Introduction and Deer Tick Song

Hi, everyone. And welcome back to the Reverse Alzheimer's Summit. It's my great honor today to talk with Dr. Richard Horowitz, the leading expert in Lyme and other tick borne illnesses, and his someone who's having tremendous results, including cognitive results with his approach.

So we thought we thought it would be great to talk about that. But first, I want to say, for anyone who hasn't seen on YouTube, Dr. Horowitz and his The Ballad of the Deer Tick, I highly recommend it.

It is fabulous. Richard, when did you write that? So my wife and I were traveling through Massachusetts. We decided to stop for a cup of coffee in a place, you know, little cafe along the road.

And all of a sudden, you know, you know, how these downloads sometimes come. You get inspiration. The whole song basically downloaded within 2 hours of a couple of espressos in a Massachusetts cafe where I was just laughing my brains out from as the words were coming with the rhymes and everything.

And then Daryl was I met Daryl Hall at one point. You know, we've been friends for a long time and I took out my guitar and I played it for him. He was laughing so hard.

He said, Rich, why don't you come into the studio and record it? I thought he just meant I would recorded not him would be singing backup for me and playing Hammond organ with T-Bone walk playing backup mandolin and guitar and Daryl was doing double backup vocals.

I mean, it was it was a tremendous amount of fun. Yeah. For anyone who hasn't heard it, they're in for a real treat. I think it's fabulous. I really enjoyed it.

So I'm glad. I'm glad you mentioned it. Great stuff. And, you know, and I give some information to people and it's something that people don't know enough about despite, you know, despite everything you've done, all the books you've written, all the papers you've published, it's still not widely enough known.

So of course, our interest is in cognition and cognitive decline. And so it's interesting if just a few years ago you had had a a summit where you said this is a reverse Alzheimer's summit, people would just would have said, what are you out of your mind?

You know, nobody reverses Alzheimer's, but we see people getting better all the time now. And, of course, especially people early on. And, you know, I always talk to the physicians and say, have you ever seen anyone who truly went on prevention, asymptomatic, doing well, scoring well, and then still developed Alzheimer's, still develop dementia while they were on prevention?

No one has seen it. So it is yeah, it may happen, but it's not common. So it's certainly something that this disease, we've all been told is inevitable.

Things are changing rapidly and in large part from from your efforts. And so I wanted to talk some about a little bit about the idea of the tick borne illness.

So if you go back to the, you know, the iceman, when they thought when he was thawed, as I recall, he was found to have Borrelia, was he not? That is correct.

Lyme Disease and Cognitive Decline

The Ötzi man who was frozen about 5000 years ago, they did find borrelia burgdorferi, right? That's correct. So I

thought so. My question is, to what extent should we be considering these various tick borne illnesses, essentially part of the microbiome?

And it's more like how you respond. And to what extent do we really be saying, no, these are not part of the normal microbiome, these are infections? Yeah, I think in the case of Lyme disease, these really are infections, not part of a normal microbiome.

You're correct, of course, that the organism has been around for for ages. The babesia, the tick borne parasite is around for over a million years. They found that also when they when they back and look at records from a long time ago and fossilized specimens.

So these are not new diseases but the problem with Lyme disease, as a spirochete is it's very similar to syphilis and it gets into the brain. And one of the major problems with Lyme disease is now that it's grown to 14.5% of the global population has now been exposed to this illness.

So it means roughly one out of seven people on the planet has been exposed to Lyme. Some of these people go on to chronic Lyme and because it's spirochete like syphilis, it causes cognitive issues.

And there's been approximately, at least in the last decade or so, about seven or eight articles in the medical literature by Judith McCloskey from Switzerland.

Eva Sharpe Alan McDonald that beta amyloid is localizing in the brain with borrelia burgdorferi and that based on Cox postulates Hill's postulates. There's a relationship with Borrelia and Alzheimer's.

So, you know, we know that these infections, viruses, bacteria, parasites, fungus, there's a lot of infections that are causing it and driving inflammation.

But my concern is with a worldwide epidemic of Lyme being one out of seven people have been exposed. This may be a cause of dementia and cognitive decline that people are not looking for because the tests are just not that reliable.

If you don't know how to look for it. Exactly. So that was my concern. So we see, okay, thousands of people coming in saying, you know, I'm not I'm having cognitive problems, etc..

And of course, unfortunately, the standard is people say, oh, this is Alzheimer's disease. They get a tiny data set. They don't even think about Lyme.

In fact, as you know, there are some published papers saying if you look at people with and without Lyme, there's no difference in the likelihood of cognitive decline.

So therefore, it's not a cause. It's like, well, wait a minute, what about when it is a cause? So this is a huge issue. And as you indicated, there are probably a lot of people out there that could be helped by addressing the tick borne illnesses instead of just saying you've got a misfolded protein and we better put you on an anti amyloid antibody that's going to make your brain bleed.

And I'd say it's a no, it's a disaster. So okay, so here's the here's the big question. Then someone comes to you, they've got cognitive decline. What can you do to say, I can tell this person that's not due to a tick borne illness.

So in other words, what makes you comfortable about saying this is not a tick borne illness? So we published a an article in the medical literature about seven years ago with University of New Paltz, researchers from the state university, I mean, 600 patients.

And we validated a Lyme questionnaire, I call it affectionately, the HMQ Horowitz/MSIDS Questionnaire was validated in 1600 people, three medical practices.

And basically and you can get this questionnaire right off my website cangetbetter.com www.cangetbetter.com just look under symptoms and you'll find the questionnaire. You can download it.

So if someone comes in with cognitive issues but they also have the story of I have good and bad days, my symptoms come and go. I have migratory joint pain, migraines, sorry, muscle pain, migratory nerve pain, which is tingling, numbness, stabbing, burning sensations, these migratory pains of the hallmark of Lyme and in fact migratory neuropathy is the only disease you'll see where Lyme is, is actually the cause.

So when people come in with this multi systemic good and bad day symptoms coming and going migratory, but it's a chronic, fatiguing musculoskeletal neuropsychiatric illness.

So they get sleep disorders, they can't fall asleep. They keep waking up. As you and I both know, sleep disorders are associated with dementia, right?

They come in and they also say, gee, my mood changes, I'm depressed, I'm anxious. Right? Loneliness, right even now has been associated. Actually with cognitive decline.

But these people come in with this multi systemic illness. And if you score high on the questionnaire over 63, you're two standard deviations above the mean.

There's a very high likelihood you have lyme and then basically you do the testing. The most important thing with the test to know for, you know, people out there, there's a lab I use, it's the number one lab.

It's IGeneX in California. We know that there are at least 16 or 17 pathogenic species of Borrelia. So Borrelia sense of stricture, the one they discovered years ago, there's all these cousins of Lyme disease now.

So if you just do a standard, Elisa, and you're looking for all these other Borrelia species, Borrelia afzelii borrelia garinii in Europe borrelia valaisiana all the ones in the South United States are in or in California, you're not going to pick them up.

So the advantage of the IGeneX Immunoblot is it picks up at least eight of the most major strains of Borrelia in the U. S. in Europe. And I call it Lyme bingo.

You just have to look at the immunoblot and see if any one of five bands shows up positive. So if you have the 23 out a surface protein C, 31 out a surface protein A, 34 out of surface protein B 39 or the 83/93.

Any one of the numbers that I just mentioned and these are, by the way, in all my published papers and in both of my books, why can I get better? How can I get better? It's all it's all in there.

Any one of those bands in the right clinical setting from an immunoblot, not a regular Western blot where you can get false positives with autoimmunity, but immunoblot recombinant DNA, it means you've absolutely been exposed to your Borrelia species.

And then if you've got cognitive difficulties, you've got to ask yourself, okay, is Lyme one of the factors? The other thing we're seeing that causes a lot of cognitive problems is Bartonella.

There's also over 17 species of Bartonella now that are showing up tremendous cognitive decline. And the problem is, is most doctors don't even know about Bartonella.

They don't even check for it. So these are, I think are a hidden factors that we're really going to have to look at as time goes on. Yeah, so interesting.

Diagnosing Tick-Borne Illnesses

So and we certainly have seen one of the patients, for example, who clearly had a tick bite, you know, ten years

ago, got a rash, got the ECM, got treated, but nothing else.

And then, you know, ten years later is noticing know things aren't quite right with the cognition and turned out to have babesia. And so as you pointed out these co-infections, you know, well over 50% of the people who get Lyme seem to have co-infections.

So do you do you feel that the same is true what you like IGeneX approach for these other co-infections as well. I do because the thing about IGeneX is they have a babaesia immunoblot where they don't just let go of the babesia Micro T or Duncan I they have a BCA fish fluorescent in situ hybridization.

It's an RNA probe and I find it positive actually in a lot of the patients with Babesia, but also for someone listening who says, well, how do I know I have the BCA, it's a malaria like illness.

So if in the Lyme setting you have day sweats, night sweats, chills, sometimes shaking, chills flushing air hunger, I can't catch my breath. Unexplained cough.

Those are classic symptoms of the BCA and most of these people that are co-infected with Lyme, Bartonella, etc. they don't have the classic presentations in the textbooks.

Interestingly enough, the Chinese government called me up about ten or 12 years ago and asked me to fly to Beijing because they thought they were having a big Busia outbreak, but that it wasn't like having hemolytic anemia.

They didn't have renal failure. The liver function wasn't any of the textbook presentations. They flew my wife and I over first class. We met with all of the people from their National Academies.

I was there for about a week or ten days and I brought an Ceylon and they brought their fish test and proved to them, yes, in fact it was a BBC, a species, not Microbe Duncan, but a different BBC, a species showing up.

So this parasite is showing up in a lot of the line patients and they also have a bartonella, immunoblot and bartonella fish. Again, we're finding a lot of these bartonella species can be picked up by Quest's Lab Corps bio reference, the standard labs because these 17 different pathogenic species but the fish this RNA test it will again fluoresce green when you find it so you know we used TI Labs and and other labs of course that just I Gen-X and I use Quest and LabCorp for Standard TICKBORNE But it's really a great lab when you're looking for these tickborne infections.

For those of you who might, you know, be concerned that you have it. Yeah, fantastic. So you think the amyloid plaques are essentially the gamma of a Borrelia?

Well, of course, this this is the big question, because we know that it has an antibacterial effect, right. Amyloid being produced. And the problem is and this is a hypothesis is that I think has obviously to be proven, but they're finding Lyme under biofilms.

Right. And the success we've had with that, some combination therapy. We just published our eighth article in eight years in Microorganisms in September 2023, and we proved that these high dose adaptation pulses, two week antibiotic pulses, six days of zap zone, tremendous effects on people with cognition, fatigue, pain, no more long term antibiotics in our practice.

But the problem, of course, is bartonella is a biofilm infection. They're also finding it in some of these patients with dementia. So, you know, when you look at the combination of viruses, of the herpes viruses and the parasites and the fungus and bacteria like Lyme spear case, but also and, you know, well, performance gingivalis from, you know, the teeth and chlamydia pneumonia and even H pylori has been showing up.

Right in some patients. I think it's a mixed infectious bag. Right. I don't think they're ever going to prove it's one organism causing this. And then, you know, JAMA years ago published that pesticides and DDT were a problem.

Right, creating amyloid production.

So the best take I have on this is it's multifactorial. And the 16 point M since model that I've been developing and seeing these 13,000 chronically ill patients, I describe it as six rivers of inflammation going into an ocean of inflammation and we know that Alzheimer's and dementia is basically an inflammatory process, microglial activation, a lot of inflammation in the brain and that, you know, all of the acids map is showing up in Alzheimer's.

I did I think I sent it to you maybe a few months ago. I did a research for about three months to go see R is every SIDS factor published in the medical literature on Alzheimer's.

And it was yes, it was infections. It was toxins like heavy metals and mold and pesticides. It was microbiome problems with Clostridium right. And not enough akkermansia species.

It was mass l and leaky gut. It was nutritional deficiencies, sleep disorders. So those are the six rivers. And then those lead to mitochondrial dysfunction and hormone dysregulation.

Right. So you're dealing ultimately with all of these sources of inflammation with downstream effects plots, disorder, anemia, which we're getting in long-covid.

Right. And my concern, by the way, with these viruses like COVID, and I'm sure you must have the same these people lose their sense of smell, right, and taste, which is a hallmark of no degenerative diseases in the past.

It's like, is this going to be a precursor for people later on having a problem with them? I mean, this this could be an absolute massive problem. So I think the model and I know you use a, you know, a similar model, the model I've been looking at, I think it's going to be applicable basically.

And I don't think in this day and age, any of these chronic diseases, we're looking at the one cause, one disease model. We learned in med school, you know, pasteur's postulate.

Cox Postulate it doesn't apply to chronic diseases anymore. It's it's usually multifactorial. So if you agree, I mean, I think that's where the answers, if anything, will be found, which is, like you said earlier, just don't throw drugs at the disease prevention.

But also figuring out how do we unravel all of these different elements causing inflammation, what downstream effects? And I think that may be where some of the solutions are going to be found.

Well, yeah, I think you mentioned it several years ago. The whole idea of precision medicine, understanding what are the things that are driving. I mean, that people keep saying, well, you know, why do you do this multifactorial approach?

What we do is simple. We ask what's causing the problem? Figure that out and then we go after those things that are causing the problem. The tough part, as you mentioned earlier, is to figure out what is actually causing the problem, because it's often multiple things.

And when you've got, you know, 17 species of something that you can only test for a few of them, you know, you're really in a tough situation. So it's interesting to me that we kind of came to the same conclusion.

We came from the test tube and looking at AP signaling and molecular biology and said, Wait a minute, there are all these things that trigger this pathway.

You know, it came this said, look, your arm said, you look at all these things, there are all these changes. This is a infectious, multiple infectious problem.

And I think basically we came to the exact same conclusion. This is a thing that you is driven we always say is driven by, you know, energetic reductions and inflammatory inflammatory increases are the two major.

And, of course, toxins can can be in there as well because they drive those things. But the bottom line is the same. It's not Koch's postulates. This is not one TB organism.

It looks like there are multiple things. And so, as you said, COVID is going to be a real concern both for Parkinson's, which there are already the few cases associated and for Alzheimer's.

And it's already been shown that if you've got COVID, you're increase, your Alzheimer's risk is increase, unfortunately. So something we have to think about.

So therefore, you know, treatment is going to be so important and you've got this really interesting depth. So an approach which I want to get to in a second, but I want to ask you first about why mycotoxins and and and tick borne illness, why are they so commonly running together?

You know, I think part of that has to be with the climate change, because a lot of people are getting flooding of their homes. And, you know, years ago I used to joke with Neil Nathan, a colleague of mine who's a mold expert, and I used to say, you know, Neil, we're definitely finding the mold, but it doesn't seem like it's playing the primary role in keeping our people ill.

Babesia, Bartonella, and Co-Infections

But I will tell you, as time has gone on, in this last article we just published in Microorganisms, 84% of our patients had up to five mycotoxins. They had aflatoxins and Leo, Toxin, Ziegler and Owen and to to thickens.

I mean, they were loaded with these toxins and there is definitely a subset. It overlaps cognitive issues and fatigue and pain, because I would give them the option protocol.

They'd say, Hey, I definitely felt better, but I'm relapsing. And they weren't getting the improvements I was seeing and other people. And then I looked for mold, found it, started using things like phosphatidylcholine glutathione, binders like charcoal clay, sometimes glucomannan.

And if they were had triggered thickens, I would be pulling out the toxins. And interestingly enough, the patients would say who were resistant with that apps that didn't get the effects I wanted.

Hey Doc, once I pulled the toxins out. Right. Oh, my God. My cognition was so much better. We used to do the same with heavy metals years ago, right? We checked everybody from mercury lead, arsenic, cadmium in the blood.

And as you know, we're finding quite a bit in the bloodstream or sometimes on a six hour year in DMZ. Some of these people, we keep light the metals if it's high in the blood, their cognition gets better, right?

It's multifactorial. But I think it's the climate. I think it's the amount of flooding that people are getting. And truthfully, the houses are just not well constructed.

We had a mold problem in our house because they didn't finish the chimney properly. And, you know, five years later we found out the floorboards underneath the house had a problem. We had to rip everything out.

So house construction, flooding with the climate and of course the ticks are increasing also because the climate is it's warming up these insects, reproductive ability goes up as the planet heats up.

And that's why these tick borne infections are about roughly a half a million in the U. S. But a year or two ago. But I suspect it's probably a lot more than that.

Me, you know, all these chronic fatigue fibro cases that are showing up. Yeah, exactly the same symptoms as chronic Lyme. So unless you know how to diagnose it, you're missing the you're missing the picture. Yeah. Interesting.

So do you. If you've got someone with both of those, do you go after the usually damp zone first and then or do you do these concurrently? You know, it's a great question.

And the reason I usually will do the drop zone first, unless if somebody comes in, let's say, and they're really loaded with toxins and they say to me, Doc, I'm a multiple chemically sensitive patient, I walk into an apartment or house and I get sick as a dog, and then you try giving them an antibiotic and they get sick.

It's like, All right, I need to work on your microbiome. I need to work on your detox pathways first and unload you with infrared soreness and the rest to get it out.

But the reason I usually do the drop zone first, the drop zone protocol is nine weeks and then you stop. And then afterwards if you have bard, it's two week pulses.

So if you only have Lyme, you can actually go into full long term remission. My wife is for four and a half years in remission since she did this adaption on protocol a couple of years back and she only did a month of the double dose taps.

I mean, she had chronic Lyme for 20 or 25 years, but the reason she is now, well, she had every message factor that I had to address. She had plots to sort of nominal.

Her adrenals were low, she wasn't sleeping properly, she had histamine mass cell disorder with migraines because she was eating the wrong so every factor.

So, you know, it's really important to think, well, let me do the on first and knock the low down because then if I do clear the Lyme or at least knock down the load, then what's going to happen is I can go for months clearing out the mold and then if they need another pulse of that zone, it's a two week antibiotic pulse.

It's kind of like I put my foot on the gas with the drop zone, take it off and do the mold for a couple of months, then look and see. What do I think is Lyme bark?

Put the foot on the gas to week pulse go back to the mold. So I'm I'm kind of going back and forth, detoxing the patients, treating the infections. It seems to work quite well in our population.

Yeah, very, very interesting. So, you know, Daph Zone is a really interesting choice. And I wanted to spend a fair amount of time talking to you about your protocol because it's been so interesting, you know, essentially like, you know, essentially an anti nutrient.

And yet, obviously, these organisms are highly sensitive to it and you do get away with it pretty well with humans. So here's the question then. When you're doing this, as you pointed out, you are causing some degree of anemia.

One of our big concerns, of course, is reduction in energetic support for the brain. So the question is, I mean, it sounds like what you're saying is that it's worth it, that some degree of anemia is not going to compromise them nearly as much as you're going to be helping them by giving them the drop zone.

So if you could talk a little bit about your current protocol, how much depth so do you give? How long? What do you look for as far as if someone crashes in terms of their hemoglobin?

Or do you see that? What things do you give with it? Do you give leucovorin rescue with it ever? Or what sorts of things do you do right? So you know the side effects of dapt.

So when I talk to people about it, I describe it as do no harm. It is her excitement reactions because when you're killing off the bacteria, you're going to get a big cytokine release.

A is for anemia. It's a folic acid induced anemia. So just as you mentioned, we use massive doses of folic acid of leucovorin. We use 100 milligrams of leucovorin twice a day, which is kind of what we use.

Like if you had methotrexate toxicity in rheumatoid arthritis. And with that and with that, I use 100. Well, actually it's it's a 25 it's 15,000 mix each.

It's about 60,000 micrograms twice a day of l methyl folate. So I'm using a methylated folate. So I'm using over 300 milligrams of different folic acid to stop the drop zone anemia.

And we use methyl B12 in case we've occasionally seen a few people with it. I met them a lot of acids, they're B12 deficient, they didn't know it and even iron in the women who are still menstruating.

So we're supporting the pathways of how you make red cells are is rashes but even people who have rashes from like Bactrim, sulfamethoxazole, trimethoprim, they usually can take that.

So the other side effect you have to watch for is met hemoglobin IMU. And this is where you don't carry oxygen well in the blood. But interestingly enough, methylene blue, which we now get compounded, you know, they're using it for mitochondrial regeneration.

It's being used in Alzheimer's. Right. So in these trials. So the interesting part is methylene blue reverses the problem with the MeV hemoglobin, but also it's helping the mitochondria.

Mold, Mycotoxins, and Detoxification

And we also to reverse math hemoglobin and use mitochondrial protocols like INARA need H so we're using actually anti factors Inara CoQ10 mitochondria might and are with nicotine aside Riboside, we're using all of these different things to support mitochondrial function during and after the protocol because we know that any free radical oxidative stress can damage mitochondria.

The thing about the anemia is you have to watch it. So what we're doing, the drop zone, it's usually not bad until you get past 100 milligrams. The way I designed the protocol is that the double dose snaps home is an eight week protocol.

If you only have chronic Lyme, it's four days of high dose dapt. So in 400 if you have BART, it's six days of high dose. So we watch the anemia weekly and the second month and when we're giving all this amount of folic acid and we keep upping the methylene blue gradually so you don't get serotonin syndrome and problems with it.

We keep people on low histamine diets because you can also get problems with raising blood pressure with methylene blue. You got to be off all your psych meds in narcotics when you do this drug.

But it's really protecting people and helping people. And because we're using glutathione on an alpha lipoic acid, which, as you know, is water soluble and fat soluble, getting up into the brain, we are protecting against free radical stress by blocking in of Kappa B one of the major ways you get inflammation with alpha lipoic acid and a C glute was stimulating the inner F two pathway using sulforaphane glucosinolates Broccoli, seed extract, resveratrol, green tea and America Kerman which has been shown to help actually in cognitive dysfunction, low dose melatonin, a milligram to block, and LRP three inflammasomes are associated again with Alzheimer's and Dapt.

So in interestingly enough blocks and LRP three inflammasomes right and methylene blue also degrades tau proteins right in the brain. So when I started looking at Alzheimer's, look at DAP Zone and I did the research, I realized tetracyclines and rifampin were actually affecting amyloid and methylene blue was affecting tau proteins and Datsun was affecting amyloid deposition and it was like they've actually published this stuff in the literature, having nothing to do with the lyme protocol, which is why maybe one day you and I, I would love to do this together with you, get a group of Alzheimer's patients, give them the DAP Zone protocol, do the msd's math.

Right, and then take a look and see what we got. But I've always wondered whether low dose naltrexone done with dap zone, a little melatonin might actually be a prophylactic right to block the LRP three inflammasomes and get some antioxidants because they had a double blind placebo controlled trial in Korea in 201 patients who had might have cognitive impairment and downstream versus cognitive cognitive impairment they did was over 8600 leprosy

patients could just get someone for 15 years and the Alzheimer's rates were minimal.

It was like five or six times higher when they didn't take that. So so the question is, was that Sony hitting the lyme in the Alzheimer's or was that so just stopping inflammation as a neuro INFLAMMASOME inhibitor?

Right. Stopping inflammation in the brain or both. Right. We just don't know at this point. Right. In fact, did you see the article? It literally just came out yesterday claiming that when you do fasting, you actually increase transiently arachidonic acid.

And that leads to an inhibition of nlrp3 inflammasome kind of the opposite of what you would expect. Presumably it is sending it to a different pathway, but very interesting.

Of course, arachidonic acid has been had shown to have some neuroprotective effects in the past, but something that we typically think of as pro-inflammatory actually had this interesting anti-inflammatory a.nd LRP three inflammasome effect.

I mean, you think d it's mostly like, I mean, we know that sugar and insulin resistance, right, is a big factor driving some of that it's you think it's maybe related to that.

It could be yeah I mean my guess they need to do a little more work on where, you know, what sort of signaling is happening. Because my guess is you're changing the typical signaling of the arachidonic acid.

But we know we'll see more work would be would be really helpful. Clearly, everyone agrees that fasting can be helpful for inflammation. Right. And by the way, for anyone who's interested in the deposition protocol, because it would take me a long time to explain all the details.

The entire protocol is written in and you can just do a PubMed search. Look up Horowitz. Comma, microorganisms with the Journal September 2023. Just look up dapps on the entire protocol of how to do it.

All the nutritional supplements, all the drugs, when to add them, when do you do an EKG to rule out peut prolongation? Everything is in that article, so any doctor can pick this up and can do this for their patients.

And I will tell you, I'm amazed day by day people are telling me how much help they're getting from this protocol. I just think what's really going to be interesting in the future is what is the applicability for Alzheimer's, because we don't really know how much spy rockets it's published.

But, you know, there's a difference between association and causation, right? They've shown some causation, but we just don't know with I think the Alzheimer's rates, they said are about doubling between 2020 and 2040.

And there's 46.5 million Americans with preclinical dementia. It's like, why don't people know that number and go, Oh my God, we better be doing something.

Looking at your protocol, reversing Alzheimer's, right? Looking at these maps, the M6 map that I'm looking at, it's like that is a dangerous signal that I don't that we're paying enough attention to it.

Dapsone Protocol and Safety

Yeah. And, you know, one of the interesting things to me there, we kind of we have okay, here's an approach we have. We started back in 2011, 2012 and okay, this helps so many people.

But then there's this group that it doesn't help. And that's what led us to Mycotoxins. So what I'm thinking is it may be that, look, we need that some of the ones that are currently not doing well are going to do much better on depth zone.

So thank you for the reference. I love to make all of these discussions very actionable. And so I think it would

behoove us all to be looking further at your dapps on protocol and looking at, okay, what percentage of people coming in with cognitive decline would really benefit from your protocol?

So I think the easiest way, again, if you just go back to the nine Gen-X Immunoblot, which is by the way, it's covered by Medicare completely. But even if that was the only test you ever did, and let's say you were a mild, you know, moderate cognitive impairment, mild cognitive impairment, I'm not sure if it's Lyme.

I have some aches and pains, but as I'm getting old, what you don't know? Just do the igg ambiguity immunoblot and play Lyme bingo as we explained earlier, any one of those bands there would say, Gee, the Daps on protocol may actually be something that I should be discussing with my doctor because it is a key marker that there had to be a borrelia species that got into your body that's causing the problem.

And it sounds like I mean, there are fish for all of these. Which ones are there? There's fish for obviously for Bartonella and I assume for Borrelia as well.

No, it's mostly the Borelli, it's mostly PCR. They've got any good fish yet, although T Labs actually does have a fish test for it, not organics. They do.

And we do use T labs also, but it's mostly Bartonella and Bethesda. They've got the fish testing and I find the fish testing, the RNA much easier to find it than trying to do PCR analysis.

But there are also great labs like Galaxy Labs does a direct droplet PCR with. I'll check all these bartonella species. Vibrant laboratories will check six different bartonella species.

So a lot of the functional medicine docs, you know, they use vibrant and they use T labs and MDA laboratories in New Jersey will do some of it. I Gen-X T lab, even arm in labs in Germany will do t cell assays.

You can use t cells states to see, look at exposure. So there's a lot of ways to look at it. But there's both direct testing antibody and I'm sorry, direct testing like PCR fish and then indirect testing like antibody testing.

Right. And so what happened several years ago, there was a urinary test with urinary PCR, supposedly for tick borne species. And they would tell you a lot of times, oh, it's got it's got a deletion in it.

So either the product isn't what we expect it to be, but it's still positive. It kind of never went anywhere. What happened with that? Yeah, there was questions about it.

I mean, they still actually have one with the urine multiplex that I Gen-X but the nano trap, the one that I think is really being used more often. This is actually a good test.

Also, I, I can't get it in New York, but if you want to see if you have Lyme the nano trap test N. A., N. A. Trap. They look for the 31 ASP, a antigen in the urine.

So this is a direct detection test instead of DNA, PCR, RNA fish that we've been discussing, this is actually a good urine test if you want to see. And it has a pretty good sensitivity and specificity.

So, yeah, it you know, there's politics. I don't need to probably tell you anyone out there who follows Lyme. I think the politics had something to do with this because organics has been really one of the greatest tabs on, you know, first in the field for a long time.

But and I used it years ago during their it was called looe at the Lyme you're an antigen test we did see it showed up more positive in women around their cycle because when the estrogen goes down they actually produce more Speier kits they hawks you would find it more often this also you can use biofilm agents to open up the biofilms and then do PCR fish because these organisms are under biofilms.

So there's lots of ways of trying to increase the the sensitivity of the testing. But generally, if we use a range of

these labs, you'll generally find it if you look hard enough.

Yeah. So with the nano trap then how many of the different species does that pick up? That's a good question. I'm not sure I know that it picks up. The Osprey in the Osprey is common in all the Borrelia species that I know of.

So if you were talking about SLA in Europe, which causes a skin rash called Acqua dermatitis, cronica metro trophy cans, it's a it's the equivalent of our M rash.

Here they have an osprey. It's the same thing what star eye in the Midwest southern tick associated rash like illness there is osprey so I'm pretty sure the Osprey the 31 is common to all the Borrelia.

So and that's why the IMMUNOBLOT basically works because if you do a Western blot, the 31 can be falsely positive from Epstein-Barr or from an autoimmune illness like lupus or something else.

Whereas if you do an immunoblot, it's recombinant DNA. There are no false positives. So the 31, the aspect you're talking about, you'd only want to do it on an immunoblot or on a nano trap if you were going to, you know, try and prove that it really is related to Borrelia.

Exactly. Okay. So what then? Let's assume that Dobson is going to be an important part of the armamentarium going forward for people with cognitive decline, as it certainly sounds like it's got tremendous, you know, promise.

And of course, we're always interested in how do we get better results, how do we get more people to get better? Where would you say, please be careful, don't use it in these people.

Like, you know, if you're 95 or if you're frail or if you're anemic, one of the people where you would say, but don't use it here. Yeah, there are certain contraindications to dapt.

So first of all, you're not supposed to be glucose six phosphate dehydrogenase deficiency six D if you aren't G six PD deficient, you can get an increase in the hemolytic anemia.

The anemia will be worse. Now, I will tell you, there was one patient in my practice extremely ill. He was g six PD deficient, but his hemoglobin started at about 15 and a half.

16 we gave him 25 adaptation looked 50 of that. So he got through the whole protocol. Believe it or not, it had no problems and went into remission now.

But that is one patient in 13,000 I've treated everyone else has G six PD but this one guy was so sick and his hemoglobin was so high, I said, Listen, we're going to follow you carefully, but I would not suggest for anyone out there listening, do not give this drug to anyone who is g six PD deficient.

That's number one in women. It gets trickier because men's hemoglobin are higher. You'd like a woman's hemoglobin at least over 13 if they're iron deficient, wait to get their iron levels up or their B12 levels up before you start the capsule.

And certainly you've got to be careful in people that have underlying medical like elderly, like you said, congestive heart failure, stroke. I mean, any serious medical illness, you've got to be careful.

But have I used this protocol in women and men that are 80 years old? I have now the beauty of the way we keep tweaking the protocol and I just had a woman and she's agreeing to do you want to be Zoom interviews very shortly.

She's a well-known writer. She could not she has kids. She's working at Yale University. She could not do the fold apps on. And I said, listen, do a two week daps on pulse like I use after people do the initial double dose, just use six days of high dose.

That's only because she was bartonella fish positive. I spoke to her yesterday. She said, I got to tell you, Dr. H. I can't believe the improvement. My cognition is better, my energy's better.

Usually every time I get COVID, it was her third time she crashes. She said I was barely ill, and that's because we knocked the load of the organisms down.

Now we didn't knock it out completely right. But one of the studies I plan on doing a double blind, randomized, controlled, multicenter style, hopefully later this year on DAP Song, because I've got to prove to the world that I think I've discovered if it's not the cure it's at least lowering the load of this organisms by 99 point something percent.

But interestingly enough, Tulane research was published several months ago in the animal model in mice. That Rifampin and DAP song combined completely eliminated Borrelia.

In the animal model, it is possible we are eliminating it with a real cure. I suspect in some it may happen. In others were probably lowering down the load so far that the immune system is able to handle it as long as they don't have immunosuppressive mole toxins like LEO Toxins.

And a lot of my lying patients, by the way, are immunosuppressed. The immune system, they have low eggs, low subclasses. You got to be careful. Natural killer cells can be low.

So you've really got to check these people for it. But, you know, if I could do a four arm study, one of the what the arms of the study would be 50 people.

The way I do the dapps on another arm with a placebo, everything's the same. Just no dapps on placebo, another arm plaque or minnow control group, but another group.

Just to recap some pulses. And it's only six days of that zone every two months and follow this group for a year. If I can get six or $7 million from the Lyme Foundation is that would be the study I would like to do.

And then I'll come back to you. Dalen will say, Hey, these are the results. Maybe we could look at how we could do this for some of the dementia patients and see what we've got, especially if any of the bands on the Immunoblot are positive and they have migratory pain scoring high on the cue.

Yeah, it's a great point and you know, we always hear, well, you know, but just this one band, we don't think it's positive, etc., etc. We hear this all the time and I do wonder how many, you know, we look we're so interested in the various contributors.

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And as you said earlier, it's amazing how many contributors there can be. You know, it is mycotoxins and it is heavy metal exposure and it is various HSV and HB six eight just go right down the list.

And so, you know, my guess is that you're right, this is going to be an incredibly common and very important contributor. These various tick borne illnesses, beginning with Borrelia, but not ending with Borrelia.

So that is fascinating. All right. Well, this is just absolutely fascinating. And I appreciate your mentioning the the article so that everyone can get your protocol.

This is this is really helpful. Now, you were saying when we talked before this was several months ago that you are basically doing some training and recruiting, basically to have, you know, many people who are trained and doing your protocol.

What's the current status on that? So every year for the last, I don't know, maybe seven or eight years, I've been doing doctor trainings once a year on the slide set from the prior year and I take about a month I have you probably

do this too.

I have folders on my desktop at any time. A new article comes out from the last training, I stick it in the folder, whether it's Long-Covid, Bartonella, whatever.

So every August I've usually been doing this training. The last training we did in August of 2023, I think we trained about 70, 75 doctors. We've trained several hundred doctors at this point on the deployment protocol.

So, you know, I'm trying to get the word out only because I've been doing this now for I'm coming on close to 40 years in clinical medicine. This is the most effective.

Most effective. It's all generic medications that are oral. There's no I. V. medications here. It's a very highly effective protocol. And believe me, I have tried everything under the sun.

And it's not like other persistent drugs like disulfiram. Antabuse doesn't have some effects. We've used it. It does help some people. But you can't give chronic antibiotics to these people because first of all, you don't want to ruin the microbiome of the gut.

You don't want people to get C diff. We're loading them with probiotics, but now they're showing that these biofilm, these most chronic infections in the body, whether it's otitis, media, sinusitis, prostatitis, whatever, these are biofilm infections.

So they've now shown that if you post the antibiotics and you open up the biofilms, it's actually much more effective in lowering down the load of these bugs.

So, you know, I where the energy is going to shift as the years go forward in the medical literature, no more. We didn't have any answers before a lot of my Lyme doctor friends, they do use long term.

I don't use any long term antibiotics anymore. This is all pulse therapy. The longest antibiotics is nine weeks for that zone. But since this woman just came back yesterday and said, oh my God, I didn't even do the initial Dapsone what her result?

It turns out the higher the dose of the Dapsone pulsed, the more effective Dapsone is. So maybe I don't even need nine weeks of Dapsone Maybe it's two pulses six or eight times and you clear the organism.

So, you know, we've got research to do, but it's very exciting, gives a lot of hope to the Lyme community. But you know, for the Alzheimer's dementia patients, knowing that 14.5% of the global population has been exposed to, Lyme used to and knowing mold is showing up in people, you've really got to ask yourself, this has got to be a contributing factor in a certain percentage of these dementia cases that were missing.

And I mean, somebody high up NIH or whatever, somebody has got to take your model, right? My model. Put them together and go, listen, we've got to change the model of chronic disease medicine that we're using here, because 87% of the health care costs and 70% of the deaths in the United States are chronic disease.

And we don't have an effective model. But you and I have been working with these these multifactorial models saying, hey, this is the only thing that seems to make sense.

Yeah, absolutely. So, yeah, they're going to rename Dapsone Horowitz mason I think that's a great way to go. So last thing would be and so is there any advantage to intranasal introduction to this or is it because this is a systemic illness that you really don't want to just be getting the brain?

You know, certainly intranasal peptides, intranasal, trophic factors. These have such great promise. What about intranasal Dapsone So the only reason I mean, it's possible it would work great, but the only reason you don't need to do it is one of the great characteristics of Dapsone And by the way, this I think I probably pissed off some of the university researchers because I didn't go through 7000 FDA drugs to see how can I repurpose a drug.

What I did is when John Hopkins, seven or eight years ago said, Hey, Lyme is a persistor bacteria, meaning not that it doesn't persist, knew it persisted.

Right, but persistor bacteria like TB leprosy. I said, hold on. When I was at Mount Sinai in New York doing HIV, I was seeing MAI mycobacterium avium-intracellulare TB.

I said I use the I&A trophamine procainamide all the time. Right? So I said, hold on, let me look at the TB drugs. I looked at Dapsone and one of the first characteristics, fabulous penetration into the central nervous system, anti-inflammatory, Anticytotoxic So if you've got too much glutamate running around in your neurological and your synapses, the Dapsone blocks it right.

So it's got it's got all of these effects. They use it for traumatic brain injury. It increases the amount of flow in your brain. I mean, they've shown that iDapsone has fabulous CNS penetration, it's Antiparasitic antimalarial.

It helps autoimmune diseases, which you see in Long-Covid, which you see in Lyme disease. Right. So it kind of checked off all the boxes persist your drug autoimmunity anti parasitic good CNS penetration I don't find really truthfully, I have not had to use any IV drugs ever since Dapsone has been in my armamentarium.

The only time I used it is a patient in the last several years came in with a Bell's Palsy after being on doxycycline and I said, okay, no choice. I got to use I. V.

RE7 and and eventually this patient cleared. And this was, by the way, borrelia mayonii It was a different Borrelia species from the Midwest that causes a macular popula rash, not the usual standard.

What they and by the way, half the rashes are not bull's eye. They're like solid spreading rashes. But this was Borrelia mayonii had to give them Rosehip.

And that's the last time by the way, I've had to use it because Dapsone's penetration into the CNS is great. And that's why I believe for Alzheimer's prevention in the future, what I would love to see in a Framingham type study.

Yeah, if 50 amino and 25 of Dapsone on, well, little low dose naltrexone and a milligram a melatonin to a bunch of people. And you could do it in, you know, like they did the nurses study.

And then take a look at the absence factors, look at your model the way you did it, and then just see by stopping inflammation in the brain and blocking in NLRP three inflammasomes and right blocking enough Kappa B and stimulating NRF2 working all these inflammatory pathways because it's ultimately an inflammatory illness.

I think you may be able to prevent some of what we're seeing, but we need a Framingham study to follow people for decades to do this. And I don't know is anyone doing this now because I'm not aware that anybody is really. Not aware of either. And I think people have.

Dapsone you always think of it with leprosy and so they're like, Wait, wait, wait, what are you talking about? So I know I think getting your word out, it could really help all of us to get better outcomes in people with cognitive decline.

So this has been fantastic. Just an honor and a pleasure. Always great to talk to you, Richard. Thank you so much. And thanks for the great work you're doing and for, you know, training others to do the work.

And I look forward I'm going to stop the recording here and I look forward to talking to you again.