# Updated Peptide Protocol For The Rapid Treatment Of CIRS, Chronic Lyme Dz, CFS, Autoimmunity And Diseases Of Aging Transcript

(Transcripts are generated by AI and may contain errors)

## Introduction and peptide background

– Dr. Kent Holtorf. It's such an honor to have you on this segment of the General Medicine summit. And I'm so excited we're gonna be chatting about, because you're, you're gonna do a little kind of a streamlined way to look at how to manage mold and all the different things that count along with that.

So I'm so excited about that. – Yeah, well, thank you so much. It's an honor to be on with you and um and and when you're concentrating on, you know, Sears, you know, chronic inflammatory response syndrome with, with mold. But it does hold for so many different illnesses. And, you know, when I discovered peptides, because I was sick with Lyme, Babesia, Bartonella and didn't get better after 3.5 years of the highest dose antibiotics, you know, seven at a time, three times the dose would never give a patient, nothing, nothing worked.

I went into heart failure um and then the cardiologist said, oh, maybe in 10 years you get 10% better. I'm like, I couldn't go upstairs, I couldn't stand up, I'm not gonna live like this and kind of went around the world looking at all these different treatments, Some, some things help, you know, some crazy things, but I was in Belgium and took a bunch of peptides and then didn't think much of it and didn't really expect anything, and then like three or 44 to 5 days later, also I walked up the stairs upright and I'm like, wait a minute, what happened, you know? And uh and then probably eight months later I'm back to my cardiologist walking in upright and you know, that's interesting, you know? And then an echo, he's like, I've never seen this, you know? And I had so much damage was like fibrous from the high human transforming growth factor beta that that you see.

But I didn't even ask me what I did, you know, you know, so just kind of incorporated that into like, you know, all of our treatment. So you know, you know, whether it be Lyme or chronic fatigue syndrome or even now it's with anti aging and all this stuff plays a part. And we found all those all these are so similar and you look at like the immune panel of an autistic kid versus a lime person, they look very similar. And so you know, correcting that underlying immune dysfunction um is key.

And then you have all these other peptides to do all these different things as well. And it's just been a game changer for for myself um and our practice and all the practices that you use peptides. And I know you use uh peptides in your practice.

So um I did an interview the other night with the person who never heard of peptides. And he's just like you can tell when he's we're talking, he's just like yeah, right. And then he starts wait a minute and then you know, after we're done he's like wait what? How come I haven't heard of this, you know? Yeah, so it's great and I see you guys do so many great treatments and um you know helping these patients that have really nowhere to go and they're just treated as you know, so so terribly.

But and so I get so mad at doctors but you know, they're in a system that they can't do anything, you know, they got 15 minutes and that's probably a good paper works about eight minutes to spend with the patient. I mean I can't say hello at eight minutes, right. And uh I know you're doing the same thing and treating all these, you know, uncurable patients that are all psychological, you know, the doctor can't treat it's their fault.

So my hat goes off to you. So I'm giving the summit. – And that's I mean that's a fascinating part is that exactly what you're saying if they can't fix the patient in eight minutes or less, you know, to prescribe some kind of medication that fits their standard of care, then all of a sudden it is and their dip or they're anxious and they need some antidepressants or anti anxiety medication or some sleeping medication or anything like that before we get in because I just wanted people get a taste of what there are gonna be and be hearing from you. I wanted to go through some people know all the amazing things that you do, and Kent Holtorf is the medical director of the Holtorf

medical group. HoltorfMed.com and you've had 22 centers and nine franchises. I mean that's… – Were all my sins.

– That's that's insane. And the founder and medical director of the nonprofit National Academy of Hypothyroidism, that's NAHypothyroidism.org. He's the founder of Integrative Peptides, integratedpeptides.com That's where I get my world peptides. They're awesome, bringing doctors and patients the highest quality natural bioidentical peptides as supplements with unique deliver systems and dedicated to training physicians about groundbreaking peptide therapies. Is recently started a pharmaceutical company, KJ biopharm. That's KJbiopharm.com and proceeding with I. M. D. Clinical trials and unique peptide and biological therapies for complex immune related conditions.

He's an international known lecturer, author and innovator, cutting edge research and treatment has lectured almost 100 CME approved medical society conferences and summits that that should tell everyone that this gentleman is in high demand and what he says is really kind of that cutting edge and he's a leader in the world in this area. He is on the sterling committee and lecturer for the A4M International peptide society and was the endocrinology expert for a ol health.

He has published multiple peer review review of articles and complex multi system poorly understood conditions which demonstrates that much of the long held dogma is endocrinology and infectious diseases inaccurate and we're going to be talking more about that.

He's also a guest editor and peer reviewer for multiple medical journals including the journal endocrine. He has been a featured guest on numerous major news outlets and print media including CNBC, ABC news, CNN, Fox News, Good Morning America, The Today Show, Discovery Health, The Doctors, the learning channel, the Wall Street Journal, Los Angeles Time, Use News, World Report, San Francisco Chronicle, WebMd, and Forbes among many others. I mean, this is amazing what you've been been doing. I mean here here you're barely walking up the stairs and this is what you've done. – Yeah. You know, I was going to, you know, I said, I would not live like that.

And so every pick the date, Halloween, I'm gonna end it if I don't get better. So I got out there at one mile an hour bent over going to all these doctors.

## Shared mechanisms across chronic illness

But I kind of knew I felt, you know that this is gonna, even though like I would never wish, you know, line Babesia, Bartonella on my worst enemy, that it's gonna work out where it's gonna help others in the long run and that's kind of get me going, you know. – So so you're talking a little bit about you have this commonality, you know, you have all these different diseases and and, and somehow there's a commonality between among all of them.

You're talking about autism, somebody with mold exposure, cancer. I mean, because medically, they're all they're separate diseases and they are separate individuals or separate type of doctors that deal with them.

But what is that commonality if you would bring them all together and and how how should we look at that? – Yeah. And, and really, I think the power of what we look at is instead of I think it's kind of done a disservice, you know, with all these syndromes, right? You know, chronic fatigue syndrome, fibromyalgia, Sears and I meet this criteria and it's, you know, series I don't even think standard doctors even know about, but let's say, chronic fatigue syndrome, you know, as soon as that person has it on the chart, it's like almost give a license, really does give a license to that standard position to not dig any deeper what's the cause and just right for, you know, an antidepressant or, you know, oh, you're just stressed out.

Let's get a psych consult and we've had patients get a psych consult from the ICU, you know, um, and and they just don't want to deal with it. And he gets so mad that, you know, these doctors won't look at trying to find the underlying condition, but when they get diagnosed with these things or chronic line the infection of these doctors say, we don't believe in it, you know, and it's it's like, you know, the old saying, when doctors, like if you have a chronic infection don't go to infectious disease if you have a hormone problem, don't go to endocrinologist if you have, you know, it's that they just want the simple thing or it's like, endocrinologists are stuck on the TSH, you know, and I've written uh, you know, numerous review articles with, you know, 500 references each showing that will work. And the person who is totally healthy, no stress, no toxin exposure, which everyone has, you know,

chronic illness who's not older, that's okay. But if you don't that TSH will leave these, you know, basically so many people undiagnosed.

And that's when he started the nonprofit a number of years ago for for thyroid and I was really big on and still am on, you know, T three therapy and and that which the endocrinologists don't even want to know about, you know, because all their you know, society conferences are basically funded by the makers of Synthroid and and they don't do it. So it's like, you know, and same thing with the infectious side of America, we don't believe in chronic, like how can you not believe it's just like, look at all these studies like la la la la la, you know, and they don't have the time to dig down, you know, and, you know, these patients aren't easy. And but I couldn't do it in eight minutes either, but they're stuck, they're not allowed to even, you know, investigate, so they're stuck And so many doctors are very miserable um in the in the standard realm, but they don't know what to do, you know?

And so they're not bad people but they're kind of doing bad get in that it's a bad system I will say. And then as you look at the underlying issues, there's yet finally getting to your question right? The commonality we find is stress.

Okay, everyone thinks, oh they're just stress but especially emotional stress, like, you know, divorce, death of a family member, things like that, you know, well lowers your immunity. Well it doesn't do that.

It basically is a number of things but it changes that immunity. If you look at oversimplification but you have to with the means so complex that if you look at like this side as you know, TH1 gets stuff inside the cell, TH2 and TH17 get stuff outside the cell. Now, normally when we're young, you know, you're TH1 is good and then the The finest will regulate that which is a Gland inside your breastbone. But that starts invalluding, you know, at early adolescence and then starts dropping the activity drops uh around age 40, 45. It gets to a very low level and that's when all these diseases of aging occur. Right?

And so there's it's like this so you can't fight inter seller infections cancer, but you have this th two and th 17. so you get all this inflammation which is causing a pa sclerosis you know, auto immunity with th 17, all these degenerative diseases and this side now cannot fight interstellar infections but also cancer. That's when you start getting cancer and we're going too much into it. But you know the cells then go into t cells in essence and and t cell exhaustion and and so like for around the cancer and your you know, your uh you know a lot more about cancer than I do, but you know the cells around the cancer you think they're fighting it but they're actually almost protecting it because they're in t cell exhaustion or sin essence from the constant stimulation and they just, you know, and and then what happens the mitochondria everything is a vicious cycle of medicine.

So when when the immune system gets bad and so the th one is required to we have cells that go bad, the natural killer cells and the other th one side will go get rid of those cells and we get rid of billions of cells a day which like, wow, that's bad. No, that's good because otherwise the cells, you know, they basically cause a lot of havoc there like the hooligans of the neighborhood and the mitochondria gonna which you know, cell danger response which you know got a lot of play but it's kind of part of the whole thing and you know all these different things are kind of part of that you know the whole thing and so the mitochondria start creating um inflammatory markers reactive oxygen species instead of making energy and then they recruit Morrison essence cells and then you get hypothalamic pituitary, you know hormonal dysfunction, pineal gland dysfunctions, they don't sleep.

It activates mast cells now you got brain on fire um and then causes immune activation of coagulation. Like my blood was so thick you could not take it out with a 14 gauge needle you know And remember when I was in the ICU with with sepsis and the nurses were making a shift change or one saying oh this is that AIDS guy who um who keeps coming up negative for HIV and because I had no immunity, my natural killer cell function was zero. Like you can't give enough antibiotics to cure anything you know and but you go to you go to immunologist, they don't even check your immune system. It's like it's like crazy you know so I keep going everywhere else but your question so stress is a huge part toxins right?

And you know so mold you know kind of thing with Sears and and that's kind of part of the diagnosed although a lot of other toxins play a part but you look everyone's got heavy metals like phosphate I mean just a mass of just you know toxic exploit E.

M. F. In fact there was an environmental conference and A. D. D. So I kinda bored. So I went over to the bar And open a usa today not on the front but one of the inner front pages they found this killer whale in Antarctica you know died on this iceberg.

They went and did a biopsy the fat and it died from PCB poisoning which has been banned for 40 years. But the stuff doesn't it never leaves you know and so everyone is so toxic. And then the third thing is which goes along with this immune dysfunction that they get reactivating infections, new infections and you know with lime and so controversial but you know I think ticks are you know so it was from tick bites and I mean I think that's probably the fifth most common way of getting it. You know you got sexual transmission you know basically in utero. And I think it's number one but also mosquitoes, ticks, bedbugs, you know all these things and you know doctors here they'll say they got line there's no line in California really.

And we'll wait even at the park down the street says watch out you know it takes line but there's so many other ways. – They're stopped by the border.

I mean they don't dare that's across the state border. – Yeah it's nuts. But there's so many other ways and then we have you know so many co infections babesia, Bartonella.

But also when I say like Lyme disease is that you know when I say that usually they have a numerous infections and then they get reactivating infections.

So sometimes we don't even know what we're treating, we're treating a lot of things. But you know like when when you do get line, the first thing it does is secrete cytokines to suppress that th one then it goes inside yourself and and now it's chronic and it lowers the th one so now you can't fight it, you know and it's it's it's scary.

So many people are sick now like and also molds been around forever. We've evolved with it. Why in the last 10 years is everyone you know basically sensitive to it or you know, you'll have in the family.

You know there's one person who's just devastated by it and because they probably they have something else that's compromised their immune system or their Wi-Fi is great in their room that we find a lot but but it's usually again people can get lime and no problem. In fact the guy that they was that the Iceman, I don't know how I forget how many years he was but he had Lyme disease you know and it may not affected him because the immune system's suppressed it we have so many infections that you know the body just suppresses it and you look at, you know, everyone has, you know, human rights, one Epstein Barr, CMB but the body suppresses it then as it drops now you get all this stuff and that's why with, you know, in chronic fatigue syndrome was the thing um that was the virus of the month because there's so many infections that they have that correlate, but is that really the cause? – So it's not really the infection per se, that is the issue. I mean the infections there, we're all dealing with it, but it has a lot to do with with our immune system, how it functions. And you know, you're you're talking about th one th two th 17. So you have that that teeter totter, you know, between th one that's able to go after the infection and then th two To you know, th 17, that is that kind of inflammatory and when that's very active, that's when you're dealing with a lot of that, you know, skin rashes and flame brain, you know, you can function arthritis, you know, rheumatoid, all these autoimmune conditions.

So so what what can a person do I mean? So what is it that one person can then have a good th one response versus another one that goes into th two th 17 with that inflammatory, what what is the difference I mean you talked about like heavy metals, chemicals, you know E M F five G all of these is that the only factor or the other factors that play a role.

– Yeah I mean it's like everything you know everything is multifactorial and there's a predisposition with genetics but you know genetics are not are your destiny.

It's like you know with cancer or you got the braca one you know, you know but it's people have epigenetic lee changed their um expression of those genes and that's what the nice thing about you know peptides and why I wrote this which I will have available for the viewers of this is a ceres e book where it looks at you know the standard and Ritchie Schumacher has done an amazing job to you know basically give credibility to it and all the

research.

But what he does is try to get rid of the toxins to improve the immune system and that's the final goal which you know final goal is with you know, V. I. P. Two to adjust.

But if you give basic active intestinal peptide with any information makes it worse, right?

## Immune testing and key biomarkers

But also I talk about how it actually makes it so you're you're you're basically you're gonna relapse and it sends it means this in the wrong way. It's kinda like giving steroids but um you know it's why not go after the immune system first and then you can detox and do all these things and so you know this whole thing is it kind of started looking at really a different protocol when I've had so many patients come in uh binders and they're like I know it's gonna work and you know, and he's done some great work and and you know he spent his life doing this and my hat goes off to him.

But they've just been on forever. I know I'm going to get better, like well how long has it been? Eight years? You know, and I'm like I'm A. D. D. So if something doesn't work quickly, I'm like well let's move on. How about let's think of something different, you know, and you know, and with the peptide we've kind of become an immune modulatary clinic and where we were doing the super high dose antibiotics and you know five at a time and and and doing all all the all these treatments where you know take two years and the patients are hurting all the time feeling terrible and with peptides we can get them, you know here from there, we may not have even need antibiotics or for, you know, a couple of months versus years.

And so it's really allowed us to help and then, you know, we're getting more of, you know, the anti aging group. So it's kind of like you know with age it's kind of like the same thing happens and the same thing happens with autism with auto immunity M.

S., A. L. S. You know. We have ALS Patients coming in the wheelchair and they're jogging now and they go back to the neurologist thinking they're all just gonna go oh my gosh what did you do this?

No they just basically say oh it's a misdiagnosis. I'm like three of you you know and and we had one cancer patient had hurdle cell cancer. And the doctor who she considered her friend um and and said he's like you got to get this out this week.

And then end up talking to her and I said well give me six months you know and so we use a lot of peptides and um and things and six months later to scan it's gone.

And so she goes back to the doctor thinking he's your friend, he's gonna be happy he won't come out of the room and tells the receptionist tell her she's no longer a patient you know. It is so weird to me but but we see the same thing. You know what these complex illnesses and for a standard doctor to do it one they're gonna have to learn all these new things right And then they can't do it anyways so I don't blame them why they're not interested in.

And kind of it's just human nature if you can't do it they're not a bad doctor. So it's easier for them to believe it doesn't exist you know or it's psychological.

– The system is so stacked against them and and then also third party, you know, pay insurance companies how they pay, how it's set up. So it's so stacked against them. So you you really have to want to put yourself on the line almost to treat, you know, doing it the way that you're doing and the way, you know, we're providing care that's outside the normal box that that's been created for people that doctors feel safe within, you know? So it's it's it's hard, it's really hard. So when… – Yeah, patient you probably get this too, is that patients say, well this is so great, why doesn't my doctor know about it, you know? And so I wrote an article, it's on the National Academy of Hypothyroidism site, why doesn't my endocrinologist know this?

But you can plug in any doctor and say why is this? The annals of internal medicine looked at this and they found

most doctors are practicing 10 to 20 years behind what's available to medical literature because they don't read medical literature, they don't have, it doesn't matter because they can't adopt it anyways, but that's not the biggest issue is that if you give a doctor 50 studies or 100 studies showing that what they're doing is not optimal. They don't want to hear it.

No, no, no, no, no my my patients are, my patients are different, they're they're fine. And it takes on average a proven new therapy that significantly better than whatever is out there to get accepted mainstream medicine takes on average 17 years unless it's a drug it was a drug with the salesforce, it gets adopted very quickly. So that's the thing.

All these things we're talking about that are crazy. Alternative quackery will be adopted mainstream medicine in about 17 years. – So I'm curious. You have them, you have an individual there th one, you know, is low, they're not able to fight infection.

You know, they and their inflammatory, their brains some flame the nervous systems on flame. So how do you and and and like we're talking about it's the same with people that are aging faster. Because we have the scenario of inflaming aging, you know, where you know that this inflammatory situation is driving aging faster and obviously we want to stop that and that relates to, you know, what you call senescent cells or immune us in essence where you have these immune immune system is fatigued and exhausted, is not able to clear unwanted cells, you know, out of the system.

So how do we how do we address that? I mean, you mentioned then peptides and that these are powerful tools you have these cancer patients using peptides and and able to kind of shift that that image immune system function with it. So what is the strategy since I mean V.

I. P. Is a peptide. And you mentioned that, you know, if we do that early stage it's just kind of like you know fueling the fire almost. I mean there has to be a late stage intervention. Where do we start? – Yeah.

So you know one thing I think is people you know you look at their labs and we always know their abuses basically is going to be terrible. But also I think our job is to convince to show the patient because they're gonna go back to their doctor, going back to their friends.

This is crazy, you know. And so kind of the key labs that we found we do like 40 to 50 labs and a person to start out with but that you know a key one, a key marker of the downstream effect of key H1 is natural killer cell function. So natural killer cells are the cells that monitor body for cancer. It's seller infections.

And that if you look at the studies on chronic fatigue syndrome for instance as a as an example and you know chronic fatigue syndrome uh they say we don't know what it's from but you know there's a lot of things but um uh 75% of those people have low natural killer cell function and 25% low natural killer cell number. So the problem is a lot of lab just do the number. So you can kind of miss it but function is key and it should be above 30 little units. Even though the reference range is low and I called the lab. I said this is crazy.

Literature says differently like well we have to do our own test. We couldn't get that many people, you know. So it made the reference range really wide.

But so that's a killer cell function. Looking at the th one and th two probably the best clinical markers are C four A. And then human transforming growth factor beta especially true with Sears auto immunity because this human growth factor beta goes up very inflammatory. And but you'll read some studies and show that it's anti inflammatory, you know, which is interesting.

But in the presence of I. L. Six, it totally changes but that causes a lot of fibrosis um auto immunity. And that's what happened to me. I had my human general factor beta was so high it caused my heart to be five roast and also chronic kidney damage, which I had kidney failure, heart failure.

I mean I could not remember, we'd go to go to dinner and my wife would basically, you know, talk about who are

they have never never heard of them, but I can remember medical stuff. It was very weird.

But so when when that came down I also had very high veg f bachelor in their growth factor and it made my vessels gigantic and I went to cardiovascular surgeon.

He's like what the heck you know we're walking up the stairs a little kid said daddy, what's wrong with his legs? You know and it was just a protest but and I got them school roast and they knocked out my greater sappiness and all this and you know, so okay well look better at least. And then I got rid of the Barton L.

And I have no veins. But yeah, so see for a human growth factor beta and natural killer cell function. Now quest is the best place to get it. Although they drive me crazy um in terms of like LabCorp better to deal with.

But and I've talked to the medical director so you gotta you gotta picture their test for these, you know and also natural killer cell number can go up with sin essence, you know, so it can lead you astray but those are kind of the some of the key things. But you also look at CD four CD eight ratio because there's a vicious cycle and you also get pineal hypothalamus.

Pituitary and then adrenal dysfunction, thyroid dysfunction, growth hormone, you know, all the sex hormones and all those things that looking at the T4 to T3 ratio or the T 32 reverse T 3 ratio all show immune dysfunction. And so there's ways of looking at that and then you know some of the lymphocytes sub panels and that uh on the side of kinds can really throw you off because a lot of times if you have, you know low the body's trying to raise that. So let's say, you know, th one stimulating side of kind will be high and then oh you're th one dominant, no, because just trying to raise that, you know, um and a lot of times they're very unreliable, everything zero and things like that.

But you know, basically looking at that kind of convince the patient, although we know they're gonna be low and even with just a judge, you know. So but you know where some of the things that worked very well. So there was probably the most popular was thymosin alpha one um approved in about 33 countries for infections and cancer, but when the study came out showing safe and effective for covid, they banned it. So um we went and did study looking comparing it with metal below mix transcript O mix and proteomics and looked at the combination of thymogen and immune peptide A a one uh actually mirrored that was actually a more potent modulator of that, but also uh there are orally by available which is great too. And then, you know, TB four, thymosin beta four probably one of the most popular thymosin.

So and also when you look at, you know, as a famous inveloute and even the CDC said that age individuals have on average at least one chronic illness just due to the famous evolution.

Okay, so you're like well giving famous peptides back totally safe. They've done toxic studies as 1000 times the dose ivy people and they can't find a toxic level. They can't find a toxic level.

Why wouldn't you give that back? And and that's what the studies are showing. Like it increase decrease is all these, you know uh basically chronically chronic illnesses of aging like um uh for the to attract.

But they did one study 15 year study on individuals over 65 with significant heart disease. And they gave them six doses of a famous in and the pineal peptide epa talent and also use Pioneer lee in uh and they followed them and they found the ones on normal care. Okay, their cardiovascular system got worse.

The ones on that combination. Again, just six doses, their cardiovascular got better. They had 2.5 full less cancer, uh greater endurance, increased quality of life. They live longer.

They, you know, basically had less uh cardiovascular events. And then ones that they gave higher dose for a period of time. They had a four fold decrease in mortality and morbidity like why aren't we doing this for everyone? You know?

And and so you know, looking at, you know, when you see especially let's say, you know, probably center of lime Sears. So you want to boost that teach one.

So we'll typically use the thymosin beta four fragment.

## Peptide strategies for immune modulation

Which because the Tv for molecule is very long so you can't take that orally, you can take it injected lee but it has the middle part that actually stimulates mast cells which can be good for a healthy person but these patients not so good.

And so Tv for frag gets through that and it actually uh goes directly and lowers the human transforming growth factor beta um as well as that uh immune peptides A to also is K. P. V. So last night sibling hormone, you know everyone knows it as you know the thing to you know get get tanned but it's probably one of the most anti inflammatory substances in our body and a lot of you know some of the sophisticated lime docks are using it as an anti inflammatory work we're using it's anti inflammatory for Lyme patients. And the problem is like Dilantin one and two which was considered the barbie doll peptide because people got tanned and they lost weight and reduce inflammation. And you know weight reduction yeah so and felt so much better and but you know I I did it myself and I was a little A D d it wasn't working and I turned just black and it's like someone painted me and plus if you're older you get all these blotchy spots, you know? So but K. P. V.

Just the last three peptides of the last 34 amino acids is much more potent and will dramatically lower mast cell activation and inflammation. But it doesn't do it at the expense of the immunity. It actually improves the immunity and it's very antimicrobial. It was shown to outperform like the flu can at 100,000 of a dose. Okay and those side effects and its anti um viral antibacterial and showed with like you know like the staph aureus and things. And then you can you know use you know BPC and things which is kind of the go to peptide for people think it's a gut peptide and it does work in the gut but people don't think of it as orally for systemic but every study that I have found that looked at you know compared oral too easy to interpret Neil and Ivy. The doses were equal potent for the same effect. So or at conferences um like will give people there you can tell they're hey what's wrong with your knee here take these talk to me tomorrow and oh my gosh I've had this for eight years and it doesn't hurt or a dog basically if we don't we'll give it to him a couple times a week and if we forget also he started limping you know and – So how how much so you would actually give them then oral BBC 1 57. How many do you do you give?

I mean you have your your supplement that that you offer that people can get. How many would you do would you give them three? Would you give them six? What dosage would you give them if you want to have kind of a impact so that they see a difference the next day.

– Yeah. And and so peptides and just maybe so people don't know or Visa was talking about peptides to I don't know if people know what peptides are or not but you know there's there's small chains of amino acids which Just arbitrarily if they're under 40 amino acids there a peptide if they're over there a protein.

But we didn't think much of them and we thought like the master controller were hormones right? And but the peptides are like a layer above that basically fine tune everything. And they're very tissue specific.

And they work where hormones will go into the cell go the cell nucleus, you know, change protein synthesis. So it's kind of like you know building the factories. So they're slow on slow off and they have broad effects. So the peptides work on the cell surface but have piotrophic effects are signaling peptides which caused a number of things including you know epigenetic change in the gene gene expression.

They work more like supplements. Right? But just much stronger. And and and so I almost forgot the question. But in terms of yeah so we'll do the tv for frag the were called time again alpha one which combination of time region and immune.

A2 we have also like cerebral license which the cerebral license has been approved in over 30 countries for dementia and T. B. I. Traumatic brain injury given I.

V. But they banned that because it was too safe and effective again. But we found you can give it orally we probably get more like testimonials and feedback on that from you know people that oh my God have had traumatic

brain injury I can't think. And all of a sudden within just a few days sometimes and it's going to be you know orally effective because they're small molecular weight with the EEG studies and things like that and you know people say oh my God I can read now the world is so different and uh and and so we're we're getting better promise peptides generally are not effective orally because they get broken down and we're limited to what we can do as a supplement.

We can't you know basically alter they have now is a drug but there's different ways to get around that by delivery systems. And so I've got not in the army of FDA attorneys but I just hired an army of uh basically a big pharma scientists and so we we found some really unique ways um to get these in the body. Now, one thing that we don't like and if you look at you may see like stable B. P. C. Out there, argentine BPc and they call it stable because it's supposedly stays in the gut longer was more more stable in the gut. But you know, there's a number of third party studies and show that a simulated um BBC.

So it's a kind of a cap on it and the body will do that to peptides. It needs to protect and showing that you can sit for 24 hours. But regardless we use inter coated, it goes right to the gut.

But as soon as a non assimilated or capped peptide gets through the gut, it gets broken down plus the when you see dilated, which is natural. The body does that it makes it less polar so it absorbs.

So most people do the stable BBC, they add a snack to it, which breaks open the tight junction problem is, I don't know, I think you have the same problem. Most of our patients have leaky gut and the last thing I want to do is break open their tight junctions so we we won't go there uh in terms of increasing absorption, but we're excited, you know, it takes longer to think and we're like right there, but you know, getting it there that we can really expand our offering so well, – I mean one of the big, I mean like you're saying the biggest issue is that the majority of us are dealing with leaky gut or inflammatory, you know, scenario along the gut lining and we all know that you know when the gut is inflamed, the rest of the body is inflamed, gut is inflamed, your brain is inflamed so by by calming down that inflammation and regenerating the gut lining, you know, with something like BBC then you will also calm down the inflammation with the rest of the body and you'll calm down the inflammation of the brain and so it there's no reason to try to get that into the bloodstream.

You know that huge. I mean if you can just work on the gut, you got 70 to 80% of your immune system right there, I mean you got 30 plus narrow transmitters, that's pretty right there, you got all these nutrients that are produced right there. So by affecting things there, you're going to have a systemic impact. That's tremendous.

– Yeah, and people forget about the also you know, gut brain but also bring gut and you know, see bo was it was a huge thing for a while and I remember was on a a summit or a webinar and I said well you know is a symptom and oh my God, they didn't like that, you know that this is the reason for everything and but people get sibo because their gut is dysfunctional. So the nice thing about you know BPC will lower the inflammation um you know kind of throughout the gut microbial kill the you know bad bugs.

And then tv for frag actually directly goes after the tight junctions and then K. P. V. With the tight junctions and then the mast cells and all that. And it's a great trio but it also affects the brain gut axis that goes to the brain and affects the brain gut axis.

So now the gut starts working and and then which then makes you know the gut better and the brain you know everything in medicine is a vicious cycle good or bad.

And that's because people will just take you know probiotics, probiotics, probiotics and but the guts going to go back to the way it was and like you look at the studies on like obesity and they have a different total strain and so do cardio fatigue syndrome and Lyme patients.

And so let's just give those, well they're not gonna last, it's gonna go back to the way it was because the environment is the same. – Exactly that's the key. I mean you you can just taking probiotics and eating foods that feed the pathogens or the bad bacteria that were there.

It's just gonna keep colonizing that that area so and and for people then dealing with with stairs or mold toxicity dealing with that immune dysfunction with th one is suppressed. You choose th 17 is over expressed.

So the key is then to kind of bring in you calm down the inflammation along the gap with the BBC 1 57 is that time microbial? You also then reduce some of the inflammation with the TB frag and then also work on some of the mast cell activation with K.

P. B. Does that seem to be kind of the strategy and if you want to throw in some want to get some of that modulation in there as well. – Yeah and we'll use a lot of things. I want to make it seem like hey just give peptides you're gonna be fine. I mean we love a lot of therapies and you know ozone and you know I think LDN is great. It's kind of work for some people.

It's kind of like the person you kind of give everyone uh plasmapheresis we love. And you know trying to get rid of some of the toxins where I think even like fossil coli better than like E. D. T. A. And all the all these things um we'll also see immune activation of coagulation these patients so They tend to like the body will respond to infections and they'll they'll basically lay down fiber in which traps the infections and that basically in the cell wall and then they'll start creating antimicrobial peptide which we also use LL 37 into that space to to try to kill them.

But like Lyme will basically cover itself in like basically you know different uh layers of like lipid so it hides it goes into persist er cells where they're basically not alive or dead, they're just an animal. So the body doesn't see them, you have always antibiotics and get it up and they come back you know?

But yeah so with this coagulation now you have this layer of vibrant good in the short run but not good in the long run and we can find so that the body can't get at it now. And also all the you know whatever peptides you know medicine antibiotics, nutrients can't get in waste products can't get out and auction that takes two seconds normally get in the cells and it can take up to two minutes.

So they terrible endurance, right? They get air hunger which is common symptom and we find that you know giving heparin very low dose exceedingly safe safer than aspirin. And also some vascular enzymes like lumber canes, NATO carnation, you clean that out and you'll find that treatments you did previously that didn't work now start working and uh and like we'll do like I.

V. S like what's going on there uh it's not working. And then you get rid of that and they're like oh my God the same same things work. So. And even in the you know shoemaker protocol there's a couple of markers for um you know basically hyper coagulation.

## Gut, mast cells, and coagulation support

But in the book that they can get we'll give and the whole panel to do and and really you know look at all these markers that you can use as they correlate with symptoms with disease pathology. And sometimes you want to directly go after it and we'll see a lot of people with pots, right?

And if you ask the doctor oh my God it's a nightmare a nightmare to treat. But we really don't even think about it because when you fix the immune system that goes away you know? And another thing you'll find that I did a study on a review article on HP Access. So adrenal gland, pituitary, adrenal access in chronic fatigue syndrome, fibromyalgia.

And if you look at the standard said well cortisol levels you know looks normal. But if you use sophisticated stimulation tests um that looks at central that 90 plus percent of those patients had adrenal dysfunction.

And um and so you'll see these patients will oftentimes have a high a c th so it goes psychotropic releasing hormone you know? Well then stimulate a. C th uh to then make cortisol of ihh But low cortisol and now cortisol is very relative.

If you're 20 not stressed and healthy you can have a low cortisol that's good if you're in the I. C. U. With a normal

cortisol you're probably gonna die. You know?

So when we see that high A. C. Th the body is trying to make more cortisol and it's making part of atropine releasing hormone which is a huge stimulator of mast cell activation. So someone's giving a little touch of cortisol, not like prednisone just a little physiologic dose and lowering that AC th you'll find that mast cell goes away and the pots gets so much better and and and so many things uh in addition to you know, directly going after the mast cells and looking upstream and margin immune system because that th two is going to stimulate the mast cells. And I mean the mast cell mastermind group and it is the most smartest docks, the nerdiest docks I've ever met.

And I mean that is a compliment. But they're still stuck on direct mass selling to basically look upstream look upstream, you know? And it just works so much, so much better and modulate that.

So all these, you know, mass cell activation uh symptoms which are so many, right and some people have it which we didn't know it had even heard about it, you know, you know when I started so but so many things associated with that now and yeah you know you got pots, you got initial cystitis and things that can cause it's a component of Lyme disease and and we'll find that too if people get you know like stem cells and they oh my God they just feel terrible you know they're a mast cell patient but especially if they do their own which I don't know why you want to give stem cells and you're sick.

They're not working. That's a big part of the problem. And the peptides also we won't do stem cells without giving peptides with it because they will activate the stem cells but you know and they'll take it from the fat which they're lost.

So that was the most potent as the most. But you're also giving all this inflammatory mast cells and histamine with it and they tend to just flare like crazy you know and they spend a lot of money to feel terrible you know. So we usually won't do stem cells until we get their immune system under control and definitely don't recommend their own.

And you want to use you know young um uh you know from the uh from the build report and and exorcisms as well like with excess. So the stem cells will like we used to think that stem cells go to an area and they just transform into that cell right? No they don't do that.

They'll secrete exorcisms which are like lipid package which will protect the in uh you know whatever's in there a lot of times it's peptides. It could be M. R. N. A. And that they can actually change depending on what's what's going on. But um uh so you can give those nasaly. Like in our autistic kids it gets right to the brain stem cells are too big. They're not going to get through.

But we've had a lot of great results with autistic kids that have been pretty incredible. – With using exosomes nasally? – Yeah and peptides. – Yeah so which which peptides for like autistic Children? What would you use would it be then the B.

P. C. And the K. P. B. Or what what would you? – Yeah. Yeah. I mean I'm loving K. P. V. It's a little tricky to form but and yeah but you know typically kind of the same things immune modulators.

You want to get that under control the cerebral license uh lowers you know as well as the BBC and and and the other ones and K. P. V. Lowers that micro glial activation because they all have you know their brain is just so inflamed and it's causing all these problems and like you know insomnia anxiety. And we found for insomnia the key kind of little pearl is you give delta sleep inducing peptide which is sounds like okay take it and go to sleep but it doesn't do that.

What does it lowers the inflammation in the sleep center. It's actually the highest levels are in the gut right? So that's interesting. Along with epitalen which is the pineal peptide which is probably the most anti aging peptide or pinealian very much the same increases telomeres. It will modulate the pineal hypothalamic pituitary function. And they did some studies.

These were on chickens but they took out the pituitary and gave ePA talent and their thyroid levels went up I don't know. So very strange that along with a growth hormone or a you know secreta god something to raise the growth hormone and after 2 to 3 weeks all of a sudden there sleeping again or narcoleptics no longer have um narcolepsy. Um And then you know then you got you know the whole problem with this vicious cycle, mitochondrial dysfunction.

So there's mitochondrial peptides and one of our doctors had one of her daughters was at U. C. L. A. And you know high achieving and you know all this which are 10 people that get all this actually.

And she kept pulling out all her eyebrows no matter what they did for I think 8, 10 years. And when I went to everything medications therapy all they couldn't we gave her five amino one Mq.

Which actually raises N. A. D. Levels in the mitochondria two days later. Never had a problem since – Mitochondrial dysfunction in her situation then.

– Yeah. Which I didn't expect that. But mitochondrial function is huge in almost every chronic illness. And it will result in low thyroid because people think of thyroid just diffusing the cells as active transport. You know diabetes all the neurodegenerative diseases autism really.

As soon as someone gets sick for a extended period of time it affects the mitochondria. Even BBC will help the mitochondria. There's s s 31 which a ton of you know there's a ton of clinical trials. It's more like interstellar any auction.

Oh but I should tell you to so often stopped working right. And also Mott C which also stimulates and we gave her that too and then stopped working like and then we gave her ss 31 some middle Q.

And P. Q. Q. And and start working again. So I think we kind of over oxidized her mitochondria. But once we brought that back we uh started working again.

– Yeah because that I mean that's one of the issues is that if you just drive the mitochondria and use those kind of therapies without having an antioxidant support because the mitochondria well then you know when it's active it will produce a lot of oxidative stress within the cell. So you got to have that antioxidant support to balance that out as you're driving the mitochondria.

– Yeah and you look at all these diseases of aging.

## Mitochondria, thyroid, and senescent cells

I mean everything has to inflammation right? And which is a big broad term but it kind of comes from the mitochondria and and this immune dysfunction and we find also have a lecture on you know, I love thyroid, I love T. Three and and all these, you know, sometimes we get these line patients really sick.

They've been all the best doctors and it just you look and their TSH is normal, but we'll do like a thyroid plexus measures the inter cellular level of thyroid.

Like the British medical journal showed that a knowledgeable doctor looking at someone's thyroid um look at someone's ankle reflex was a better test than blood test for thyroid.

How could that be? They found that a normal reflex goes. But the lower the thyroid, the slower the relaxation phase you so it measures to be in the computer and we'll also take someone's basal metabolic rate.

So how many calories they are burning over the 10 minutes and then extrapolating that. And we find or even just for like weight loss patients who have dieted um and displaced by LeBeau and others have been repeated over and over that if someone significantly die, it's kind of like starvation type diets uh three cycles, their metabolism drops uh and it doesn't go back to normal even after you eat.

So when people say that I wrecked my metabolism, you know, no one believes, oh yeah, you're eating bonbons in the closet at night or whatever that we find that there is in general about 25% lower than normal.

We'll see that also with the Lyme patients and they, you know, anyone chronically ill, the neurodegenerative patients. And so you gotta get their metabolism back and you know, one way to do that is give thyroid and they're all low thyroid even though their TSH is normal.

And there's ways to show that and also show the patient so that when their friends go, oh, you shouldn't be on um that. But and then but yeah, so they found that for like Hashimoto's patients and uh and all these Sears and line patients, they have all these autoimmune things, but they never fit into a box.

Like I had anti foster lipids center for awhile, autoimmune kidney disease, you know, and just all these things, especially because the human growth factor beta.

But, you know, so you you basically you know, lower those things and all that goes away. And I was going to say something I forgot. – Yeah, I mean the thyroid is such a key and I see that with any time you're dealing with any kind of immune system dysfunction. I mean the thyroid is is like the fuel, you know, that that drives immune system and that's one of the easier things and the cheapest thing to fix is to make sure that you have at least that.

And people that are so sick, they have that type of autonomic dysfunction, which means that you the TSH really doesn't show anything. So it's useless to really look at TSH you've got to look at all these other things like you're mentioning that diversity three, that you know to T.

Three ratio T. 43 you know, so these become key and so many people forget to look at, you know, do the antibodies show up, you know, do I have Hashimoto's so there's so many people that are dealing with Hashimoto's and they never get tested for it. Yeah, good.

– Because the endocrinologist don't think that you can do anything about it. So they don't even test it. But yeah, so the studies show that if you patient with Hashimoto's, if you modulate their mean system, they actually feel better than if you give them thyroid.

But but we kind of do both. But I like to show you the Starr report, largest study ever done on antidepressants, right? I multi antidepressants and they kind of use them like them clinically and they found, you know an depressant working about 30% of people.

And after a year most of them stop stop working. But they gave them all T three, didn't matter what their levels were. They gave them straight T three.

And they found T three outperformed the antidepressants with less side effects, right? But they didn't they didn't fund the study. So they didn't get in the abstract, You know?

So and also another study, 135 bipolar patients that were totally treatment resistant. They tried on average, 14 different medications without any improvement.

Okay, so 14 medications nothing gave multi three didn't matter what their levels were. 80% responded and 35% total resolution of symptoms. – Yeah, I mean, that's criminal too. I mean, here you are then giving these individuals and drugs set that that alters their ability to function in in life, you know, and and they can't really get off of these medications without serious implications. And here you have such a simple solution that can help them tremendously.

– And it hugely affects their life and everyone around them. And yeah, and the problem is is they have a low normal TSH and a high normal T four. So the and across goes, oh, you're kind of high thyroid. But because the pituitary dysfunction and the lack of uh thyroid transport into the cell, that's what you see.

And that's the same thing we see with, you know, Lyme and autism and, you know, Sears and all these things. So

they need thyroid. But the doctors go, no, you're you're high. Well, in fact, you know, I think I got some calls from, oh, you're making the patient's thyroid storm.

You know, you gave your suppressing their TSH. Well, okay, thyroid storm their pulses, 40 for their body temperature's 96. They can't get a bed, they're gaining a pound a week.

Oh my gosh, they're just, – yeah, it's amazing. And then you have the the scenario talking about inflammation and depression, you know, where they see that if you address the inflammation that will then improve depression much more than giving antidepressants. So, you know, using things like, you know, the anti inflammatory peptides along with also maybe curcumin or boswellia or something like that, that just calms down inflammation and and that's that's, you know, I get so much more traction that way.

– Yeah, and we're doing a lot more of kind of the uh with these patients sick for a while as a syphilitic therapy, you know, getting rid of those bad cells and I'm I'm impressed.

We just, you know, kind of uh started doing it um and it's kind of hot in the bio hacker world, but I think that you're gonna hear a lot more about that in the future, – And I'm curious about that. So you're using a lot of the rapamyosin and and Metformin, those, those type of things or what, what are you?

– Yeah, so mainly you need actually, one big problem is why they're not getting rid of you need high th one right to get rid of them. So we want to raise that first off and then that helps a lot, but kind of a standard protocol is a bed called the stabbing of which is a chemotherapy drug.

So people freak out, but it's really immune modulator and it only, it's selective for senescent cells and senescent cells have a particular mechanism that they're resistant to standard, you know apoptosis that will get along with a polyphony. So like curcumin which is most of the studies but by setting is another one that is more more potent.

And then there's a peptide called Fox O. For de Ri which is selective against senescent cells and but it's very expensive. And so we're working to get that much cheaper and available to everyone an enzyme that doesn't break this down or you have a weakness in this part of your immune system. I lost you on the screen.

But yeah actually if you let me see here, here we go. – Yeah I had a little if you can kind of repeat like after the fox for I mean we we I apologize, it's kinda get disconnected and then started again.

– You know, that's why I couldn't do it at my house, I try to webinar the other night with it and just cut off, it's like it's temporary housing. And so but yeah so with with Fox so for D. R. I.

It selectively will knock out the senescent cells. And the only problem is it's it's very expensive and hard to get. So we're working on ways to get that less expensive and available to the consumer.

– That's that's awesome. Well Dr. Holtorf I mean you are an amazing source of information and and in the area of of you know chronic disease. I mean obviously lime mold all of these things. I mean, you've gone through the journey, you've been there, you've done it yourself and and look at you now. I mean, so you're living proof that what you do works. And then also when it comes to anti aging.

Yeah, you're driving the technology and, and that's really my hats off to you. Everything you're doing. Thank you so much. – Oh, then thank you so much for having me and I, and you know, follow your work and you're doing some amazing things as well and putting on this summit. It's a lot of work.

So I appreciate you getting, getting the word out and honored to be on. So thank you so much. – Thank you so much.