the biosynthesis of nitrous oxide that controls circulatory problems.
- c. Damnacanthal slows the rate of multiplication of cancer cells
- d. Ursolic Acid regulates the self-destructive programs essential for all healthy cells and assists in the prevention of cancer where the cells may not self-destruct as they should.
- e. Scopoletin has a bi-directional effect to normalize blood pressure

The most effective adaptogens, including the ones we have identified as “super-adaptogens”, act on all three levels at the same time. They contribute to our heightened state of non specific resistance, improve and protect cellular structure and function, and provide essential biochemical building blocks that act synergistically to provide a wide range of health benefits. When used in combination they provide the most complete benefits in a well synchronized homeostatic balance.

B. ORGANIZATION, INFORMATION, COMMUNICATION AND NATURAL INTELLIGENCE

In addition to the physical operations discussed above we need to understand the intuitive wisdom and natural intelligence displayed by adaptogens.

Adaptogens are botanicals that carry the creative energy derived from light that formed them into the body of the plant and assisted that plant to adapt to the extreme swings of the environment. The adaptive mechanisms were inherent in the memory chip that is carried by the super adaptogens in their phytochemicals. This provides adaptogens with extraordinary natural intelligence through which they promote homeostasis to bring the entire body into balance and adapt to stress.

Through intercellular communications they arrive at an intuitive understanding of what a particular person needs, where they need it, and in what quantities they need it to achieve balance. They then assist the body to carry out the operations needed to normalize functions that will bring us back into balance.

It is at this level that scientist have attributed intuition and wisdom to adaptogens in recognition of the fact that something of this nature must be the case whether or not it can be scientifically explained. With only “hardware” and no “software” we can’t possibly understand how the computer of adaptogens function.

This process utilizes the transfer energy: input guided by natural intelligence to express extraordinary results (such as in the extraordinary powers of the Yogi). Raw materials are transformed into the needed

components by this process of energy transformation. Adaptogens use the vibrational power of the sunlight contained in the phytochemicals to perform the transformation of one substance to a more specifically required substance with the intervention of natural intelligence. This is a basic principle of universal intelligence as demonstrated by quantum physics where energy is transformed to matter and results in a more specifically useful material.

This level of consciousness demonstrated by adaptogens is supported not only by the wisdom of the ancients but also by the recent discoveries in atomic and sub-atomic physics of quantum theory described in detail in this book.

The Golgi Apparatus, Enzymatic System, HTP axis, Krebs Cycle and many other biological systems reflect the effective operation of adaptogens. The body's complex physical operations are unexplainable in the absence of elements that provide intelligent communication between the cells and organization at the mental (software) level of operations.

Based on the above, we shall now provide the definition of adaptogens as we see them:

Adaptogens are botanicals that act on the biophysical level to provide a heightened state of non specific resistance to stress, promote overall cellular integrity essential to create bi-directional normalization of our physiological functions, and contain phytochemicals that provide or induce the

production of bio-chemicals acting synergistically to provide a wide spectrum of non toxic, long lasting remedies that have no known negative side effects. At the same time, adaptogens operate at the level of natural intelligence to communicate the details of specific needs and provide the necessary information to direct the operations to normalize the functions that assist in the corrective measures to satisfy those needs.

Chapter 15

Conclusion

This is intended to be more of a new beginning than a conclusion. We believe that from this point we continue to move forward, hopefully with a slightly wider perspective and more opened mind. It is time for the whole of humanity to raise their fullest potential. If we do not, the world is at stake and all life along with it.

The universe was originally created to work in homeostasis. It was a blueprint that worked spontaneously at every level to create adaptation and growth. If we look honestly at the functions of the universe we see only one flaw: the intervention of the limited human mind in our attempt to change the universe to suit our egocentric needs without comprehension of how it might upset the balance of Nature.

In the 21st century we must recognize the necessity of achieving homeostasis and avoiding the devastating destructive negative side effects of narrowly conceived man-made solutions. This statement applies not only medicine. The survivals of mankind and mother earth are in the balance. The universe and our bodies know how to adapt and achieve homeostasis. Quantum physics has already become partners with ancient spiritual science.

A quantum leap in medicine is about to take place and Complete Nature hopes to be on the cutting edge of this threshold by locating and sharing our adaptogens (and the understanding of how they work) with as many people as possible. We want you not only to experience amazing physical and psychological results, but also experience a shift in consciousness as you come to fully understand and appreciate the results.

Today, thanks to modern science, we understand adaptogens more fully than the ancients who attributed magical and spiritual powers to explain their healing qualities. When Spock traveled back in time to the Twentieth Century, he was amazed at how crude our medicine and science was. The next generation will understand the practical applications of quantum field principles far better than we do today. In the future, quantum field and other scientific endeavors will provide an even more complete explanation. This is progress, ladies and gentlemen, and Complete Nature will do everything within our power to be part of this continuous development of knowledge, understanding and vision.

Section 2

The Super Botanicals:

Jiaogulan

Noni

Amalak

&

Mangosteen

Introduction to The Super Botanicals

Now its time to introduce our friends: the super adaptogens and herbs that we have discussed in the First Section. Although each adaptogen uses the same universal intelligence and creates greater vitality and homeostasis in the body, mind and soul, they all have their own unique characteristics and abilities. It is both informative and exciting to see how each of these herbs perform in action.

The adaptogens we have chosen have been recognized and used for over a thousand years in India, China and Polynesia as the supreme herb of their respective botanical traditions: Amalak from India, Jiaogulan from China, and Noni from Polynesia. We have also added Mangosteen. Even though it is not an adaptogen, it possesses remarkable anti-oxidant properties that rank it as one of the most important botanicals on the planet.

Each botanical has its own unique personality and primary healing abilities. When using adaptogens, while they all create homeostasis and channel universal intelligence for assisting the body to function in maximum efficiency for holistic healing, they also each have their own gifts and “target” specific bodily functions. When universal intelligence moves through each adaptogen, the characteristics of each herb is enhanced and uniquely accomplishes homeostasis and healing in its own dynamic way.

All adaptogens work homeostatically with each other. Combinations of them are even more powerful and work more effectively than they do singularly (although they are unquestionably amazing just by themselves). The whole is greater than the sum of its parts.

For a deeper clarification of the way adaptogens work, we will shift our discussion for a moment to the Enlightened Masters who discovered them. Universal intelligence works through a human being and creates Enlightenment (homeostasis and a highly coherent state of body, mind and soul). It works through adaptogens to create a highly coherent and revitalized state of physiological functioning in the body. Examining the characteristics of Enlightenment also reveals a lot about the characteristics of adaptogens.

One of the first things that we teach our students of meditation about Enlightenment is that not all Enlightened Masters are the same. Each has their unique cultural differences and personalities. When you become Enlightened, you will not change your personality and become a Maharishi, or a Muktananda, or a Jesus Christ. You will be simply yourself, 100% *you* without any interference, incoherence, or stress.

In the state of Enlightenment, Universal Intelligence will move through your personality in unique and positive ways to create homeostasis not only for your body but in everything you do and everyone you touch. These Masters were clearly amazing during the

time in which they lived. Everywhere they went they drew thousands of people who would listen to their words of wisdom and soak up the spiritual energy and love that they radiated. To be in their presence was an awesome experience. This is an example of the homeostatic quality of universal intelligence. All the parts are treated with love and concern. Nothing is left out. No one is disappointed.

Adaptogens function with this same kind of universality. Every system of our body is enhanced. Every part of our body is happy. There is no negative side-effect, and no discomfort. When they work together, the body is even happier. The botanicals that we discuss in this section all compliment each other and can be used either individually or in combination. The choice is up to you. See what you like, create a formula that works best for your situation, and try it out. You will not be disappointed.

Jiaogulan Leaf Powder

(*Gynostemma pentaphyllum*)

History

Jiaogulan ("jow-goo-lan") is native to mountainous regions of rural South West China, well known for the longevity of its inhabitants (where it is called "Xiancao" or "Herb of Immortality"). It is also known in other countries around Asia where it has been used as an energizing herbal tonic tea and traditional folk medicine to combat fatigue, increase endurance, prevent colds and respiratory diseases, and enhance longevity. In Thailand it is known as the Immortality Herb. Jiaogulan's use was primarily regional and was, therefore, not part of the mainstream of traditional Chinese medicine until recently.

China conducted its first national census in the 1970's. It was reported that many residents of the remote regions where Jiaogulan had been used for centuries lived to the age of approximately 100 years. The residents attributed their long life span to Jiaogulan. This captured the attention of Chinese officials, practitioners of traditional Chinese medicine, and scientists from the Chinese Academy of Medical Science who began extensive research up to the present day. This research has demonstrated a wide variety of benefits without any toxic or negative side effects.

In Japan Jiaogulan was studied for different reasons altogether. Jiaogulan grew wild in the mountains of Japan and was known as "Amachazuru" which translates as "sweet tea vine." Japanese pharmacologist, Dr. Masahiro Nagai, decided to study the chemical compounds in Jiaogulan as part of his research on finding a sweetening agent as an alternative to sugar. To his surprise, he found compounds in Jiaogulan identical to those of ginseng.

Dr. Tsunematsu Takemoto, a specialist in herbal medicine was, at about the same time, investigating a Chinese melon in the gourd family, *Momordica grosvenori*, known as the "fruit of longevity". The studies of jiaogulan, which is in the same family as momordica fruit, captured his attention. Dr. Takemoto focused his studies on Jiaogulan for ten years during which time his research team discovered eighty-two saponins (as compared to twenty-eight saponins found in *Panax ginseng*) and, over the following ten years, scientifically investigated their medicinal properties and clinical effects.

Literally hundreds of scientific papers on Jiaogulan and its saponins have been published, and Jiaogulan is now recognized worldwide as an extremely potent herb with remarkable adaptogenic/antioxidant properties.

Jiaogulan as an Adaptogen

Jiaogulan is an adaptogenic herb and natural antioxidant with substantial scientific research to back up its claims. It is certainly one of the most powerful adaptogens on the planet. Unlike most botanicals, the results from Jiaogulan

Noni

Ancient Chinese and Indian texts refer to Noni as a remedy for a variety of illnesses. Noni has been used as a traditional folk medicine to combat stress related disorders such as regulation of blood sugar levels, constipation, circulation, blood pressure, inflammation, cancer, ulcers, indigestion, immune system deficiencies, chronic fatigue, and asthma.

The wide range of benefits of Noni seem unbelievable. How can one plant have such strong positive benefits for so many seemingly unrelated conditions? The answer lies in the fact that these conditions are all interconnected. They all involve a cellular dysfunction that Noni helps to prevent and correct. All these conditions are normalized by a balanced physiology operating in homeostasis – the intuitive goal of all adaptogens. Extensive scientific research from 1950 to the present supports the ancient claims that Noni is truly one of nature's most miraculous healing substances and most potent adaptogens.

Noni is indigenous to South East Asia. It was carried by the Polynesians as one of their most prized possessions in the voyaging canoes as they migrated throughout the Pacific including Tahiti and Hawaii. The ancient Kahunas (Hawaiian High Priests) attributed spiritual healing powers to all parts of the Noni plant, most specifically the fruit. According to Hawaiian legend, the god "Maui" was restored to life after having his body wrapped in Noni leaves. Scientists around the globe are now engaged in research that supports the traditional healing powers of Noni.

Noni as an Adaptogen

Phytochemicals are natural chemicals found in plants. One essential phytochemical found in Noni is proxeronine, a micronutrient that promotes human cells to synthesize xeronine. Xeronine is an active alkaloid produced naturally by our body and found in healthy cells throughout the body. Xeronine is essential for the proper functioning of all our cells and particularly proteins that are our source of strength.

The Xeronine System

Scientific investigation suggests that xeronine is an essential building block that provides rigidity to the structure of the cell walls of proteins preventing them from collapsing and malfunctioning. In addition, proteins are essential components of enzymes that enable our cells to maintain their proper structure and function.

Under excessive stress our requirements for xeronine exceed what our bodies can produce. As we age, our natural ability to produce xeronine decreases. Cellular dysfunction due to xeronine deficiency can result in many and varied health problems. In fact, the synthesis and proper functioning of enzymes and other vital elements and life sustaining processes on the cellular

Mangosteen Rind Powder

"mangostana garcinia"

Mangosteen has long been used in Asia for its powerful anti-inflammatory properties and has been effectively used for treatment of skin conditions such as psoriasis. In the Caribbean, Mangosteen tea is a traditional tonic for fatigue and low energy. There may be no other plant more widely used and studied in Asia that is so unfamiliar to the Western world. Over the past six years, noted ethnobiologist, Dr. James Duke has identified 210 distinct active ingredients each of which play a role in maintaining balance in the human body." The value of mangosteen has two important components:

1. antioxidant properties
2. other medicinal properties of Xanthones.

Antioxidant

Free radicals are unstable oxygen molecules generated by our bodies during metabolism (at a level that your natural defense systems can normally handle), but which are generated more abundantly in response to unnatural stress, exposure to air pollution, smoking, pesticides and other environmental factors. The enormous increase in these free radicals from environmental stress can overwhelm your body.

A free radical occurs when an oxygen molecule loses one of its two electrons making it incomplete. This "free radical" looks to take on an electron from healthy molecules, destroying the healthy cells in the process and generating a chain reaction that creates more free radicals. This can disturb the equilibrium between various organs as well as the stability of the organism as a whole (homeostasis) and cause various illnesses including cancer, diabetes, liver disease, inflammation and arthritis, and accelerate the process of aging.

Contained in the skin and pulp (rind) of the Mangosteen fruit are powerful, life-enhancing substances that scientists have named "xanthones." These are natural chemical substances that are found nowhere in nature in more abundance than in the rind of the mangosteen fruit. Modern medical research supports the fact that the "alpha mangostin" and "gamma mangostin" xanthones are among the most powerful and effective antioxidants found anywhere in nature. In their natural form (not synthesized in a laboratory) these are digested and metabolized and help your body to fight oxidation and the deleterious effects that result.

Xanthones

Xanthones are naturally occurring bio-chemically active compounds that couple with other molecules to become beneficial to a multitude of systems in our bodies. Xanthones have been intensely and thoroughly studied for several decades regarding their medicinal effects and pharmaceutical properties. No

Postscript

Try our products and listen to yourself

Let's not get so absorbed in ancient and modern theories and metaphysics that we forget the bottom line: if it works, it works. The history of these adaptogenic botanicals reflects thousands of years of successful results. Jiaogulan, noni, and amalaki share the distinction of being the most highly valued botanicals in the cultures from which they came. The modern literature on noni, jiaogulan, and amalaki as well as other potent adaptogens contains volumes of testimonials, clinical studies, and extensive surveys that clearly demonstrate their effectiveness. The real proof is in the pudding.

Our continued efforts to understand why and how adaptogens work will serve to expand our understanding of how to make best use of this universe and of our own bodies. In the meantime, for your well-being and good health, we strongly suggest that you listen to yourselves. Adaptogens work differently on different people. You will need to see for yourself what affect they have on your health and your life.

Without regard for the teachings of the ancient masters, the investigations by modern science, the spiritual assumptions of universal intelligence, or the predictions based on quantum field, simply try our natural adaptogens and see how you feel.

Here's to your health!

Complete Nature

Adaptogens are the precious gems of botanical medicine. The ancient traditions referred to them as “Herbs of Immortality” and gave them spiritual significance. Their ancient history is filled with amazing claims of supernormal healing abilities. There is an abundance of clinical research taking place around the world that is verifying many of the extraordinary results of adaptogens. But there are many unanswered questions about how and why they actually work.

This book represents a unique effort to understand and verify the working mechanisms of adaptogens. It touches upon some far-reaching subjects that take us beyond the biological and into the realms of the philosophical, metaphysical, and quantum field theory. Adaptogens, like the ancient cultures that recognized and used them, blur the line between practical and spiritual, between contemporary science and quantum field. Adaptogens are part of a wave of transformation in the Twenty-first Century that will challenge us to change the way we view our reality.

Adaptogens are attracting a lot of interest because of the amazing range of benefits they provide. They become even more interesting as we unravel the mystery of their ancient secrets and open the doors to an amazing understanding of the universe as seen through the eyes of quantum field.