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One Reader at a Time...

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Public Health Alert

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Will Surviving Mold Mean Surviving Lyme?

Ritchie C. Shoemaker, MD
With Laura Mark, MD

NOTES FROM THE MOLD FRONTIER...

Take out a microscope and look under the in the kitchen cabinet right underneath the pinhole leak in the water supply line. Is there something growing in the waster-damaged area? You bet: You'll surely see some filamentous fungi (AKA molds), but look too at the bacteria and actinomycetes. They are feasting on the simple food stuffs created by the extracellular digestive enzymes of the fungi. Free food! This habitat is a nice warm 65-72 degrees all day, every day, year round. Microbe paradise! Plenty of food, plenty of moisture and plenty of places to breed safely means plenty of microbial growth and plenty of secondary products of microbial metabolism. Call the products toxins, inflammagens, cell wall fragments and beta glucans; they are all foreign antigens as far as our immune response is concerned. And they all cause intense inflammatory responses that are well-demonstrated in tests of innate immunity.

If you put those compounds in the nose or lung of someone with "increased susceptibility," you will see innate immune functions going nuts trying to defend against the invasion of these foreign antigens. The excessive host inflammatory response can become the enemy if levels of melanocyte stimulating hormone (MSH) are low or if there is a particular collection of immune response genes present. As it turns out, about 25% of the general population have these specific immune response genes (HLA DR).

Add to this example of health hazards created by a leaky pipe some other sources of water intrusion that beget microbial growth like musty basements, crawlspaces with sagging flexible duct work, leaky roofs and slidshod construction in schools, homes and workplaces. You will see why in 2011 NIOSH says that **50% of our buildings** in the US are water-damaged.

Do you think that people with chronic illnesses *are helped* by being subjected to inflammatory stressors from within? No, they aren't. Don't forget, those chronic illnesses are altered in presentation and therapy by such exposure to toxigenic microbes.

This entire mold problem hasn't gone unnoticed. There are numerous reports from US agencies (some are just downright deceptive, however; don't believe it when you hear that mold is a nice warm fuzzy co-habitant that doesn't make people sick unless they eat it), the Government Accountability Office and the World Health Organization all describe how moldy buildings sicken people. There are hundreds of academic papers published showing the diversity and intensity of the inflammatory responses found in people sickened by exposure to the interior environment of water-damaged buildings (WDB) even without other illnesses. We have accurate diagnostic tests and our meticulous research has defined the abnormal physiology carefully. Such delineation led to published treatments that detail the step-by-step protocols used successfully by our group (and countless others) in thousands of patients. We aren't done; these illnesses continually show us that there is still much to learn.

Paralleling the march of science in the "mold" community has been a similar call in the Lyme community: to (1) establish better diagnostic tests, (2) identify accurate physiologic markers that define the illness; and then, (3) publish case control data on protocols (not anecdotes!) that work. We have these three defining parameters in the mold world but they are not yet in the world of Lyme. Indeed, some practitioners who focus on Lyme still don't acknowledge the devastating effect of exposure to the interior environment of WDB has on their patients. Lyme isn't just Lyme when a patient is moldy too. And to secure the diagnosis of Lyme, the illness must pass intact and unchallenged through the sieve of all other CIRS, including mold.

Mold illness is **essentially identical to Lyme in symptoms and chronicity.** This observation is critical to understanding why some Lyme patients just don't get better with antibiotics. There can be no "clinical diagnosis" of Lyme simply based on the geography at the time of onset of illness or symptoms until mold has been considered and ruled out by careful environmental evaluation and sampling that includes DNA sampling. Mold illness doesn't get better with antibiotics.

Maybe some perspective will help bring understanding to treatment of the many patients suffering needlessly who are taking antibiotics for Lyme that haven't worked. The answers start with genetics, move on to loss of regulation of inflammation and then to the effects of unregulated inflammation (including silent colonization by commensal bacteria living in biofilms). Finally, correction of T regulatory cell (T regs) abnormalities must occur before return to normal health can be claimed. In the end, if the inflammatory elements that are invariably abnormal in Lyme and mold, specifically C4a, TGF beta-1 and MMP9, aren't identified and corrected the patients won't get better. Said bluntly: **If these parameters aren't improving with a given therapy, the therapy isn't correct.** Clearly, what many physicians who treat mold illness use for therapy has direct application to the management of illnesses collectively called Post-Lyme Syndrome.

The reader may find complete discussions and up-to-date information on mold illness at www.survivingmold.com and by reading *Surviving Mold: Life in the Era of Dangerous Buildings,* by Ritchie C. Shoemaker MD, published 12/2010. Another useful resource is the peer-reviewed consensus statement, "The Expert Mold Treating Physicians Report," hosted by Policyholders of America (see www.survivingmold.com or www.policyholdersofamerica) and published in 7/2010. This consensus statement has the most complete set of references of any of the current mold reports. Additional information is found at www.globalindoorhealthnetwork.com.

So what is "Mold Illness?"

Long answer: The acute and chronic health conditions caused by exposure to the interior environment of a building with a history of, or ongoing, water intrusion in which there is amplified growth of microbes, including but not limited to fungi, bacteria, mycobacteria and actinomycetes; and presence of inflammagens in air and dust, including but not limited to beta-glucans, endotoxins, mycotoxins, mannans, proteinases, hemolysins, microbial volatile organic compounds (mVOCs) and spirocyclic drimanes. The illness is readily identified by a combination of health symptoms, visual contrast sensitivity (VCS) deficits and abnormalities shown in blood tests performed by high complexity, CLIA-approved laboratories. **These tests are eligible for insurance coverage and are all available to practicing physicians** (see www.surviving.com at the laboratory section).

Short answer: this is an incredibly common Chronic Inflammatory Response Syndrome from Water-Damaged Buildings (CIRS-WDB). The lesson for the Lyme community is that Post-Lyme is a CIRS too.

The US Government Accountability Office (US GAO) conducted and published its own review of governmental agency efforts to look at CIRS-WDB. What they found wasn't pretty: no rigorous science, no coordination of research efforts and no involvement sought by agencies of people who actually treated the illness. At least the GAO provided an overview of the inflammatory basis of the illness and a case definition. That definition superseded the one published by our group in 2003. The GAO looked for three elements: (1) similarity of symptoms of a given individual to those published (see roster of symptoms in Table 1) and a (2) similarity of lab abnormalities seen in published studies involving experimental animals and people (see roster of lab abnormalities in Table 2). Finally, the (3) GAO wanted to see improvement with treatments. The GAO reserved special criticism for a paper published in 2006 from the American Academy of Allergy, Asthma and Immunology (AAAAI) that is routinely used by defense interests in mold litigation.

In July 2009, the World Health Organization (WHO) weighed in with a far more comprehensive assessment of the inflammatory basis for mold illness, with recognition of the diverse potential sources of inflammation found inside WDB.

The mold world is dominated by litigation, with outcomes of personal injury cases resting on decisions made by judges across the country that have a marked diversity of interests in the science involved in mold illness. The defense in these cases can only cite one or two papers that purport to show that mold illness can't possibly exist, especially the 2002 (and now 2011) consensus statement from the American College of Occupational and Environmental Medicine

"Mold"... cont'd pg 3

EDITORIAL

As a Phoenix Rising from the Ashes, I'm Still Standing

by Dawn Irons

Life after Lyme is possible! Dawn Irons and her Aunt Dr. Charlene Conner at the DBU graduation ceremony in May of 2011.

Battling Lyme disease has been a journey! There were days when it seemed the fight to survive was as intense as what those who survived hurricane Katrina faced, only the storm never seemed to pass. It came to stay.

There were moments when I could not remember a time that I was not sick. I was undiagnosed for 18 years before they discovered it was Lyme and I began treatment.

There was one thing the doctor did tell me when I began treatment: This is going to get worse before it gets better. That was not the news I wanted to hear, but I was braced for the treatment process.

My treatment process lasted 3 gruelling years. In that time I think I experienced every emotion, feeling, rage, and desperate thought that is known to mankind. Though I was never suicidal, there were days I would earnestly pray for God to end the suffering. That deep-end when I began seeing the effects of my illness on my family. I came to feel more of a burden than a member of a family.

My participation in normal family events was quite limited due to the illness, pain, and overwhelming fatigue. There were two occasions that I lost my ability to walk and had to be assisted/carried to even use the restroom. Depression seemed to be a constant companion and there seemed no end in sight to the financial strains of the medical treatment. But God was ever-faithful in the midst of the battle with me.

Within a month of my diagnoses, the doctor recommended my husband be tested as well since he suspected that Lyme disease, being a spirochetal illness, may be sexually transmitted. Brad's co-infection of Babesia came back "through the roof" according to the doctor. He said he had never seen a level so high in all of his practice. Then he cautioned us further that we should get the children tested.

A year later the children became sick with what appeared to be a stomach flu. The two boys rebounded in two days. My daughter, by day three, was in a coma, unresponsive, and the doctors did not know that she would ever wake up or recover. We urgently requested they test for her Lyme disease and they refused saying, "We don't have Lyme disease in Texas.."

They were running tests and gave a tentative diagnosis of meningitis-- atypical. They preventatively put her on IV Rocephin antibiotics pending lab results in the event it was bacterial in nature.

In the meantime, we had our Lyme specialist on the phone asking if he felt this could be Lyme-related and he began asking what they were treating her with. We told him and he responded that if it was Lyme-related what they were treating her with would be the same thing he would treat her with and if/when she was discharged from the hospital to get her to Louisiana to his office and he would do a complete Lyme work-up panel from the tick-borne pathogen lab called IgeneX in Californa.

Within 12 hours of starting IV Rocephin, my daughter was out of the coma and conscious! Upon discharge we took the road trip to LA and sure enough-- her Lyme tests came back positive. The doctor explained to us that there is a form of meningitis that is induced by Lyme disease.

This journey was getting harder by the day and there seemed no end in sight. My treatment protocol was not without risk and dangers-- as no long-term antibiotic therapy is-- during the course of treatment I developed a condition called Pseudotumor Cerebri (PTC) which is a problem that is caused by excess cerebrospinal fluid in the brain. This came about due to a reaction that both the doctor and I were unaware of that can be caused in overweight people who use doxycycline for long term. I fit the bill, and wouldn't you know, I got PTC.

We switched antibiotics and decided that I would just deal with the issues of PTC as they arose. This was one of the risk-benefits of long term antibiotic treatment that I was willing to take. The bizarre thing was that I had felt better than I ever had while taking doxy! So I completed my treatment protocol on Zithromax, pulsing with Flagyl.

Within 3 years I heard the words I had been longing to hear: REMISSION! It was sort of like that surreal dream sequence in the Wizard of Oz where Dorothy steps out of her black and white world into a new reality of COLOR!

I slowly began to test the waters. We stopped all treatment (with doctor approval) and he said if I ever felt the symptoms were back-- to call and we could restart the protocol. My energy was increasing, my strength was increasing, and my confidence in my ability to live life again-- was back!

I tool the biggest leap of faith that I had ever taken. I had enrolled in graduate school at Dallas Baptist University and began to pursue my masters degree in counseling. This is something I would never have dreamed of attempting prior to remission.

This is not to say there were not road blocks in the way in life-after-Lyme-- there were! But the challenge was to not just assume every health issue was Lyme-related. I already knew that I had developed PTC. That was not going to go away when Lyme was in remission. It was induced by Lyme, but it has a life all its own. So although Lyme was in remission I still had the bear of PTC to deal with.

Soon after starting graduate school I was scheduled for brain surgery to place a ventricular shunt so that my body could help balance the fluid pressure in my brain which caused extreme vertigo and hearing loss. One neurologist said it was definitely related to the PTC and another neurologist felt it was Meniere's disease-- both strongly related to Lyme disease. To me, I felt it was just time to clean up the mess that Lyme disease had caused and deal with what was left behind. So brain surgery brought immediately relief to the crippling migraine headaches, but the vertigo still continues to be problematic several times a year.

Some friends try to convince me the Lyme is active again. I am not as convinced. I remember what Lyme disease was like. That is not where I am now! I went from being bedridden to now working 2 jobs and going to school again in the fall! I was able to complete the work of my masters degree and now I am working on getting certified in American Sign Language so I can continue my counseling practice if my hearing loss progresses to the point of complete deafness. At that point I could still counsel in the deaf community.

One other casuality of the long-term antibiotic treatment was my gall bladder. I ended up in surgery to remove my gall bladder just 4 weeks after my brain surgery to place the shunt. Risks and benefits... you just have know you have made an informed decision about the protocol you choose. I chose. I accepted the risks and benefits. They were my choices to make! I chose a risky path. I reaped some tough consequences of my choices. But I sit here today fully functional, living a full and happy life. I feel I have a new lease on life!

As I look back on my journey now, I truly believe that I have experienced the old metaphor of a phoenix rising from the ashes.

In my healing process, I never stopped trying to help Lyme disease patients or the doctors and researchers get their information out to the public for education and awareness. The Public Health Alert still continued to turn out a monthly publication for advocacy purposes.

There were times that I did have to emotionally take a step back because there is an inner healing that has to take place after overcoming the trauma of battling a horrific illness like Lyme disease. There were times I really could not write about my experience. I needed to process it and deal with the damage. The damage was more than just the consequences of treatment! There was damage in my family relationships, my finances, my marriage, my role as mother, and the list goes on... but I do want to offer this bit of encouragement: I'M STILL STANDING-- healed and whole emotionally, and in a medical place of remission. I know that remission offers no guarantee and that can change in a moment. But today-- I am alive and standing! I am living life to the fullest and sucking the marrow out of the bone of life!

Be encouraged! There is hope. There is healing! There is life after Lyme disease!

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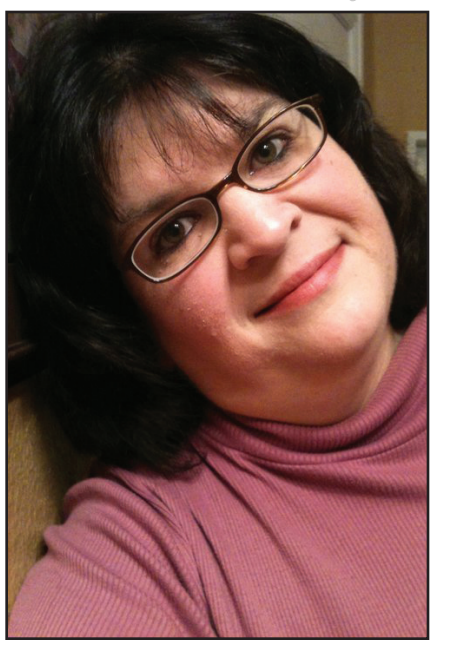

Public Health Alert

The PHA is committed to researching and investigating Lyme Disease and other chronic illnesses in the United States. We have joined our forces with local and nationwide support group leaders. These groups include the chronic illnesses of Multiple Sclerosis, Lou Gehrig's Disease (ALS), Lupus, Chronic Fatigue, Fibromyalgia, Heart Disease, Cancer and various other illnesses of unknown origins.

PHA seeks to bring information and awareness about these illnesses to the public's attention. We seek to make sure that anyone struggling with these diseases has proper support emotionally, physically, spiritually and medically.

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"Mold"... cont'd from pg 1

(ACOEM). This trivial contrivance has no data, no science and nothing even close to facts in it, and the newer version added no new information and no new references despite the passage of nine years (see ACOEM: Ploys and Lies at www.survivingmold.com), yet there it is at every mold case, portrayed as the best science in the world. Unfortunately for the defense, however, the collusion and bastardization of science that underlies ACOEM was exposed by Dr. James Craner in 2008 (see link on www.survivingmold.com) and the Wall Street Journal in 1/2007 in an expose` written by David Armstrong (see link on the same website).

These battles sound eerily similar to what goes on in the Lyme world: the basic battle of patients and their physicians versus entrenched university types with their numerous conflicts of interest goes on, though I haven't heard of $22 million judgments against the deer and mouse community for fomenting tick-borne disease like I see in construction defect mold cases. Not surprisingly, the same strategies manipulated by Big Tobacco for years (see the Tobacco Legacy Library documents at UCSF) involved a tightly coordinated use of well-paid physicians who would opine that cigarette smoking never hurt a fly. In fact, the same docs who so often opine that mold won't hurt a fly either are the same ones whose opinions were used by Big Tobacco to hide the truth about health risks associated with using tobacco.

Actually, few of the physicians involved with mold cases are "insurance company whores." The research interests in the mold community are broad-based with good science being published constantly. International meetings help researchers share peer-reviewed papers on a regular basis. Physicians affiliated with our group, for example, use the same template to collate and share data in an organized fashion.

Until the Lyme community can attain the same research collaboration from treating physicians, with many clinicians involved in publishing peer-reviewed papers based on hard data and solid statistics, the argument against Post Lyme Syndrome will continue to be a one-sided battle of university physicians with academic reputations (and an agenda) versus anecdote (but also with their own agenda). Organized data collection would end the arguments but even though I hear of attempts to bring such organization to the variety of Lyme docs out there, there is no position paper with authoritative references in favor of long-term antibiotics in Lyme patients not healed by three weeks of antibiotics. Even the studies of long-term antibiotics in Lyme don't sort the benefit of antibiotics alone by HLA haplotype (see below for why this lack of recognition is a major oversight). I recently looked over some of the opinions I wrote in 1999 and 2000 for the Dr. Bransfield's LISTSERV about microbes and mental illness (mmi) calling for organized data collection; nothing has changed. No organized data collection is ongoing that has led to publication of multiple data-driven papers.

So what is a CIRS-WDB? (And what implications does this entity hold for Post-Lyme patients?)

The innate immune system directs inflammatory responses seen in both mold illness and Lyme disease. The host defenses are constantly prepared for battle with foreign antigens. Antigen detection is performed by specialized cell membrane-based receptors (Toll, c-linked lectin, dectin, mannose and many more) that when activated set off inflammatory responses characterized by release of pre-formed cytokines and complement. Such inflammatory responses lead to differential gene activation and suppression such that the exact time course of acute exposure/illness acquisition can be identified as a sequence of activation of innate immune

"Mold"...cont'd pg 5

Table 1. Number of subjects reporting symptom by group and symptom

	GROUP		
Symptom	Control (n=132)	Mold (n=812)	P value**
Fatigue	22	742	<.0001
Weak	6	634	<.0001
Ache	10	601	<.0001
Cramp	4	501	<.0001
Unusual pain	0	446	<.0001
Ice pick pain	1	249	<.0001
Headache	27	596	<.0001
Light sensitivity	11	634	<.0001
Red eyes	4	460	<.0001
Blurred vision	9	515	<.0001
Tearing	12	401*	<.0001
Sinus	47	534	<.0001
Cough	28	449	<.0001
Shortness of breath	17	581	<.0001
Abdominal pain	18	361	<.0001
Diarrhea	3	300	<.0001
Joint pain	40	561	<.0001
Morning stiffness	5	438	<.0001
Memory	10	681	<.0001
Focus/concentration	6	647	<.0001
Word recall	9	652	<.0001
Decrease assimilation	6	647	<.0001
Confusion	1	561	<.0001
Disorientation	1	371	<.0001
Skin sensitivity	1	302*	<.0001
Mood swings	6	607	<.0001
Appetite	5	492	<.0001
Sweats	7	531	<.0001
Temp regulation	17	531	<.0001
Thirst	9	540	<.0001
Increased urination	11	537	<.0001
Static shocks	2	399	<.0001
Numbness	6	445	<.0001
Tingling	10	484	<.0001
Vertigo	4	463	<.0001
Metallic taste	2	339	<.0001

* n=811

**From testing hypothesis of no difference between groups

Under His Wings

by Joan Vetter

Mama duck paced anxiously to and fro on the edge of our pool. Her five babies clustered together and swam like Olympic hopefuls, unable to discover their way out.

Finally, when it seemed like they would not be able to escape on their own, we tried to scoop them out with our pool net. However, when we approached, Mama flew off. After a thirty minute struggle, all five babies huddled together on the grass. Where's Mom? Do I call DPS (duck protective services) to report a mother who abandoned her children?

Sure enough, after huddling together for a while, they ended up back in the pool. We are ready for bed, and it's ready to storm. The thought of leaving them alone with thunder and lightening beginning to blow in was disheartening. "Lord, how can I pray? Can I believe for Your protection?" Instantly the scripture in Matthew 23:37 came to mind, "O Jerusalem…how often I wanted to gather your children together as a hen gathers her chicks under her wings, but you were not willing." Also, "When my father and my mother forsake me, then the Lord will take care of me." (Psalm 27:10)

So I committed those little ones to Him, and resisted worry as much as possible. My husband woke me up this morning with the news, "The mother duck is here and the babies are all out of the pool."

With so much in the news to threaten our peace, this scenerio affords a glimpse into the heart of God. It is not the size of our circumstance - it is the size of our God we need to consider.

Snuggle in - His wings are big enough to cover you.

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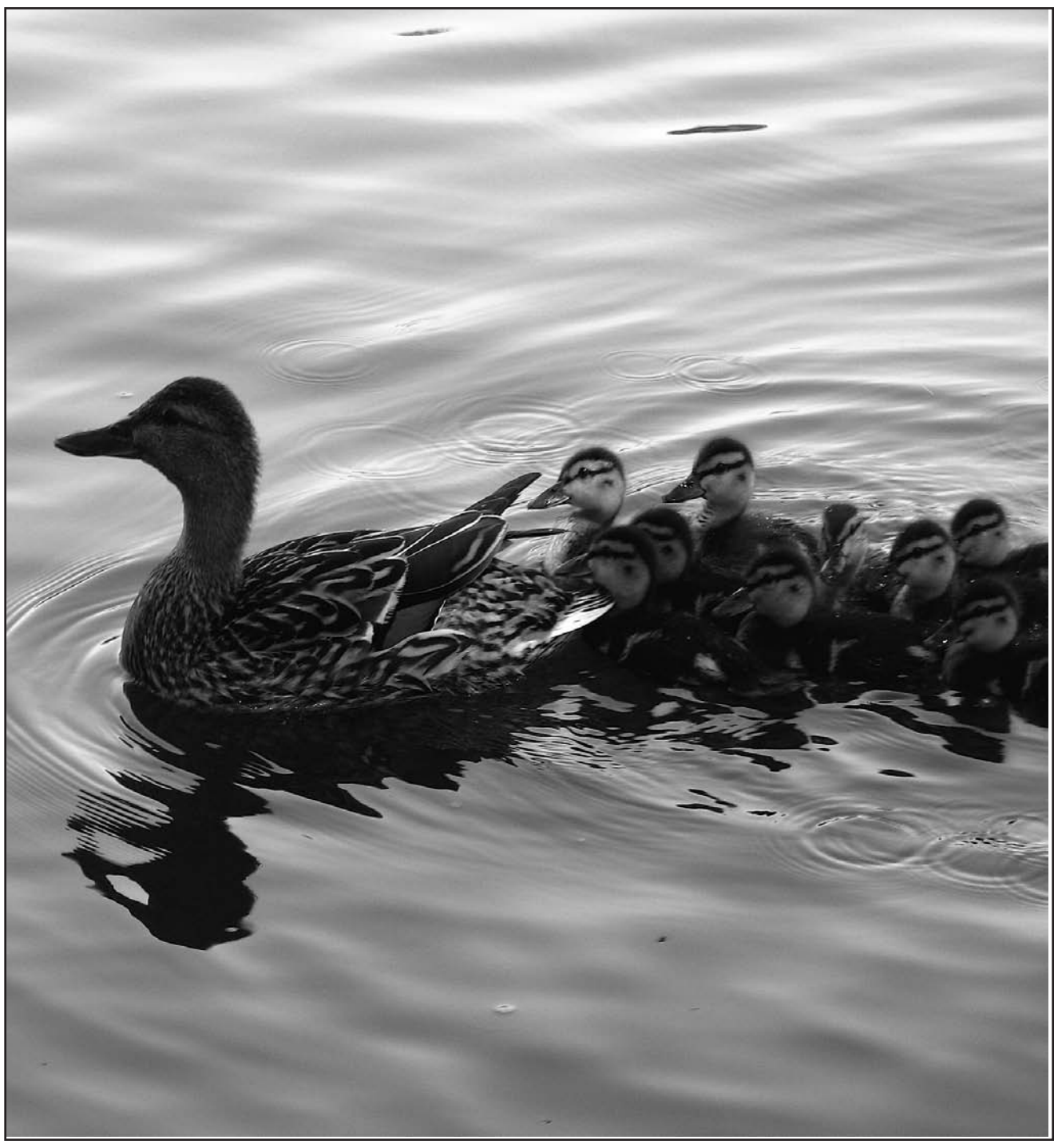

Imagine...

Imagine a child.
Imagine that child bright and beautiful
as if it had been kissed by the sun.
Imagine the energy and joy of that child at play.
Imagine you as that child.

Imagine falling off your bike, brushing off your
scraped knee and going back for more.
Imagine the feeling of achievement for finally getting
what you've tried so hard to learn.
Imagine the joy of a warm wind blowing through
your hair as you go as fast as you can.
Imagine the thoughts racing through your head as
you ponder your next great adventure.

Imagine the feeling of getting a flu from your buddy.
Imagine being stuck on the couch
on ball day in gym class.
Imagine getting better and
going back to be with your friends.
Imagine it happening again.....and again.

Imagine being with your friends and having a
tantrum and not knowing why.
Imagine not being able to keep up
with your buddies anymore.
Imagine missing out on your field trip
because you don't feel good.
Imagine screaming because your pain and fever are
so intense your mind is playing tricks on you.

Imagine having to go to the doctor
...again...and again.
Imagine the doctor telling your Mom it's nothing,
like you're not even there.
Imagine wondering what's wrong with you
and thinking you must just be stupid.
Imagine seeing your Mom cry.

Imagine a Hell that changes every day.
Imagine a pain taking over your legs so you can't
walk one day, and your stomach
so you can't eat the next.
Imagine that pain taking over your head
and destroying your ability to think.
Imagine not being able to behave and lashing out.

Imagine being scared and confused
because you don't know why.

Imagine a sadness that seems
to take over your whole being.
Imagine a fatigue so devastating
you don't even want to leave the couch to play.
Imagine the torture of a good day:
happiness...clarity...energy...and no pain.
Imagine knowing it will be replaced by sadness,
confusion, weakness and pain
as surely as the sun rises in the morning.

Imagine what you'd feel when someone finally says
"I believe you....you're sick and I'll help"

Imagine the hope that some day
you'll be "normal" again,
and the fear of "what if you're not"

Imagine the feeling of having to constantly take
handfuls of medicine when you'd rather have
handfuls of candy...and still not feeling better.

Imagine the feeling of someone saying
"I'm with you and I'll stay with you
as long as this takes."

Imagine a day when you're finally well.

Your body doesn't hurt,
Your mind is sharp,
You can play and work has hard
as your heart desires.
Imagine being truly happy to be alive.

How long will it last?
...imagine.

Featured Poetry Written By:
Tricia Stuart

Healing from Cancer with Integrative Medicine

by Connie Strasheim

In September, 2004, I became disabled by chronic illness involving Lyme disease. I quickly learned that conventional medicine offered little to help me out of the mess and multiple dysfunctions that this disease and all of its co-morbid conditions caused. Thus began my unofficial career as a medical researcher, which later became official with the release of my two Lyme disease books, the second of which is entitled, *Insights Into Lyme Disease Treatment: Thirteen Lyme-Literate Health Care Practitioners Share Their Healing Strategies*.(www.lymeinsights.com). This book has been a bestseller within the Lyme disease community since its release in September 2009.

I wrote *Insights Into Lyme Disease Treatment* because I realized that people with Lyme disease needed better information about how to treat Lyme from doctors that truly understood the disease (which were not those in conventional medicine). Indeed, this doctor interview book turned out to be a valuable resource for many people who, like me, had spent years searching for accurate, valid information on how to treat chronic illness involving Lyme infections.

Because of its success, I decided to apply the concept of a doctor interview book to cancer and interview cancer doctors because cancer, like Lyme disease, is controversial and its treatment complicated. Furthermore, political and pharmaceutical interests have heavily influenced the availability of accurate information, as well as effective treatments and I wanted to help people to find better treatments, which I was sure were out there.

Many cancer treatment books provide excellent information on alternative cancer treatments, but few provide a comparative overview of different doctors' treatment approaches, as well as outcome information on those approaches. Suzanne Somers' book, *Knockout*, is one doctor interview book that has done this and which contains very useful information. However, it is written in an interview-like format, and I wanted to provide people with a book that wasn't written in conversational language and which incorporated a broader range of treatment approaches and doctors into its chapters. When people can compare and contrast different doctors' treatments, and get a feel for how those doctors approach cancer and their patients, it can help them to make better treatment decisions.

As I set out to interview cancer doctors, I was determined to find those who were having good success at treating cancer (success being defined as patients living a long, symptom-free life, with or without cancer cells in the body). If my experience with Lyme disease had taught me one thing, it was that effective treatment solutions existed for Lyme, no matter that the media had mostly taught us (Lyme sufferers) otherwise, and I believed that the same was true for cancer. My suspicions were confirmed and from my interviews with numerous doctors, my recently released book, *Defeat Cancer: Fifteen Doctors of Integrative and Naturopathic Medicine Tell You How*, was birthed.

Of course, no doctor will tell their patients that cancer can be cured, as there is no test to definitively establish this, but many doctors of integrative and naturopathic medicine have been able to either bring their patients into remission or turn their patients' cancers into diseases that can be successfully managed like a chronic illness. Indeed, it is possible to live a long, productive, symptom-free life with or without a tumor in the body.

The Problem with Conventional Cancer Treatments

Medical politics and pharmaceutical interests have heavily influenced the kinds of treatments that are available to people with cancer. Conventional treatments, such as chemotherapy, radiation, and surgery, are usually the only options initially offered to cancer patients, but they aren't always effective.

While these treatments have proven to be useful for treating a handful of cancers, for most types of cancer, their track record has been dismal. In *Defeat Cancer*, Robert Eslinger, DO, states that: "From 1990-2004, over 150,000 people with all types of cancer were studied, and it was found that only 2.1 percent of them were still alive after five years. All had done full dose chemotherapy." (Journal of Clinical Oncology, 2004). Eslinger adds that more than 250 billion dollars have been spent on cancer research over the past 60 years, and yet the cure rate for cancer hasn't improved much since 1950.

Conventional treatments for cancer have their place but are useful only for certain types of cancer, are often inappropriately prescribed, and are inadequate in the absence of a holistic approach that includes botanicals, dietary modifications, and other therapies which augment the effects of anti-neoplastic (anti-cancer) therapies.

The Importance of Integrative and Alternative Cancer Treatments

Integrative, naturopathic, and other types of "alternative" medicine frequently offer more effective solutions which have been proven in clinical outcomes studies and in doctors' experiences with their patients. (I put the word alternative in quotes because I believe that labeling non-conventional treatments as such is to assign them an undeserved inferior status).

In Defeat Cancer, the fif-

"Cancer" ... cont'd pg 8

"Mold"...cont'd from pg 3

elements (SAIIE). These changes are easily seen in mold illness with re-exposure and in cyanobacterial illness (blue green algae syndromes), also with re-exposure. The exact time course has been delineated by our published research. What we see is complement activation with enhanced production of C4a on day 1; leptin rising on day 2 as cytokine responses block the activity of the leptin receptor in the hypothalamus creating temporary leptin resistance; MMP9 rising on day 2 to day 3 as endothelial cells are producing MMP14 from gene activation by cytokines and then MMP14 is cleaved to MMP9. VEGF rises on day 1 as cytokine responses create capillary hypoperfusion, generating tissue hypoxia. As VEGF rises, enhanced production of TGF beta-1 down-regulates VEGF, a well-documented feature of the day 3 labs. Factor VIII, an acute phase reactant, falls on day 1, recovering to baseline by day 3. von Willebrand's antigen and ristocetin associated co-factor fall by day 3, with such a nadir often associated with bleeding from lung or nose. Interestingly, TGF beta-1 will rise later in day 1 and is well established by day 2. TGF beta-1 will initially cause a rise of T regs. This rise is difficult to catch unless there are two blood draws on day 1, as by the time the blood is drawn on day 2 the T reg levels are falling (!) as they are bound in tissue with many apparently are being converted to pathogenic T cells.

I only have a few acute Lyme patients who waited three days to start antibiotics specifically so that they could participate in clinical care by testing our research models. Their lab parameters demonstrated the exact same pattern as those seen in our mold patients, understanding that I have hundreds of mold patients recorded in acute exposure data sets.

The inflammatory response following antigen detection also activates immature dendritic cells (professional antigen-presenting cells) to then engulf (phagocytose) the antigen/receptor complex into a "bubble" inside the cell called an endosome. This endosome, if acidified, will fuse with a lysosome where a specific molecule of HLA DR will be attached. Further processing of the antigen/HLA complex occurs when the antigen complex is processed in the endoplasmic reticulum, finally leading to presentation of the finished antigen/HLA complex at the cell surface to a naïve T lymphocyte. If there are no blocking cells, activation of the T cell leads to presentation of the HLA-labeled antigen to a B cell. From then on, antibody production occurs. (See Figure 1, the Biotoxin Pathway.)

Here's the bottom line of the findings that both mold and Lyme communities must acknowledge: there are individual differences in response to Lyme and mold solely based on the immune response genes found on chromosome 6, HLA DR. Specific haplotypes are associated with a marked increase in incidence in cases of mold illness and Post-Lyme patients. The haplotypes overlap, with several being "multisusceptible," and in that group there are two types that (while uncommon) are wildly overrepresented in those with the worst clinical illness. These are the "dreaded haplotypes," of 11-3-52B and 4-3-53, with the subtypes of 0401, 0402 and 0404 being the worst of the 12 identified subtypes of 4-3-53. Elegant research has shown why these HLA structures don't do well in antigen presentation.

Data on HLA DR haplotypes in over 7000 patients confirm that there are six separate haplotypes conferring increased relative risk (incidence in cases divided by incidence in controls) for mold illness and four haplotypes for Post-Lyme. For those with Lyme (don't guess!) who don't improve with antibiotics, expect to find one of these four haplotypes. Similarly, in those who become ill following exposure to the interior environment of a WDB, expect to find one of the six mold susceptible haplotypes. Understanding that essentially nothing in biology is guaranteed, there are some moldy patients without one of the six mold haplotypes and there are a few Post-Lyme people without one of the Lyme susceptible types. In the general population, the incidence of these mold susceptible haplotypes is 25% and for Post-Lyme susceptible is 21%.

The key point here is that when a patient continues to experience illness symptoms and is shown to have genetic susceptibility, it is mandatory to understand that defective antigen presentation is ongoing and that production of a protective antibody (ies) is **NOT** happening. The problem must then be re-defined - **persistent antigen stimulation of production of cytokines, TGF-beta-1 and complement factors have become the illness,** with all of the SAIIE activity ongoing. Now that we know that there are inflammatory parameters that must be corrected in order for mold patients and Lyme patients alike to return to health, physicians and their patients need to be educated about fixing what is shown objectively to be wrong. Don't guess!

Differential diagnosis is never ending.

Since the clinical diagnosis of Post Lyme and mold illness are the same, how can one say the illness is one or the other? Without exposure, diagnosing neither illness would be supported, but with exposure, each illness could be present (and many times both are!). What evidence could be used to convince a skeptic that mold illness could be present?

First, look for the moisture. There are many sources of water intrusion commonly

"Mold" ...cont'd pg 10

Table 1. Mean, standard error (SE), and sample size of controls and cases by parameter; p-value from testing hypothesis of no difference between controls and cases*.

Parameter	Cases			Controls			
	Mean	SE	n	Mean	SE	n	P
Age	47.8	0.46	812	50.3	0.94	132	0.0378
# Symptoms	22.7	0.27	812	2.9	0.17	132	<.0001
VIP	12.8	1.64	812	36.6	1.02	129	<.0001
MSH	13.1	0.62	799	41.2	1.22	130	<.0001
Leptin	19.4	2.66	697	17.9	2.15	126	0.8160
ADH	3.1	0.47	692	3.7	0.20	119	0.5436
Osmo	302	0.62	709	288	2.65	119	<.0001
ACTH	16.8	0.60	687	22.0	1.23	121	0.0007
Cortisol	13.0	0.35	689	21.7	5.86	124	0.0009
MMP-9	420	9.90	812	269	10.9	132	<.0001
PAI-1	7.0	0.63	636	6.3	0.57	116	0.6605
VEGF	62.2	2.88	756	67.9	2.34	132	0.4084
C3a	427	13.8	808	253	13.1	131	<.0001
C4a	9661	348.5	812	2303	99.3	132	<.0001
TGF-BET-1	6412	189.5	812	2365	84.7	132	<.0001

* One-way analysis of variance

National Multiple Sclerosis Association:

www.nmss.org

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3840 Ridgeway Drive
Birmingham, AL 35209
Phone: (205) 879-8881
Phone: 1-800-FIGHT-MS
Email: alc@nmss.org
www.nationalmssociety.org/alc

Northern California
150 Grand, Oakland, CA 94612
Phone: 510-268-0572
toll-free: 1-800-FIGHT MS
Email: info@msconnection.org
http://www.msconnection.org

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Denver, CO 80203-3442
Phone: 303.831.0700
1.800.FIGHT.MS

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mailbox@nmssga.org

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Maitland, FL 32751
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Houston , TX 77054
Phone: 713-526-8967

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Rockville, MD 20855
(301) 978-9855
toll free: (866) 348-3257
fax: (301) 978-9854

Great Philadelphia ALS Chapter
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Ambler, PA 19002
Phone: 215-643-5434
Toll Free: 1-877-GEHRIG-1
(1-877-434-7441)
Fax: 215-643-9307
alsassoc@alsphiladelphia.org

Lyme Disease Support Arizona
Southern Arizona - Donna Hoch: nanandbo@cox.net
520-393-1452

L.E.A.P. Arizona
Tina J. Garcia
Lyme Education Awareness
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Arkansas
Mary Alice Beer
(501) 884-3502
abeer@artelco.com

California
Dorothy Leland
website:
www.lymedisease.org
contact@lymedisease.org

Mid-Peninsula Lyme Disease Support Group
Mountain View, CA
2nd Tuesday each month:
6:30-8:30 PM
ldsg_scott@hotmail.com

Lyme Disease Support

Colorado
Mary Parker
303-447-1602
milehightick@yahoo.com

Connecticut
www.timeforlyme.org
914-738-2358
Meetings: first Thursday of every month from 7-8:30 p.m. at the Greenwich Town Hall

National Support:
truthaboutlymedisease.com/
Dana Floyd, director

LDA of Iowa
PO Box 86, Story City, IA
515-432-3628
ticktalk2@mchsi.com

Kansas
913-438-LYME
Lymefight@aol.com

Montana
bepickthorn@earthlink.com

Minnesota
Duluth/Superior Lyme Support Group. Meets first Tues. eachmonth at 7pm, St. Lukes Hospital, 1000 East 1st Street, Duluth, Mn. For more information call Tom Grier at 218-728-3914 or Tom Kurhajetz 218-372-3744.

North Carolina
Stephanie Tyndall
sdtyndall@yahoo.com

South Carolina
Contact Kathleen at
(864) 704-2522
greenvillelyme@bellsouth.net

Lyme Disease Support

Illinois Lyme Disease Network
http://www.illinoislyme.com
Contact: 618-204-8084

New Mexico
Veronica Medina
(505)459-9858
vrmedina@comcast.net

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Janet Segraves 405-359-9401
Janet@LDSG.org
www.LDSG.org

Portland, Oregon
Meets 2nd Sunday of each month 2010 NW 22nd Street Second Floor from 1-3 PM.
503-590-2528

TEXAS :
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League City/ ClearLake & NASA Area
Sandra Mannelli
smannelli@comcast.net

Washington State
Alexis Benkowski
WA-Lyme-owner@yahoogroups.com

Western Wisconsin Lyme Action Group
Marina Andrews
715-857-5953

Military Lyme Disease Support

Military Lyme Support is an online source of information and emotional support. This site is for Military Members, Veterans, and their family members who suffer from Lyme and other vector-borne diseases. Members are stationed in the United States and abroad.

http://health.groups.yahoo.com/group/MilitaryLyme/

Texas Lyme Disease Association

www.txlda.org

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donations@txlda.org

"Cancer" ...cont'd from pg 5

teen doctors that I interviewed describe their treatment protocols which have effectively helped many people with cancer to live long, productive lives. Integrative medicine takes the best of conventional, naturopathic, and other medical disciplines such as Traditional Chinese Medicine (TCM) and homeopathy, to formulate protocols that treat the underlying cause of disease rather than just its symptoms. These doctors share the goal of treating their patients with whatever works, regardless of medical politics or other non-beneficial influences.

Examples of Effective Alternative Cancer Treatments

All of the doctors in *Defeat Cancer* have a unique way of treating their patients, but all utilize therapies that have been proven in clinical outcomes studies and in their experiences with patients. Among the treatments described are:

1) Insulin Potentiation Therapy (IPT), which utilizes the hormone insulin to make chemotherapy and natural anti-cancer substances more effective. By lowering the body's blood sugar levels, insulin causes cancer cells to starve and open up their cellular receptors to sugar. Doctors can then administer chemotherapy, along with glucose, at one-tenth of the normal full dose, and the chemotherapy will be more effective because the insulin has made the cancer cells more receptive to it. It also doesn't destroy the immune system in the same way that full-dose chemotherapy can, so the body has a better chance of fighting the cancer. Many good doctors of integrative medicine utilize IPT as part of a comprehensive, holistic approach to healing.

2) Metronomic low-dose cyclophosphamide, which is a natural chemotherapy agent that functions to destroy tumor blood vessels and stop angiogenesis, or new tumor blood vessel formation. Cancer cells get their nutrition via blood vessels, so stopping tumor blood vessel growth prevents this from happening. When people with cancer take very low doses of cyclophosphamide every other day, this can shrink and, in some cases, eliminate their tumors. In any case, it keeps their cancers from growing and further harming the body. Finn Skott Andersen, MD, from the Humlegaarden clinic in Denmark uses this as part of his cancer treatment protocols.

3) Antineoplastons, which are naturally-occurring peptides and amino acid derivatives that the body makes to control cancer growth, but which can also be biochemically synthesized and used to aid the body in its fight against cancer. Antineoplastons turn off the activity of the genes in the body that cause cancer and turn on the genes that suppress it. Stanislaw Burzynski, MD, one of the physicians in Defeat Cancer, is renowned worldwide for his work with antineoplastons. With these, he has been able to successfully put a high percentage of his patients who have failed both chemotherapy and radiation into remission. These are people who were told that nothing else could be done for them.

4) Pancreatic enzymes. The early 1900s English scientist John Beard discovered that cancer cells look and behave much like placental cells, and developed a theory that cancer cells come from residual placental (trophoblast cells) that are found in everyone. What stops placental cell growth in a fetus is when the pancreas (of the fetus) starts producing pancreatic enzymes; correspondingly, Beard discovered that high doses of pancreatic enzymes can be used stop cancer cell growth. Nicholas Gonzalez, MD, in New York, has perfected the use of pancreatic enzymes and has had tremendous success in putting many people's late-stage cancers into remission with this treatment.

5) Mistletoe, which is an anti-cancer herb that has been used extensively in Europe to treat cancer since the early 1900s. Mistletoe acts upon cancer in various ways: by preventing angiogenesis, directly killing cancer cells, and stimulating the immune system. It also reduces the side effects of conventional treatments. The biological constituents of mistletoe which make it useful in cancer treatment include viscotoxins, alkaloids, and lectins.

6) Puerarin. According to Keith Scott-Mumby, MD, one of the interviewees in Defeat Cancer and a former physician in the United Kingdom, puerarin is an estrogen-blocking herb that is an excellent alternative to Tamoxifen, which is a drug commonly prescribed to women with breast cancer. This herb comes from a region in Thailand where breast cancer is virtually unknown and has proven to be very effective for treating hormonally-influenced cancers.

7) Local and whole body hyperthermia, which is also widely used in Europe. This treatment heats tumor cells and causes apoptosis, or programmed cell death. Hyperthermia is a very effective adjunct treatment for cancer treatment.

8) Sono and photodynamic therapy. Photodynamic therapy involves giving patients light-sensitive substances (usually chemical compounds called porphyrins, which are breakdown products from recycled hemoglobin) that accumulate preferentially in cancer cells. Patients then lie on a light bed, which activates the light-sensitive agents via light diodes and creates a chemical reaction that destroys tumor cells. Sonodynamic therapy follows a similar principle, except ultrasound is used instead of a light bed to activate the light-sensitive substances. Julian Kenyon, MD, a United Kingdom physician who is also represented in Defeat Cancer, developed both of these techniques at his clinics.

9) Low-dose naltrexone, which has very powerful anti-cancer effects. It stimulates apoptosis, lowers inflammation, and improves immune function. Incidentally, this medication is frequently given to people who suffer from a variety of diseases since it stimulates endorphin production, which is involved in immune function.

10) Intravenous Vitamin C. When administered in high doses, Vitamin C has a pro-oxidant, rather than anti-oxidant, effect against cancer cells. One of the byproducts of Vitamin C when it is broken down is hydrogen peroxide, which tumor cells don't tolerate well. Fortunately, Vitamin C doesn't break down until it reaches the fluid that surrounds cancer cells. Here, it kills cancer while leaving healthy tissue unharmed. Many studies have been done which prove the anti-cancer benefits of intravenous Vitamin C.

11) Immune-boosting substances, such as 1-3, 1-6 beta glucans and thymus peptide extracts. Beta glucans derived from baker's yeast are known to be among the most effective substances for stimulating the innate immune system, which tends to be weak in people with cancer. Thymus peptide extracts cause the immune system to produce more immune cells in the bone marrow, and train mature immune cells to support an active defense system in the body. Nina Reis, MD, of Bad Mergentheim, Germany, is one physician in Defeat Cancer who uses the latter as an integral part of her cancer treatment protocols.

12) Other effective treatments for cancer include: melatonin, homeopathy, Poly-MVA, fever and oxygen therapies, as well as a variety of intravenous and oral nutritional and botanical substances.

It's Not Just About Killing Cancer Cells

In addition to the abovementioned therapies, all of the doctors in *Defeat Cancer* address other factors that cause or enable cancer to flourish in their patients' bodies. These factors include heavy metal and other toxicities; comorbid conditions and infections such as Lyme disease; a poor diet, emotional trauma, and unhealthy lifestyle habits. The doctors then describe strategies for ridding the body of these toxins and other infections; healing trauma and relationships, and balancing organs and systems that are out of alignment in the body.

Additionally, like my second Lyme disease book, *Insights Into Lyme Disease Treatment*, *Defeat Cancer* describes factors that affect healing, roadblocks to healing, practitioner/patient challenges to healing, and how family and friends can support their loved ones with cancer.

Finally, people with cancer should know that there is no such thing as a "one-size-fits-all" treatment protocol for cancer in integrative or any other type of medicine. "Cookie cutter" protocols don't work for most people. Everyone is unique and requires an individualized, customized treatment approach by physicians experienced in integrative cancer treatment.

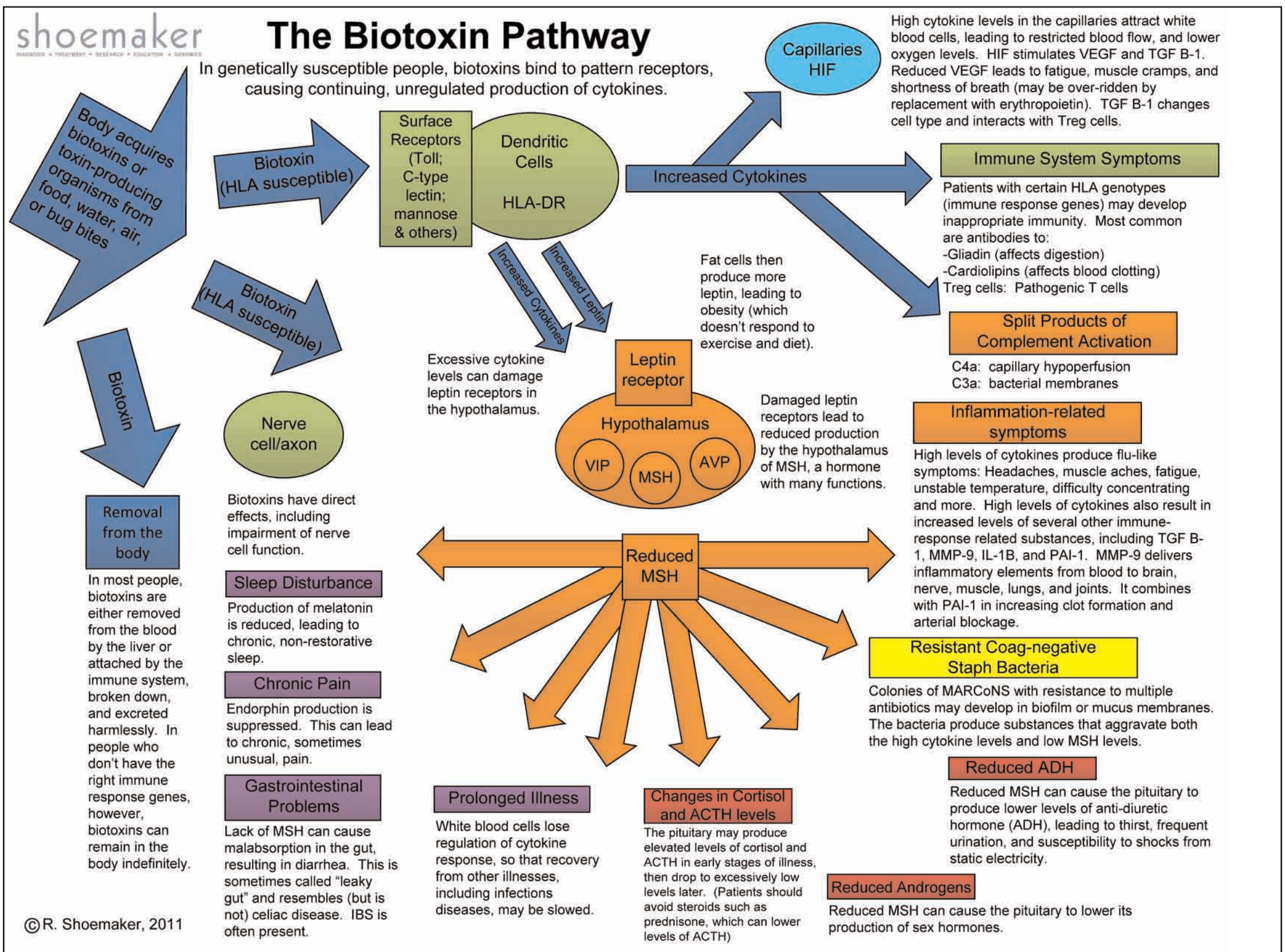
Never Lose Hope

As I interviewed the fifteen doctors represented in Defeat Cancer, I was encouraged by what I learned. I hope that through my work, I can encourage others, too. There are good, accessible treatment solutions that are being used by doctors of naturopathic and integrative medicine, in the United States as well as abroad, that may enable people with cancer to live for years beyond their initial prognoses, no matter the type or stage of cancer that they are in. Many of these solutions are found in Defeat Cancer. To learn more, visit: www.cancerbooksource.com.

About the Author

Connie Strasheim is a medical researcher and writer, and the author of four books on holistic healing, including *Defeat Cancer: 15 Doctors of Integrative and Naturopathic Medicine Tell You How*, which was released on May 10, 2011. In addition, she has published two books on chronic Lyme disease, including, *Insights Into Lyme Disease Treatment: Thirteen Lyme-Literate Health Care Practitioners Share Their Healing Strategies,* which has been the best-selling Lyme disease book on the market since its release in September 2009. Her fourth book, *Healing Chronic Illness: By His Spirit, Through His Resources,* describes strategies for spiritual and emotional healing through a relationship with God. Ms. Strasheim's research and education, along with her near decade-long battle with chronic Lyme disease, have provided her with profound insights into how to heal chronic illnesses of all types. *pha*

"Mold"... cont'd from pg 5



seen in construction, both brand new and old. Crawl spaces and basements are the biggest offenders. Look for water coming through concrete walls (block and poured concrete are porous wicks for water). Check for in-ground water pressure against a subterranean wall, especially if the wall is at the bottom of a hill. When you hear about a sump pump or dehumidifier being used in the basement look out: water intrusion already confirmed! Musty smells should not be ignored. "Dry" soils in crawlspaces are always releasing water through transpiration and evaporation: that dry soil isn't benign! Whenever you see fiberglass ductwork in a crawlspace of basement, be very wary as it won't be long before the joints between sections of those ducts loosen and permit entry of air full of bioaerosols made by the crawlspace microbes into the universal distributor, the HVAC system. That means the "dry soils" in the crawlspace just contaminated the whole house.

Bathrooms surprisingly aren't the common source of moisture most people think. Sure pinhole leaks in plumbing will contaminate wall cavities but the black fungal growth you see on grout lines and along condensation areas of windows usually isn't from the big-time illness causers. Always test: never guess.

Common disasters from construction defects include lack of flashing around doors and windows, venting exhaust pipes into the attic, failure to seal around roof boots and over-flowing condensation pans. This isn't an exhaustive list.

As it turns out, it makes no difference in determining the potential for exposure if we use DNA testing (ERMI, environmental relative mold index), observe mold growth or simply smell musty odors. Each of these indicators of impacted building health is correlated with human illness. What ERMI does is to provide a clear indicator of what organisms are present, something that air sample never can do thoroughly, and that make-up of the fungi tells us what levels of water saturation are going to be found. That information in turn tells us where to look to (1) fix the moisture; (2) tear out the wet building materials and clean reservoirs in air, possession and floor/wall/ceiling. Cleaning the reservoirs of microbial products is maddeningly demanding of attention to detail.

If one is considering a Lyme diagnosis, take a minute or two (that is all it takes) to ask the questions about water intrusion. If you have a problem, and NIOSH says over 50% of US buildings do, then the illness might not be Lyme. Or if Lyme really is there, it might be both Lyme and mold illness! Treating with antibiotics alone in the face of mold illness is illogical and potentially disastrous for the patient.

Tip-offs to presence of mold illness and not Lyme will be absence of elevated C3a at any time, especially after treatment for mold illness is completed. C4a will be high in both illnesses as will TGF beta-1. Sorting illness presentation by HLA DR is wonderfully instructive. When one sees a mismatch of HLA DR and illness, we need to re-consider the differential diagnosis. In fact, always challenge today's diagnosis tomorrow.

Each step along the sequential path of therapy includes an assessment of outcome from what the prior intervention. Treatment should be transparent, logical and plodding with one step at a time the rule. Repeated evaluations of the response to therapy help narrow the diagnostic process. Please remember that a sudden worsening of illness or a recurrence of prior symptoms will usually mean re-exposure to a WDB or there might be a new colonization of a MRCoNS.

Genomics

We have entered the world of genomics testing. This diagnostic advance, using microRNA and mRNA, has given a preliminary fingerprint to the genomic differences between controls and those with mold illness; between controls and Lyme patients defined before and after antibiotics; and between mold and Lyme. The genomics of ciguatera has been established previously. We are working on defining the role of commensals, such as biofilm-forming, methicillin resistant coagulase negative staphylococci (MRCoNS), as agents that influence genomic changes in affected hosts. We know that eradication of such organisms is absolutely mandatory as one of the steps in therapy for both mold illness and Lyme, but now we are seeing just why that observation is correct. The future of this research is bright!

For those physicians interested in learning more about genomics, please contact the www.survivingmold.com website. Specialized testing tubes are used in phlebotomy for genomics assays; cost of these tubes is about $15 each. After the tubes are filled with blood (we will provide instructions on specimen handling) and frozen the stabilized RNA can be analyzed electively. The website also offers the new seven-hour instructional videos in mold illness and Lyme, as well as the Physicians' Section where treating docs can share information, ask questions and comment on what they have seen in their practices. The potential for cooperative interaction here is expanding rapidly, as new docs are being trained in protocols and collation of research data every day. Learning how to use an evidence-based and sequentially organized approach to diagnose and treat biotoxin illnesses opens a world to improve the health and lives of our patients.

This brief discussion is just an overview of the research basis of modern mold illness practice. Given the commonality of findings in mold illness and Lyme, clinicians need to consider if their data base is current. If not, we truly hope they will ask what can be done to bring their practice into the exciting new era of management of CIRS. Successful patient outcome depends on it.

We don't have to guess any more about complex illnesses. Use of physiologic and genomic parameters will bring order to the arguments that continue in the Lyme community, just as it has for mold illness.

ABOUT THE AUTHOR:

Ritchie Shoemaker MD is a practicing physician in rural Pocomoke, Md where he has lived since 1980. Since the Pfiesteria outbreaks in the Chesapeake Bay in 1997, Shoemaker has dedicated his practice to unraveling the complex physiology of biotoxin-associated illnesses. To date he has treated over 8800 cases, including 6500 mold cases, maintaining a data base that includes symptoms, labs, visual contrast scores and response to therapy.

Many of the tests physicians now routinely use in the chronic fatigue/Lyme/mold communities (C3a, C4a, MSH, VIP, HLA DR, MMP9, TGF beta-1, VCS, CD4+CD25+, MARCoNS cultures) are spin-offs of Shoemaker's research on innate immunity in chronic inflammatory response syndromes (CIRS). While most of his work focuses on illnesses acquired following exposure to the interior environment of water-damaged buildings (WDB), Lyme and dinoflagellate illness are routinely treated in his practice. He has extensive experience in legal cases as a plaintiff's expert, having provided testimony in over 150 cases in the US, Canada and Caribbean. Shoemaker has published academic papers in peer-reviewed journals including papers on mold, Lyme, cyanobacteria, Pfiesteria and ciguatera. He is lead author (2010) of the Expert Treating Physicians Report on CIRS-WDB.

He has written eight books of which *Mold Warriors* (2005) and *Surviving Mold* (2010) are must-reads. Much of Shoemaker's academic research is presented at www.survivingmold.com. His current focus is on therapeutic use of vasoactive intestinal polypeptide and unveiling the genomics of differential gene activation by step of diagnosis and therapy.

pha

Due to the efficacy and the science behind the products, these are my favorites
- Joseph J. Burrascano Jr. M.D.

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Transfer Factor Multi-Immune™	Potent, front-line immune system support Formulated with pure transfer factor and the most researched immune nutrients to promote healthy natural killer cell levels, fortify macrophage activity and healthy cell replication Clinically researched**	Those looking for the doctor's favorite immune support formulation Promotes healthy immune system for those dealing with ongoing health challenges, as well as individuals striving to maintain overall good health Travelers who want to maintain health while traveling
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**Research Available Online

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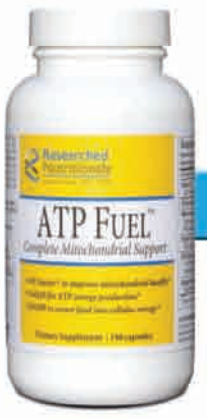

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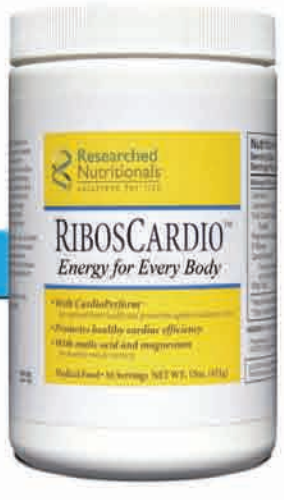

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ABOUT THE COMPANY

Nutramedix was founded in 1993 and currently has facilities in Jupiter, Florida, USA and in Shannon, Ireland supplying highly bio-active nutritional supplements to health care professionals and consumers.

From the beginning, Nutramedix has operated with a unique business model. First, the owners and management work diligently to operate a company according to Biblical principles– with honesty, integrity, value and respect for all people. Its corporate environment is one that works to serve both its customers and its employees, producing one the best customer service teams in the industry. Second, Nutramedix was founded with the goal of using a significant amount of its proceeds to support orphans, widows, Christian pastors and missionaries in economically distressed parts of the world. So as a customer, you are not just purchasing high quality nutritional supplements, you are helping us give back to people in need all around the globe.

ABOUT THE PRODUCTS

Nutramedix has made a significant investment to develop a novel, proprietary extraction and enhancement process used to manufacture its liquid extracts. The result is a highly bio-available whole plant, broad-spectrum extract that is also very cost effective. We were the first to introduce Samento, a rare chemo-type of Cat´s Claw, which has remained one of our signature products. We have since developed a full line of liquid extracts utilizing the same proprietary extraction and enhancement process.

Nutramedix also conducts extensive research to procure the very highest quality raw materials for its powdered capsule products, many of which have been designed to enhance the effectiveness of the liquid extracts. We are committed expanding our line of natural products meeting the highest expectations of health care professionals and consumers.

ABOUT THE FOUNDATION

The owners of Nutramedix have been involved in international Christian ministry since the 1980s. Prior to starting the company in 1993, our Founder and President was a missionary pilot serving tribal groups in Peru. The Kairos Foundation was created in 1995 to fund projects that address both the physical and spiritual needs of people in some of the most disadvantaged areas of the world. The foundation provides ongoing financial support for organizations operating in Africa, Asia, Eastern Europe, North America and South America.

NutraMedix®
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