# The Power of Peptides & Cell Danger Response Part 2 Transcript

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Welcome to the Peptide Summit. My name is Doctor Matt Cook, and I'm here with my very good friend. Doctor Eric Gordon. He's the president of Gordon Medical Research and the clinical director of Gordon Medical Associates.

And he's one of the best doctors that I know. He's a deep thinker. He's an amazing person, and he's one of my favorite people to talk to. And so when I, found out that today, actually, I knew that I was talking to him, I just, 100% looking forward to getting into talking about, complex illness, how to think about peptides and how to think of of taking care of really complex, difficult immune problems, be that long-covid be that Lyme disease, be that mold.

And, so let's get into it. Welcome. Welcome to the Peptide Summit. And I'm just totally delighted to have you here, Eric. Well, thank you, thank you. Man, that was a very kind introduction.

I yeah, you're one of my favorite people also just love. Because every time I talk to you, I learn something which is just always fun, you know, because we this world of, you know, I call, you know, the chronic, complex illness is, something that that, you know, is just an amazing, journey.

It's you you learn humility every day. And you get excited every day because, you know, you you bump into people who you can't help. And that makes it really fills you with humility when you realize you've tried and tried and and then you find people who have been sick for years, and you press the right buttons or help them take the right steps and they get better.

And that that's the amazing thing about medicine, I think, and especially the kind of medicine that you and I get to practice, which is, a joy, you know, I feel bad sometimes for the guys who are stuck with them, you know, the cookbook medicine instead of the ability to use your mind and really listen, have the time that we get to listen to our patients.

So it's it's it's amazing. But, but chronic illness for me is, is just really understanding how the immune system has gotten confused, you know, it's I, you know, people often think that their immune systems are broken, and, and they really think, you know, that does exist.

There are people who have deficiencies, you know, in parts of the immune system that are just not strong enough. And that's there. But the vast majority of the people that you and I see where people who are otherwise healthy until a certain age and then one or 2 or 3 events happened and they start getting sick and and then along the way they just stayed sick.

And usually those people, they're not broken, which is the good news. But the system is a little confused. And the model that really helped me understand this was developed by Doctor Novio.

Robert Novio or Bob is he likes to be called amongst his friends. It is, is that of what he named the cell danger response. And and he's he's kind of, you know, made that a little bigger.

Now calling it the health cycle. Because but I predicted but the cell danger response aspect of it, has allowed me to make more sense out of the symptoms and immune dysregulation that we come in contact every day.

And, you know, it's one of those concepts that I can make very confusing because when I first learned it, I learned it by reading his papers and talking with him.

And he's such a font of knowledge about biochemistry that I would try to follow all the details and get thoroughly confused, because I would reach my level of of ignorance.

And, so I have to be careful when I explain it to people because as you well know, the better you know something,

the simpler you can explain it. But so just as an overarching idea, the cell danger response just explains that when your body is confronted with, danger of any kind of stress of any kind, the mitochondria, the, the energy producing aspect of the cell, the mind, the organelle in the cell that we think of is an energy producer.

Also has a takes on its other role of, conductor of the immune response. Okay. And so when, in the cell danger response, it's just not realizing that, there's kind of three phases of what your body does when it is, exposed to danger and it doesn't have to go through all three steps.

When the injury is mild in the everyday stresses of things, it kind of skirts them. But when you have a significant injury, whether it's a cut, a wound or an infection or a toxic exposure, it has to go through these three steps.

First, repairing the, the injured cell weather and also limiting the energy supply for the intruder because usually this was designed to fight viruses.

Probably. And maybe some, prevent the, tying up of toxic, of of, of toxins, especially, you know, some of the things that tie up sulfur groups. Okay. But now we're getting too many details.

Just think of it simply. The mitochondria, they sense that they're not getting as much nutrients as they should be getting. And when that happens, they begin to, turn off.

They turn down the production of ATP. And so, and that way they deprive energy and raw materials to the intruder. I always say it's a little bit like, you know, in the old days you would burn the fields and seal up the castle walls, you know, and that's what happens.

The cells, the cell during that CD are one cell membrane thickens. So you can't things don't get out as easily and new information doesn't get in as easily.

And so that's CD1. CD2 is your being to repair. You begin to build new cells and, at that point the mitochondria are working, but your cell is still pretty dependent on glucose.

And in CD3 the cell is repaired and it begins to really, restore the communication between it and the rest of the and the other cells around it. So, I mean, each one of these things can be very detailed.

And I just this is one, two, three, you know, limit, limit the reproduction of whatever of the intruder, to repair the damage that was done. And three, restore communication between that cell in the body now.

And many diseases happen because parts of our system, parts of our organs get stuck in one of those three places. You know, we can see, you know, heart disease and diabetes happening, when the cell gets stuck in that second place where it's rebuilding.

But it's not restoring full communication. And so you get scarring or just hypertrophy of, of of parts of the organ. So. Okay. So then I'll take that.

So then, so cell danger response A cell is faced with stress. And let's for, for today, we're kind of thinking about immune stress because we're thinking about patients with chronic infections or that or a dysregulated immune dysregulation from chronic infections that may be viral or maybe post viral or maybe bacterial like, things like Lyme disease or long Covid, right.

And so then as a result of that stress, the cells sort of go into a protective mode where they don't make energy. A sufficient layer is usually in the mitochondria attempt to sort of down regulate energy and kind of potentially not not.

And then what could that explain? Symptoms of fatigue, for example? Yes. Oh, absolutely. And that's why when people are really ill, taking more CoQ10 and, creatine and alpha lipoic acid and all those good things don't do much.

And it’s very frustrating. You see a lot of people when they’re really ill, they come in with shopping bags full of supplements, and it’s not changing much now as they get better, those things start to work.

You see a lot of people who are like just a little tired. They take, you know, the CoQ10 and other supplements and they feel better. I mean, this stuff really works, but it only works when your body can actually use it.

And when you’re in that CR one in some and sometimes in CD2, you’re not able to fully make use of these nutrients because the mitochondria have changed their form and their shape and their and their function, and so they’re not broken for a long time.

People in our community look and and many of them still do actually think about the mitochondria as being sick when people have fatigue, but they’re not sick.

They’re they’re acting just like they’re supposed to do. This is their function. Their their function is to limit the raw materials available to the, the virus.

You know, and to get the, to get the nucleus to start producing pro oxidant chemicals because those pro oxidants or what we use to kill bugs to kill other things.

So they’re not bad. They’re only bad when they get stuck. And I think that’s the essence I think the, the, I think actually of all the words that I said, the most important thing for people to realize is that when you’re ill, there are some that most illnesses that developed in our adulthood are not because the system is broken, it’s because it’s stuck in a loop of trying to fix a problem that it can’t.

Quite complete fixing. Okay, but it’s different than that. The organ or the cell is is damaged. It’s often, just stuck reacting to a signal that may or may not be there.

I mean, you know, we were talking just long. Covid is the great example or chronic line, you know, just I mean, chronic Lyme is something that’s been dear to my heart for the last 20 something years, ever since I started really actively treating it.

You know, we’ve had that great debate. Is it do we have to kill the bug or do we have to, you know, detox the body? And or as the, infectious disease doctors like to say, if you’ve kill the bug for a month, you’re done killing.

And you should just. Now you have post Lyme syndrome, which is an auto fuels, an autoimmune disease. Well, I think all of that is true. It just depends on the individual.

And it’s often there in varying degrees. But many times, it’s it’s you know, what we see is that sometimes the bug can be gone, but a piece of the bug can be left in the system.

I hope so. That’s so good, because that’s basically kind of like what’s happening with long Covid. You can have, the virus is gone. The virus is not replicating in the body anymore, but there’s a little spike protein that may be floating around in the body.

Yeah. And it’s interesting because Doctor Bruce Patterson, the fellow who’s, you know, kind of proposed and, this concept of the of the S1 as part of the spike protein being stuck in, in some of our white blood cells.

He’s also done some work that suggests that there’s some glycoprotein from line that gets stuck in the system. And God knows and to be fair, you know, some of the, the, the natural parts that I worked with, you know, early on, actually, you know, Byron White was one of them who, who, who would actually he even developed in his, in his formulas, these, things when he said, you know, you would he would get he would, get the cell to release, you know, the the, particles, you know, I, I, you know, I said I just didn’t understand how he knew this, but he, he was doing these things intuitively.

But but I think he it looks like he was right, because I always wonder why sometimes his remedies 1 or 2 drops

would, like, really flare the system. You know, it couldn't have been the herbs because there was nothing in there.

And it does seem that that's true, that we're left with pieces of, of in proteins or could be, you know, combinations of pieces of these, bacteria and viruses that keep stimulating our immune system.

And the bug is gone, you know, and so but so if we can sometimes get the immune system to relax, acts, it, it can reboot itself. It just, you know, you see, I mean, that was Neil Nathan had a great I mean, that was I have to say that was one of his great phrases is because it really is, is that, you know, just like you unplug your computer and you plug it back in and it starts to work again.

You know, sometimes when we can get the body to change its patter, okay, it can go back to normal. That's why I name my company by our reset. Right. That is.

But if it was like that and, and, you know, we were, we were doing so many stellate ganglion blocks, you know, we were thinking of, like, bio biological reset of the brain.

But anyway, it's a bio, but it's a reset of the immune system. It's a of a reset of neurological physiology. And everything is sort of intimately tied together.

So then, so then imagine. So we go back to this because I want to repeat what you said and then repeat. And then and then kind of continue along this line.

I like it then. So let's say there's an infection, there's some physiological stress. And then as a result of that stress, it can one thing that would be a cell danger response type of thing that would happen is the mitochondria start to pull back.

And then the cell basically goes into a little bit of a dysfunction state because it's reacting against the virus. Now, not only could that happen to an active and inactive viral infection or an an active like Lyme, Borrelia or Bartonella infection, if there was a little bit of the protein of that bacteria or virus that happened to stick around an the immune system, that could also in certain parts of the body or wherever it was being affected, lead to a dysfunctional either cell biology, say, cell danger or a dysfunctional sort of immune system in general.

If some of the cells in the immune system were being affected by that. Yeah, know what kinds of infection? It's this it's this circle. And one thing I just want to see, we all I mean, again, I don't want the words, but you see the cells aren't dysfunctional.

The cell is doing the normal function that it's supposed to do. Because when you get infected with the virus, you want to you want to suddenly switch and you want to deprive the virus of the wrong of, of of nucleotides.

So it can't build its own machinery, you know, so you, you, you, you, it's this is a good response. But I always like to compare things to psychology.

And because, you know, psychology is like Chinese medicine and, you know, the Indian and your Vedic, they have much better stories than we or better ways of putting things because medicine, because we want to know A causes B, we tend to get very linear, which is really useful, but it's you know, but but it's, it's only but it's not good at understanding broad concepts.

It's good at understanding that that you know, when we break the system apart, we can use very linear concepts, a cause B, you know, and that's really great.

But when we're talking about an interactive system with, you know, trillions of interactions happening, then we have to be a little more loose and we have to have story.

Okay. And it doesn't make it less scientific. It just because it makes it more accurate, about what's really happening. So what I'm saying is that, you know, when you learn a behavior, that, you know, anger is the best

example.

Okay? If you learn when you're young to express anger clearly. Okay. You can often get your needs met. Okay? But if you use that tool over and over again for everything, it becomes you have a fairly dysfunctional life.

I mean, you know, angry people. You know, they, they might get what they want, but they don't get what they really want, which is, is, is is friends in love or, you know, like, there's a harshness to their lives.

There's an emptiness. You know, we can all see that when we know people who are angry all the time and, you know, you might like them, but, well, that's what an immune system that is always going after an enemy is like, okay, it's angry all the time now, if you're too passive and just nice to everybody, you know, well, you can be well loved, but you kind of get stomped on a lot.

You know, it's it's being able to have that place where you can be appropriately angry in the moment and then relax and go back to a more normal, you know, easy interaction with the world.

And that's what we want for our immune system. And so that's how I'm going to take that. So then so then imagine there I've got this balance between an immune system.

There's two of this doing nothing and two angry. There's kind of fighting two heart. There is a term that, called immune regulation, immune system regulation.

And it turns out everything that is we think of as good stem cells, certain biologics, peptides, there's all almost all things that are helpful for immune problems.

In some way regulate and balance immune system to tell me tell me about that. Tell me how you think about that. How you put that together. Well, to me, that's why I love those things, you know?

I mean, like, it's, I mean, I, I include, you know, basically, you know, herbs, ozone, exosomes, stem cell, you know, peptides. These are all things that balance the immune system.

They give the immune system enough information and let the immune system then take what it needs to restore balance. Because, is that most of the time it's, you know, when you have immune dysregulation or the dysregulation, the immune system is because, some cell type, you know, whether it's your mast cell or more likely, you know, some T rex cell that's not working like it should.

You know, or, you know, a, a toxin that your body can't get rid of and it keeps pressing the alarm button, you know, because it keeps depriving some group of cells of the information of the nutrient that it needs and that turns on the mitochondria to go.

There's danger here and when that might and see. So I'm going to tell you a little bit more about the CR. One of the, one of the main tenets of the CR is that when the mitochondria senses danger, it starts to put ATP the normal and the the normal, kind of like the gas of your body, you know, the the way you store most of your energy is ATP, and it usually is a very, very minuscule amount on the outside of the cell surface.

It goes up like a million fold when the cell when that mitochondria senses danger, okay. And that is a nonspecific immune activation. That tells your body there's danger that just that signals your immune system at a very basic level.

This is another example of peptides because atps it's a nucleotide. It's not quite a peptide. But these smaller molecules that are nonspecific signals that just.

And then we take our immune system that is a little, you know, to first the innate immune system just goes, you know, danger. And it's designed to recognize like all four legged creatures.

And and so it will it will try to kill you whether you're a cat or a dog. And then the acquired immune system begins to come on and it can begin to, you know, discriminate.

But when you keep releasing ATP, you keep triggering that innate immune system. So in order to get the anger out of your body, you have to find a way to quiet that down.

Okay? And that's where these anti-inflammatory, things such as, as you said, you know, exosomes and the peptides and, you know, just, just, anything, that that has a strong anti-inflammatory signal, you can sometimes it's like, again, I, you know, said going into the myriad details of biochemistry and which we, you know, every time you read about immunology, we keep learning another detail.

Okay. And that's why I said that it's better to think in these over wet, overwhelming stories, okay. Or not, overall overarching stories of like, safety and danger, because that actually gives us more information.

So when we when the system gets, a little bit of information that says, things are safer, and we, we, we kind of get like an immune cell, like, again, when we, when we quiet the mast cell down.

Okay. The mast cells are a great example. You quiet the mast cell down, then the rest of the body quiets down. Okay. And if you do that long enough, it just.

And so it's just like people, you know, when you have a really angry person and you can really relax and, and make them feel safe, okay. They stop causing trouble.

Right? I mean, it's it's so and you know, like when you when you try to explain it through the immunology, you get more and more details and more and more story, which I love.

But it doesn't really, it helps me understand what happens. But when you give somebody exosomes or, you know, or like, Cfpb or, you know, some of the, that or BPC, you know, it's almost, you know, yeah, these are peptides.

It's nice to know we can read about the research that shows, well, you know, maybe Cfpb might have some effect on lowering TNF alpha or something like, you know, some some obscure molecule.

Okay. But at the end of the day, what we have to understand is that the system quiets down, okay. Because the explanation, is nice to understand, but it's still only partial explanation.

It's just that we have to get it. The body is in constant balance. And when you do a stellar ganglia, amigos riff on one thing you said before, like we do the stellate ganglion block, you know, you quieting the sympathetic nervous system.

And that quiets the immune system because it's one big bag of information. They're all talking to each other. And so that's what we have to keep in mind when we deal with chronic illness, is that don't get hung up on having to fix one thing.

You know, you influence one system, and then you see how if the body goes along with you. And that's why there are so many different therapies that work.

You know, everybody always wants the one therapy that's going to make them better. And the beauty is that, you know, I'm sure there is the disease that needs the one therapy.

But many times, if you can quiet down one aspect of the immune system and make the body feel a little safe, I mean, that's where, you know, we're, for some people, prayer and meditation or just being in a, in a quiet environment begins to allow healing.

You know, and for other people, that's not going to work. You know, it doesn't mean that being in a quiet environment, in a healing environment doesn't help you heal.

Okay, perfect. So then now I'm going to tie this together, and I'm going to take us down into a little bit of a journey into, this thing called serve.

And so and, and and you've been at this longer than anybody else that I know. And then I'm going to agree with you on almost everything. So then that's what I could and, we'll talk about this.

So the and and if and I think this is all going to come together. But imagine that somebody may have gotten exposed to a water damaged building and then they had mold.

And then that mold causes inflammation in the central nervous system that, and call that topic one. Another thing that could happen. Topic two is that maybe you got bit by a tick, and then you can either have a little bit of the remnants of that bacteria.

The classic one is Barella, or maybe you still have that bacteria living in your body. It's a stealth infection. They can live inside of cells or Bartonella or maybe Epstein-Barr.

So there's a whole bunch of different infections that we've been taking care of for a long time. And these have been challenging infections for people because once they, sort of take hold and have their effect on the body, the body goes into this angry immune system state.

And the end to cell danger response is one way of describing that angry immune system. Another way of describing that angry immune system is serves. And so then maybe and, and and I think that fundamentally it could be Lyme disease, it could be mold.

And so we can talk about the biology a little bit of that. Tell me about sirs and how you think about it. And then we're going to go into some of the interesting testing and epigenetics around that.

Well, the interesting thing, I mean, sirs, I mean, you know, it's been around for a while. I mean, I always think that this is Richie Shoemaker's, you know, concept, even though I am sure other people have like, oh, great ideas.

They come from many, areas. And, and Richie is somebody who, I feel has done immense. I mean, for myself personally, he really opened my eyes to, just so many pieces of of of immunology and how the body works.

I, I have great and great respect for Richie, but, and what I with the chronic inflammatory response syndrome. I mean, that is just another way of talking about the CDR.

I mean, because they're all basically we're just looking through slightly different lenses, you know, and, I, I sometimes, I think, would argue that many of the things that he calls that label sirs, sirs, are what happens when you are stuck in that CDR CD2.

But that's that, that's, you know, just playing back and forth. So, you know, and Richie came from the world of of Michael talks of Michael, of toxins.

Okay. Of of biologic toxins. His first experience was with cyanobacteria. And that's how he came up with, the brilliant idea of Kostya. I mean, in the by and I mean, you know, natural, passive use binders for a long time, but but Richie was the one who really, like, pushed it forward, you know, big and, you know, serendipitous.

I mean, this is what makes, Well, I have great, great respect for his mind. Is that that serendipitous realized, that realization that he treated somebody for diarrhea, and he gave them Kostya, meaning to bind to, which can stop diarrhea.

And it cleared their mind, and he went, oh, my God, this isn't you know what's going on here? And he can't do it. He got so over the years he expanded this concept and he started to really work with initially with a lot of mold.

And, now he's expanded it to act, you know, that, you know, by, you know, bacteria that, you know, mostly

atomics. You know, so it's bacteria as well as mold, water damage, building are his common theme that these critters, which are ubiquitous in the environment, overgrow when we give them, you know, plasterboard and water or basically, you know, any, any, carbohydrate source, you know, like wood and water sitting will we'll get a lot of critters to grow and they produce, you know, normally in the environment these are background levels.

But when they get concentrated they start to affect people and especially sensitive people. And, one of the things that that I believe is that most of us are able to deal with most of the actual bacteria, toxins and the mycotoxins, unless we have something else that has screwed up our system and has changed our immune system.

And that's often, in my mind, Lyme or some other chronic bacterial infection. But, you know, that may or may not be true, but that seems to be that that's one of the reasons why I think, I don't I over the years I've always done shoemaker doctor, shoemakers testing, but I've always disagreed with him on what it means because he or he often felt that his biomarkers for the chronic inflammatory response syndrome in the early days were reflective of mold.

And to my mind, that's where we I know they were just markers that your innate immune system is pissed off. Okay. You know, when you're, he would measure, you know, your for a your tumor necrosis your TGF beta one not to you know MSA MMP nine.

These are all alphabet soup of like, you know, of your, your immunology. How would you define innate immune system for somebody who's first listening to this?

Okay. Well, the innate immune system is your first is the immune system that activates when you that first three days, or especially in that first three days of infection or injury, or in the first few hours of injury, that involved your neutrophils.

Like I said, this is an immune system that I said, meaning that recognizes patterns, okay, of danger. It's not specific. It doesn't know if you're dealing with, you know, you know, Lyme or, or like influenza or Covid, you know, it just knows that there that the cell is infected with something that's using its energy and the cell signals that it's in danger, and the neutrophil will come and kill that cell.

Okay. It's very, very primitive but very effective without the innate immune system. Were dead. You know, acquired immune system. You can have deficiencies in and missing parts of and, you know, you might get a lot of sinus infections, but you do.

Okay. You know, you kind of kvetch along there. So the innate immune system is, is just your first response, okay. Your acquired immune system takes usually a few days to get going.

And that's why we give people vaccines to touch it. Interesting subject is because the vaccines, train our immune system. So when we see the infection, we already know that it's X, you know, it's Joe.

It's not just anybody, you know? Okay. So anyway, so what Doctor Shoemaker did with the chronic inflammatory response syndrome is that he started to see that.

Well, that these were, you know, nonspecific, immune markers, but they're often related to water damage, building exposure for a while. They run rampant in people.

And in my experience, the water damage building aspect or the mold exposure, whether it be, you know, is a component of what's going on. And that's where we different over the years because Doctor Shoemaker really his idea was that line.

If you treated line for three weeks with antibiotics, it was gone. And, you know, the the IgG tests were just too sensitive and were inaccurate and blah, blah, blah, blah. And, his current, you know, people who I really respect, many of them still believe that.

And I just think that that's what happens when you, don't treat enough people with this, you know, because, you know, if you're just treating the if you, you know, the serious treatments, the, the pyramid that they have for treating Sias, is very, very nice.

But if you don't know how to deal with the infections as well, or with the mast cell issue, you know, you it's it's everything for most people now, there's luckily there's a lot of people who if they, just follow, you know, this year's protocol will improve and will get better.

I mean, okay, so so then this is a good one. And so then if I was to kind of contextualize that within your the story that you said, then certain triggers can come in and it's trigger could be an immune conversation or it could be an emotional conversation.

We could trigger certain things happened that we didn't want to happen. And so then a trigger could trigger the immune system into being kind of angry.

And then when that happens, then there's a whole kinds of consequences of that. One of one of, the things that could trigger could be any of the, the we call them vector borne infections.

So takes, Bartonella, borelli, all of those things that are in the Lyme category. So and now water damage building could be mold, could be of mice. These could be gram negative rods is probably a little bit of all of those, viral things.

Could be things like Epstein-Barr and CMV could be long Covid. And you know, we're hearing more people say, oh, you know, long Covid kind of begins to look like serious.

And then I think for people like you and me, it's almost like that angry immune system walks in the door and I started realizing, boy, you know, the long Covid patients look just like all the the patients that we've been taking care of for the last ten years.

Yeah, yeah. And and no, absolutely, they look the same. And that's why I so appreciate Doctor Patterson's work because he he gave us some new tools. I mean that no, that was what I really appreciate is because by identifying that the fact that these monocytes, which are a white blood cell that can just for people that in the bloodstream are monocytes, the same cell continued tissue is called a macrophage.

Welcome to why immunologists should be shot because and you just biology we have we have three names for everything. Because everything was usually discovered by different people at different times given the same name, until we figure out that it was the same thing.

But we never we never go back to one name. It just depends on what we, you know, what group you belong to. So anyway, sorry that. But so so then, so then, so then here we go.

We've got this cell. This is a cell in the immune system called a monocyte. And then so then that monocyte, let's say that person had Covid, that monocytes can be one of the white blood cells.

This is going to go to the lungs or the sinuses or wherever it is. And it's going to start an immune response to trying to fight that viral infection.

Also, if you got vaccinated, that monocyte might come over and pick up some of that spike protein as part of generating an immune response to the vaccine.

And so then whether that monocyte picked up some S1 protein in your, in your airway or whether it picked it up from the vaccine, then now that monocytes got a hold on to that, that protein.

And so there's this theory that Doctor Patterson, that, that, that monocyte becomes inflammatory. And then, is part of the angry immune system that's like a new video game.

Yeah. Yeah. Well, it's then, you know, again, that monocyte, you know, should do that, but it's supposed to go away. So this is the whole point is that these cells like should have limited lifespan.

The failure to die in this in the body is like you know, and what the extreme is cancer. But chronic inflammation, artery diseases are the other example of cells and cells that don't die when they're supposed to, you know, are, you know what?

I've been thinking a lot about this, you know, a lot of our chronically ill people have very high, Epstein-Barr, you know, a high six CMV. All these, you know, herpes family viruses that that have very high genes.

They stay forever, you know, I mean, we're supposed to have low levels of these hanging around. So we do recognize the bug when we see it again, and we don't get sick.

We just go, oh, it's there, and we can knock off the few cells that have it and go on. But, you know, people who stay chronically ill have very high levels of these, and immunoglobulins are, inflammatory.

They, they, they help set off other cells. So, so I think that's, that's that that's part of this long standing issue. But getting back to the long-covid people, you know, those those what he the the the insight that Doctor Patterson has given us that, you know, when it's a monocyte involved and we don't know how many other, chronic infections, have this mechanism.

I mean, that's the that's the issues. But we always wind up with, like we learn a new mechanism and we think it's in everybody. You know, we don't know, how many other chronic, you know, like he, he has worked in the past on dengue.

That's what got him into this. So, so maybe chronic dengue is the same thing. You've got this monocyte that is holding on to a piece of protein that it it should have destroyed.

It should have either destroyed the protein or the monocyte itself should have died, in which case the protein would have gotten, you know, gotten rid of as well.

And the rest of us do fine. You know, everybody else, you know, because, no, I mean, God knows how many hundred million Americans have had been vaccinated or have had Covid by now.

You know, and most of us don't have this problem, you know, so when things are working well, this doesn't happen. It's a failure to self-regulate. It's a failure for that monocyte to get the signal to die, you know, and, and and that's where, I'm tying this into the this whole story of persistent noise.

I mean, this is why people get mast cell activation, okay? Is because you have a persistent immune irritant that keeps turning on the mast cells. And after a while, you probably develop clones of mast cells that are now hyper vigilant.

Okay. Because like, just just to talk about the mast cells for a minute, I mean, cause that's a big issue. I mean, like, you know, I always say every few years we learn something new, you know, I remember like, you know, it was all lime then it was all babka and it was all Bartonella, you know, and then we were.

But we were at the meeting. I was sitting with you at the meeting when he gave the lecture on mast cell. Remember at the last meeting say that. Yeah, yeah, yeah.

Nobody knew. Nobody knew about it at that time. Yeah. Well, well, I mean, Doctor Afrin, I mean, I knew about it early because, again, I learned everything from my patients.

I had a very, very smart patient who, you know, she had migraines and severe Gerd. And she got scoped and she actually had, you know, even the, the, the, they found this was, you know, because the elevated, mast cells in her sausages, in her sandwiches and she quickly, right after that found Doctor Ephron's book and sent it to me.

And suddenly I went, oh, my God, made so much sense, you know, I mean, like, I've been treating all these people with migraines, with Gerd, with with irritable bowel and with, interstitial cystitis, you know, and like, his point is, when you see people with 4 or 5 diseases, maybe they don't have 4 or 5 different diseases, maybe they've got one thing that what we had to teach Doctor Afrin was that these persistent because he thought these just happened, you know, I mean, I had dinner with him many years ago when he was when he first started teaching this stuff and, and he, he was this happens.

And I tell know it's happening because these people have chronic infections. And it took him a few years before he came around. Today he's a regular doc and he's a brilliant regular doctor.

So he thinks. But it took him a while to get that. Yeah. If you keep bombarding the immune system with noise okay. Which is what a chronic infection does, it keeps it keeps telling your body that you're in danger.

And I said, this is the pneumonic. This is what Covid has done to so many. I just one of my one little rant and I'll shut up. But Covid has done this to so many of my patients and I hate it.

Is that Covid is bad, no question about it. But I've had so many people who are now living in utter fear, which is the last thing that, an already upregulated immune system needs is to be in constant fear.

And we have done that. And I think it's just a terrible disservice because, you know, if you're 40 years old, then even if you've got chronic inflammatory illness, you're probably, I my experiences, you're not dying from Covid, okay?

I haven't lost any patients to Covid, you know, because we can treat them. That's another dirty secret. There are lots of treatments for Covid, but the point is they're not dying.

They're not, you know, hypertensive, older people dying who were dying. Not now. They're not even dying, thank God. So it's just fear is such a driver of the immune system.

And I just beg people to, like, please don't fall into that place because. Right. No, I like it. It's the kind of. And it's there's a bimodal distribution on the fear, too, because it's enjoyable for me to kind of meet some of the people that met that the don't have any fear which and, and, and it's kind of entertaining.

We don't we, we see less of that in California. Yes. Unfortunately it is. But but so then so then I'm going to take you on this, Marcus. And what I wanted to do is kind of talk through a handful of these things.

Then we're going to then kind of think about a little bit about testing and a little bit about therapy. So then. People can get these infections. And so we've been talking about them and there's a host of different ones.

And it's basically the, the obvious ones that affect people. And then as a result of that there are these cells and these cells, these mass cells talk me through.

So when they get and so then we talked about the angry immune system. So then I'm going to kind of keep going on this theme. So then suddenly there's this angry mast cell.

And if that mast cell it's this immune cell gets too angry then it it will do something. I'm going to let you say what that is. And then and then it turns out there's a bunch of normal medication that, that people have heard of.

Both. And some of those are going to be just regular medicine that you can get at Walgreens and CVS and then another one. Then we also use some peptides for this, but to try to deal with the fact that these cells are angry and a little bit overactive.

But tell me about what that is and why infections do that to people. Well, first of all, the mast cell was it is was our first immune cell. When you got a multicellular organism that finally reached a point that it actually had an immune system because, the mast cell was the first of the immune cells before you had, you know, lymphocytes and T cells

and B cells, mast cells came first.

Okay. Because of that, they talked to almost everything else in the body. You know, we we thought of mast cells, decided as just something that had to do with allergy.

You know, when when I first got into this, it was like, you know, at Marcel's big deal. You know, rashes, hives, you know, you know, because they release histamine, right?

They release histamine. But the problem is they release about a thousand other chemicals as well. And they so they have myriad effects on people. And but they turn on everything now, so that's why they can produce.

That's why the mast cell and depending on, and this is what makes this whole chronic illness thing so crazy, is that depending on your genetics and how your put together, you know, your cells go off and you just might get migraines, you know, while the other person is going to get, you know, is going to get rashes and going to get a tight rope.

But some people don't get the add in, like the tight throat stuff. They just get diarrhea. You know, it depends on which system is a little more hair trigger in other ways.

Where is your immune system a little more upregulated. You know, that's why, you know, when you get yeah, you know, you can get more, joint issues so you can get more gut issues.

It just depends on how you're put together. So, but getting this mast cell quieted down, it's like, you know, it's like getting the drunk at the end of the party, you know, it all is down towards, you know, you get rid of the one crazy, rowdy person, and everybody else goes back to more or less normal conversation.

They stopped yelling and screaming because they have to talk over the crazy person or drunk person. And so then what would be kind of give me your top three sort of over-the-counter type of medications.

And then why do they help, a mast for mast cells that are overactive. Well, what we, the top three or the are just basically, you know, the antihistamines, the and we have h eight, you know, b h2 blockers are the, ones that, you know, you know, like the, you know, the Benadryl and, and the h twos are like, you know, the Pepcid, you know, Tagamet, one are the other, you know, basically any of the, any of the, the first generation of antacids, more of that first, first and second generation of antacids, you know, and then I prefer, you know, Zyrtec.

I like in Alegra or if people have money, I think it's Zazzle or levo tourism. I actually learned how to say that. One of the things about medicine is we have generic names which are usually unpronounceable, but make doctors feel much more scientific.

But, it's the right hand levo. It's the left handed version of, Claritin. Claire, you know, like, most chemicals come in a left hand or a right handed version.

And so, and version, and it, it seems to have some really nice anti-inflammatory, you know, better anti-inflammatory effects, except, unfortunately, it's a little expensive.

So Zyrtec is probably my favorite for just starting off simply. But people who are very sensitive need to get these compounds. I, you know, it's it it's it's easiest to start with the cheap stuff, but it's you react to these and if you react to two of them, it's a good thing reacting to the fillers, you know, in the capsules and not the chemicals, themselves, you know, not 100%, but that's a pretty good guess.

So, okay, good. So I'm in a I'm a positive there. So then what else? So imagine somebody made a garden garden Covid and their immune system is angry. Or they might have gotten, a bit by a tick and their immune system was angry.

Or they might live in an apartment like I did that had more than it. And then their immune system got angry. So

anyone any of these things can cause the immune system to get angry?

And then that primordial original immune cell, I got to activate it. And then that can kind of get that part of the immune system can get stuck active.

And so then people can have symptoms that are kind of mast cell symptoms. And probably these were nebulous things that we weren't even paying attention to. But also maybe our environment is more toxic and so more people are having it.

And then maybe more people are having infections. Certainly now. And so then as a result of that, there are just so then what happened is this. And people started giving these over-the-counter H1 and H2 blockers that are kind of histamine blockers.

They kind of calmed down that so and so sometimes like people are certain foods. Then once that those mast cells get triggered now all of a sudden certain foods.

So like for example, meat that has like leftover meat that's been left out for a day can be a big trigger. So there's a variety of triggers. And and so then let's somebody might come and see you.

And then you would give them one of these medicines which can be very helpful for people. And there's a whole bunch of protocols around just call me down mast cell.

Now then another thing that I could do is we could try to calm those mast cells down with peptides like what's what? Tom, tell me about your thoughts on, kind of that side of the equation.

Yeah. Well, again, you know, and embarrassingly, I haven't looked I haven't really done a deep dive on the literature directly related at mast cells. But they work on cells.

I mean, they work because the, you know, the whole system is in communication. Mast cells are are aggravated often because other, cytokines, these are the chemicals that white that immune cells release to tell each other to come to the area or to reproduce, get released.

And a lot of these cytokines, you know, and mast cells are very sensitive to these cytokines. So, and that's where we use things like, I really like the Cfpb and the TB.

Frank. TV for Frank, because, you know, the Cfpb is a derivative, is a piece of something called MSH, melanocytes stimulating hormone. Okay. And melanocytes stimulate hormones.

Really cool thing. Obviously it does stimulate your you will get tan if you take melanocytes stimulating hormone. But unfortunately the FDA took it off the markets.

Oh 20 I don't know a long time ago the effect because the the gynecologists were using it for a while. I forget what, but it was I think it was helpful for endometriosis, but it could be could be wrong there.

But my mind, I'm not. It's a long time ago. I'm not sure about that. But anyway, it was used. I think was also used to help regulate cycles, you know, women's cycles.

But for some reason, the FDA took it off the market. There was no danger. But I think they didn't have enough studies. And, then we had something called melatonin two, which is a derivative of MSH that also caused you to tan. And, give erections as well.

There there is in fact, another derivative. MSH is a medicine for women's, libido, which men also use. Anyways goes down there's all different 41. Yeah.

You keep breaking these chemicals down and you get active things. Well K bv is a very small part of the MSH, but

it seems to have a very powerful effect on the immune system.

Okay. Very nice immune modulator. And it does help quiet mast cells. Yeah. Okay. And the same thing with the thymus and data for frag again the holes if you use the TB 500 like the bigger piece of thymus in data, you can actually stimulate your mast cells a little bit.

But by using the fragment we just give the quieting signals to the immune system. And that's what most people need. Because I said it's very rarely a failure to kill that keeps well in chronic illness.

I mean, it could be a failure to eradicate. But usually if we can get the immune, you know, again, to make an analogy, if you're, a trained fighter, you throw the appropriate punch, okay?

If you're untrained or just angry, you just flail. And I think that's what the immune system is doing with many of our people. It's flailing, okay. Because when you quiet all when you get the mast cells quieter and you get you when you use some of these, modulators to quiet the immune system, then all of a sudden the infection is is often controlled.

Okay. So that people understand we're not using immune suppressors, we're using modulation. So the, the the cell that they need to do the job can do it effectively rather than throwing everything out there.

And the signals get confused. You know. And right. So then so then at at high at a high level, go back to the story and then, you know, a story is everything a story because the story at the beginning there was the story and and and but then within that story is the secrets of, of of wisdom, around how to how to get over something and get through something.

And I think that, you taught me this. Yeah. This is going to be something that you taught me, which is best when, when when someone first comes with this angry immune system, there's so many things going on.

Because if the mast cells are active, they might be active in 5 or 10 places. If there's if there's a neurological infection, there might be 8 or 9 things going on related to that.

If you can begin to mitigate some of those symptoms, it clears the water a little bit and allows you to see what's going on. But all of a sudden people start to feel better.

And so then the what and and and and having a way to kind of describe and talk about things and process things as is because I call you and ask you questions and, and also and then to talk to patients and be able to talk and guide them through the story.

Then to go back to the specific example and I'll give you another one. If your immune system's angry and it's reacting to everything, it is kind of like you're sitting there throwing punches, but they're probably none of them are going to land you that Cfpb and those peptides that regulate that side of the immune system, suddenly you feel better.

Go back to so the insurer responds. What I found is you give somebody some other mitochondrial peptides and start to get them making energy again, or maybe stacked that with other things like nad suddenly if they're if they're actually making energy, they feel good.

And so then we're, we're I would say a third of, of complex illness is regulating the immune system. And then so getting people sort of both psychically, psychologically, spiritually metabolomic calm and then spinning up energy so that there's efficiency of energy production.

And then those two things dramatically change the trajectory of of what it feels like to have a big problem. Yeah. And that was really important. What you what you said there is that it's the order in which you do it is that if you don't begin to calm the system a little bit, if you try to throw people with high energy stuff right off again, if they're if they're just overworked, you know, if they're just, you know, stressed and like, you know, they got a cold and they,

their immune system went off a little bit.

But basically everything is working okay. That can sometimes push them through. But if they've been sick for a while and you really are stuck in in either cell or whatever you want to call it, the cell danger response or, Sears, you know, you got to take some of the fire down before you restore the energy or it's.

So I've got a humbling story to tell you about that. This is unfortunately, another thing that I learned from you so that when I'm very, I want to tell you, because I learned I mean, the reason we talk is I learned a lot coming.

You know, your stories are always helpful to me for the next day because. Yeah, it's. And, you know, it's interesting because you're like, you know, it's kind of like an who wants to be a millionaire?

Oh, I'm going to call my lifeline, you know? And I have kind of 8 or 10 people who are my lifelines that I call. Yeah. And you're so you're one of those. But. So then, you know, we both have done a lot of I. V.

therapy for a long time. And so then, when, we were early, some of the first people, doing NAB therapy and nab is, derivative of vitamin B3, but it's kind of like currency in the body that can stimulate immune function and it can stimulate mitochondrial function.

DNA repair does all these things. And, and, we like to give it as a part of our strategy of spinning up those mitochondria and getting energy. But, you know, some friends of mine used to, if you call the shot, if you got a shot of Nadh, they used to call it best day ever, because you would have energy and feel good and stuff like that.

And so then I remember, I, I was I was teaching you about it, and then you called me the next week and said, oh, guess what? You can't give nad first to really sick people because then and, and that was a really and that's an important insight because it turns out if you give that too much stimulation, while there's a lot of angry inflammation going on, at the same time that in a fragile person can be much, too much.

Yeah. So the sequencing is crucially important. And I just wanted to echo that. Yeah. Yeah. You know, I mean I learned all this stuff because, when I first came to California in 98, I, I inherited a bunch of patients from this fellow that, wonderful doctor, doctor Jasmine Anderson, who had, been specializing in, multiple chemical sensitivities and things of that sort.

And so, and he unfortunately got disabled from chemical exposure and, but and so I walked into these people who made no sense to anything I'd ever seen before, you know, they couldn't do anything.

I mean, I was it was like I and so I learned quickly that, Yeah. Don't. Yeah. Step lightly. Step very lightly. And, you know, and and then as I continued, you know, rolling into, the really complex Lyme patients because, again, we, we had them because Doctor Anderson, when he joined me, Wayne Anderson, he had been treating Lyme for almost ten years already, like under the tutelage of, of Joe Burson over the phone.

And so we had all these. But what happened is that when he came to join me, he came along with all these patients who hadn't got better. You know, because again, we keep learning and that's like, hey, my great sadness is I know how many people I saw in the early 2000s in 2010 and even probably three years ago that I didn't help, that I now know something that might help, you know.

Right, right. But it's, you know, but unfortunately, you know, you know, we're, you know, it costs a lot of money to see us. So, like, when we're wrong, it's an expensive it's expensive learning process for us.

And the patient, especially for the patients. And I just wish that we could I someday I think we should do this. Have a Rolodex of, like, you know, the people who I didn't help, and I could go back and go, oh, wait a minute, I got it. Now, however, I have this kind of, like, Grateful Dead.

Like like the idea with the Grateful Dead in their, music was that they shared people would just share tips and they gave away their music. Right. And what I'm trying to do is give away knowledge and talk about this because, you

know, if you think of it, over the course of time, we were at the lecture where mast cell activation got sort of presented to the medical community, like, now we're actually giving you things that you can you can take there's, there's supplements that you can take.

There's these medications you can take, there's peptides. And then what I think is going to happen is, is and there's such a community based sort of approach that as these ideas sort of come into, more clarity of understanding among people, then suddenly the, the sequencing and the, the ability to kind of work their way through it is going to it's going to come this the message is a big one.

And interestingly, there's the theory that MSH actually is important in regulating mucosal barriers. So then people that have low MSH are more susceptible to infections and their sinuses, which could be a place where there could be a biofilm and to, to leaky gut.

But then, in terms of, in terms of thinking about MSH and sort of the reason why serous causes low MSH, what what are your thoughts on that? Well, you know, I think I can only tell you what, you know, I learned from Doctor Shoemaker years ago, and I have to admit, he might have new teachings, you know, but in the old days, he he felt that, the low MSH and low VIP was related to, the more cons, the, multiply resistant, but mostly the methicillin resistant, staff in the nose.

And, that created a hemolysis in a chemical that would break, that would break down these compounds that would split them up and destroy them. I don't really know.

You know, again, I think that was his concept. I don't know if that's his current thinking. But it definitely seems to work. And that was, you know, I think why he left VIP, which was the one that you can still get, I mean, over the not that over-the-counter prescription, the nasal therapy with vaso active intestinal peptides, which works very similar to MSH, in, in many areas. It's interesting.

It also has anti-parasitic effects. It also protects the mucous membrane. It also, has very positive effects on the gut, any inflammation anywhere. You know, if you have, anybody with the fibro, lung disease, you know, inhaled the it will help.

But anyway, that being said, he he that's why his pyramid, in a way when we doctor, he was like, saying the same thing. I am that you have to be careful.

You have to do things in an orderly fashion, more or less. It's just that his pyramid is much more structured. Well, he's just a much more structured person.

I, as you figured out by now, and not very a, you know, a little. I see the whole and the. And I haven't always followed his his teachings. I've, I've often, you know, used interventions at different times than, than he does.

And I think you can I think you might not get as excellent results if you don't do it, you know, in his order. But many times we're looking, as you say, just to put the fire out a little bit.

So that person gets some respite and begins to get hope. Because, you know, just like when you do the stellate ganglion block, you are removing some sympathetic drive and let the system kind of like take a breath.

Well, hope that you can get possibly get better, that this isn't your life forever is the same thing. And so when we when we give somebody something that reduces the inflammation and lets them have a better day, it we can restore hope.

And that can trigger so many physiologic events. So I'm sorry I lost your question, Renee, but yeah, so okay, so then, let me so then I'm going to give you this one.

I think you probably agree with me and but I'll be curious. And so then if you and and often we're having one conversation as an analogy to another conversation and then sometimes that, that, that the and this is a so mold is

a good one because mold we think is related to surface.

And so then if, if we can talk about mold as sort of at a strategic high level, and then we understood a sequence of therapy, then as an analogy, then we can begin to compare that to our thoughts of other things like long-covid and stuff like that.

So that my, my idea, my idea on, on mold is, is that one thing that happens is that somebody gets exposed to mold and they may have this, this biofilm on their nose called mark ons, and then that can cause, and then the mycotoxins and, act a mix, can, can cause inflammation systemically that gets into the brain.

And then as a result of that can cause inflammation around the optic nerves, which is why the that test, called the visual contrast sensitivity, starts to go off.

And then the immune system gets angry, kind of goes back to what we were talking about before. And then the genetic system can kind of get angry as a result of that.

So we've been doing, this test, the geni test, which will look and, and begin to show that as a result of that immune system being angry that we start to print more an inflammatory side of our genome because we're kind of getting mobilized, kind of to go have a big fight with this thing that, this, that, that has triggered and, and created stress for us.

Now, then and then as a result of that, that can actually then cause a whole bunch of downstream aspects of our immune system to go haywire. One of those would be mast cell activation.

And then another one of them could be that, our ability to regulate the balance between fight or flight and rest and relax kind of goes haywire. And so then when people stand up, their their blood vessels can't squeeze appropriately to keep their blood pressure normal.

So they get lightheaded and pass out, which is called pods. So then these are sort of some of the things that happen now. Then as we think about sequencing and then as we think about taking care of these patients, then what I'm gonna suggest is that long Covid is going to be somewhat they have a lot of overlap with that story that I just told.

It's not 100%, but many patients will behave like that then. Now traditionally in the mold conversation, what we did is so that story that you told, oh boy, they took a binder and then all of a sudden their brain got better.

So the idea would be to take binders and kind of fixed any infections in the nose, and then at the end do something that would regulate broadly the inflammation of that, a genetic level.

And, and probably at many other levels for T regulatory cells, all these other things take the IP and it would calm things down, but you couldn't do it too soon.

So people would always wait. Now I want to hear your opinion. What we found is, is that the bio regulator peptides, you can give them much earlier and people start to feel better sooner.

And so then suddenly and then you know, the Cfpb, which is a segment of MSH, which is this, which is this molecule that's too low. And these patients. So we start to give them, anti-inflammatory, immunomodulatory and immuno regulating peptides, both at a brain level and at a blood vessel level.

So I, you know, I, I, I like penicillin, I like cordage, and I like a Patel and I like best agen, which is the one for the blood vessels. And what I found is, is that constellation sort of calms people down and we get them feeling better then we start to kind of spin up mitochondria and get them feeling even better, and then start to layer and things like VAP.

So then suddenly it's not this long saga of waiting. And then what I think is, is that if you think of that as sort of a

framework, many of these other kind of chronic infections could well, well behave quite well to algorithms like that.

And then we could layer in other theories. But what do you think about that? Well, I, I you know, I have to say, you know, we're seeing the same thing and, it's doctor, you know, Doctor Papaya who really led the way on that because, you know, I was kind of hesitant with the oral peptides initially, you know, like, you know, you know, they're expensive and don't want to give them.

And you got to take and she, you know, just had an intuition about them and went gung ho. And that's exactly what we saw, is that you could add them in early on.

And they they allowed everything else to function better because that's it. Once you know, this is the point, you know, whether we call it CEUs or, you know, I mean, because it said that what you're seeing in the gene when that transcriptomics like looking at how much RNA you're making, and what that happens because you're, you know, you're mitochondria, sent to signals.

Well, this is where I won't go into that argument again. But you know what came first? Chicken a b a you know, it's just that the signaling for chronic inflammation is, is on.

And if you can change that signal, everything else is possible. Okay. And that's what these peptides do. And I think, I, I just love your story that, that I think is that is the way I am really think that maybe I have never asked Richie why he I think he he was waiting because he really felt that you had to deal with the more cons and, I don't know why and but but all or maybe the VIP just doesn't, does it?

But but by itself. But using this combination of peptides really does set the stage and allow you then to get the patient to the next levels, which before this we were walking was a lot harder to do.

You know, I used to call it pick up sticks. And by using the peptides, we've gotten rid of some of the trickiest of the pick up sticks. You know, we've gotten places where we can be much more like you say, you can be much quicker to then start adding things in to help increase energy.

Right. And so then, just so to give a little information away for people who are, who are listening to this and thinking about this, violin as a bio regulator for the spleen, thymus.

So we like that one for these patients. And, and I like that, I like that is at a milligram a day. And almost all of the bio regulators, people can take a milligram a day, and there tend to be low, they, they tend to be small peptides.

And so they tend not to create big reactions. We and then we like, we like vestige and, especially for people with pots, we like, cardiogenic and Piniella and also and and then we like cardiogenic also for people with pots, but and so then, we'll, we'll put sort of combinations of those together and.

Yeah, the, the, you know, Doctor Kevin son, who is, you know, one of the great, I would say, doctors in the world. Has, has used the bio regulator peptides as an injectable, but he also has some orally.

I'm actually taking them, and I really like taking them. And, and and so then they isolated them as extracts from, from, organically raised animals. And so then the idea would be that these, these are small molecules and all of the best peptides to me are these small peptides.

K is the connective tissue peptide, right. The small and kb. So suddenly there's a whole bunch of tools that we begin to have some of them oral, some of them injectable that, that that you can get away with giving to these sick patients.

And, you know, it's amazing when you find something that you can get away with giving to them. And interesting. They haven't since been given these to people for 30 years with very good results.

And anytime you can get away with doing something for a long time, that is a signal to me that that's probably a

good thing for sick people, and it's probably a good thing for healthy people, which is probably an idea we share.

Yeah, yeah. Oh yeah. Because I mean, I you know, I know you've done a lot of work in the, the, the, you know, anti-aging but regenerative medicine world.

And what I've always seen is a way is that anything that works for my really sick people is usually good medicine in different doses for people who want to stay healthy.

And. Yeah, right. It's like we're, we're we're seeing where the healthy people are going to wind up in one little aspect. And but one of the one of the peptides, I just want to throw in there that BPC topical is something like I sometimes mixed with the GCC, but sometimes just by itself, because one of those retinol, one of those like, sci codes that we see with mast cells is people with, you know, the various levels of, you know, neck instabilities or just, you know, the chronic cervical instability stuff.

And you have some really interesting ideas on that, which, hopefully you'll talk about with their time. But, so many people who have severe this autonomia do have issues with lax ligaments, and lax ligaments get lax when we have chronic inflammation.

So 100%, you know, it's around and around. And if you can lower the chronic inflammation through the use of peptides, those lax ligaments will tighten up a little bit.

And those autonomic sort of no nomic symptoms will diminish a little bit. Sometimes a lot. So it's it's nice to have what I call virtuous cycle. So, you know, things that we can go in there and start to fix.

And then again, the beauty of the body is that it heals, you know? I mean, like when I was a kid, I was I was a very short time. I was an auto mechanic in the front, you know, on me, you know, if you don't do it right, it doesn't work.

The beauty of the body is you just got to get close. And and we have this inherent healing mechanisms that if we don't screw them up too badly, people get better and we just have to allow.

And that's the beauty of the peptides and especially the ones that you mentioned, like the supporting organ function, you know, in a very gentle manner is, is, is sounds just like, you know, what the doctor ordered for getting getting people to the next step.

And then as they, you know, we should wrap it up. But as a, as sort of a conversation, this the trajectory sort of conversation of where to go. And then as we begin to think of these long Covid, and some of these challenges, what we've seen and, you know, I had a great talk with one of Paterson's doctors, and, and basically we went through and there's going to be a bimodal or tri modal distribution within long Covid.

And so then so for example, with the when that monocyte gets triggered, then and it has that spike protein. And one thing you could do is take up an Aids drug.

This is called a Ccr5 antagonist which will kind of regulate that. And they combine that with a statin which kind of calms down the inflammation in the vascular system.

And so then that's one, one idea of taking care of Covid vaccine injuries and then also taking care of long Covid, right. And there's some issues with that medication.

There's a black box warning because it had, some liver failure, but that was in people that had hepatitis C, who are Aids patients who are pretty sick.

And there's a hard time teasing that out. The, and but then I've had that be extreme helpful for some people, but not for everyone. And so then we've had peptides be extremely helpful for some people, but not everyone.

Okay. And then, you know, another thing that, you're you're, we're recording this now. By the time this goes live,

you're going to be doing the same plasmapheresis in your office, right?

We do. And so, Erica, as a as an amazing doctor, and if you want to go see him and kind of participate, one of the one of the things that we do is we do this thing.

Plasmapheresis, where, we run your blood through a plasma separator. When we pull some of the plasma off. And then what that does is that pulls inflammation and toxicity out of the body and, and gives the immune system by detoxing it a chance to kind of regulate and come out of that kind of angry immune system.

Situation or just, you know, again, it goes back to, thinking more and more about these excessive number of, antibodies that sick people tend to have, and they are a constant immune, they're noise, like I said, they're just noise and noise.

And then this is the body doesn't like noise. It's listening very closely to to a hum. And when there's noise in there. You start getting dysregulation and that noise.

And so then the antibodies are all floating around in the plasma. Which is why when what was taking some of them out kind of calms down that noise. Yeah.

And so then at a high level and what I my goal and I think we did it today was to sort of talk with you talk through some of the big immune challenges of the day.

Recognize that at a genetic level, at a blood testing level, and at a symptom level, we have fairly good ways of, of beginning to kind of think about and talk about these problems.

And then we've got a diversity of ways that we begin to regulate and calm down that immune system, peptides being one of them. But even over-the-counter medications and, then sophisticated medical procedures that we do.

But then knowing, knowing that within that then, you know, there's a, there's a song called, a song for you. It was, old Leon Russell song. Yeah. That's right. Yeah.

So Willie Nelson did it in rituals and, and he says, if the, if the melody doesn't come through, my love is in there hiding. This is kind of is an idea. Yeah.

And so then our love is, is is, I would say in here in this story, in this I think it's our story today is a hopeful story that there's there's there's hope on the horizon.

And and actually it's kind of here today. Yeah. No it is I said we're you know, we have the invasive and the simple. And you know, we just keep trying to find more of the simple.

But, you know, we saved the the more invasive things for when people really need it. But it's just it's just to have that palette that we never had before, you know.

And it's really growing and it's just very, very exciting that, we have so many more abilities to help people. Now, unfortunately, if we could just stop the toxic vacation off the planet, maybe we would need so many skill sets.

Treatments. But, that because of that vacation, I think we'll be in business for a long time. Stuff, unfortunately. But then I bet. But, hopefully everybody could live in a beautiful place.

I love that background. Like a healthy. You're the. You're in a healthy environment. I, I love you, and I'm grateful to have you in my life. And, thank you for for being on the podcast.

And we're going to have to do a lot more of this, pleasure. And I said next time. And we love to keep one. We'll keep you on one track. That will be an amazing event.

Thank you. Matt, that was perfect. Thank you so much. Okay.