Repair, Regulate, Restore: A Roadmap For Inflammation Control Through Peptides Transcript

(Transcripts are generated by AI and may contain errors)

Introduction and inflammation as the root issue

Jim Lavalle. Welcome to the bio regulator and peptide Summit. It is a true pleasure to finally meet you. It's been an innovation. I've been an enigma. Yeah, you've been an enigma.

I mean, I've just I keep here. I have a frustrating enigma, right? Yeah. Yeah, I talk to Jim Lavalle. I'm like, I'd love to know. Hey. So finally we meet.

So it's a pleasure to meet you. And, today we're going to, we're going to kind of take a bit of a winding road, but one of the I think the what's going to drive our conversation, aside from this whole topic of peptides and by regulators, which, right, everybody's listening to this finds fascinating, is really around this space of inflammation as the source and really like where it all begins, whether it's whether we're talking about aging or we're talking about metabolic dysfunction or we're talking about injuries or neurodegenerative disease, it all boils down to how hot is the fire burning?

Exactly. That's exactly it. You know, at that old, that old adage, you know, metaphor, summation leads to inflame aging, right? I couldn't make it up better than the the tier one journals cited it that right that that's what everybody in all the clinical literature they've pinned it.

Right. And I think the biggest thing that people fail to understand is that you know, inflammation is there to create homeostasis. Right. Yes. It's there to turn off whatever the source was.

Well the problem is now we've got too many sources. You know, people may be exposed to things environmentally or it's stress or it's their diet or lack of sleep or, you know, for what, you know, for whatever reason, too many text messages not answering your email.

There's so much stress. It's out there though, right. And and I think that metabolic stress, you know, and I and I and it's interesting, I first wrote about this in a book called Cracking the Metabolic Code back in 2002.

I have that book. Oh, good. Yeah. I mean, I ended up selling a lot of copies because I think it was one of the first books that started talking about this system of systems of fact, and that when you trigger metabolic inflammation and when you think about peptides, I, you know, so one of the early signs of, of metabolic inflammation is obviously you get fat act or lipids being made.

So that's let's put that in one box. And then you start to decrease growth hormone production. So as people get under metabolic stress their cortisol goes up.

They trigger less growth hormone releasing hormone. And they trigger less Canada open releasing hormone. Right. So that those are signals that are peptides that you you can actually help get back on line to get people back to homeostasis.

Right. But so that first step is people become sarcopenia. So like you know they lose a muscle. Yeah. What's interesting about now is, is they don't think about that growth hormone releasing hormone peace.

And then they get on a GLP one and they wonder why they're losing 30 to 40% of their weight and muscle. Which is by the way, what a medical weight loss program does.

It's identical to a medical weight loss program. Now if we use some things intelligently, you don't have to lose. You don't have to lose that muscle. But that is going to include going to the gym.

It is going to include exercising it. There is no secret I have not found exercise in a bottle yet. I'm trying so hard I can't find it, you know? And here's the thing.

Like, I mean, when we talk about memetics, like exercise, memetics, there's a physical reality to to actually moving the parts of your body that that builds functional muscle, which builds that tissue that is going to allow you, when you're 95 years old, to stand up out of your chair without needing to use your upper body to do that.

That is going to give you the flexibility to trip over a sidewalk and catch yourself, instead of face plunging like nothing. There is no pill, no peptide, no nothing that can possibly replace that.

So what I would love to help people to release right now is the idea that there's a pill, or a potion or a peptide that's going to replace exercise like exercise.

You know what, guys? Look at it as a gift. Look at it as I get to move my body right and I get to experience this versus all the people that are walking around the walking wounded who are either in pain or injured or sorry, I said I wasn't going to rant and I'm ranting, but I think I really believe that.

What? Yeah, I know, I know anyway, but but but the point being inflammation. The point being the the the. And not to mention the fact the role that healthy muscle tissue plays.

Yeah. The mind managing inflammation. Right. Yeah. And the other pieces as it progresses.

Metabolic stress, muscle loss, and peptide signaling

So you kind of want to think of people you're either going down the funnel or you're staying at the top and at the bottom of the funnel with some kind of chronic illness or debility.

Right, and bone loss. It's, you know, a neurologic disorder, cardio metabolic disorder, colitis, whatever. Yeah. So you get through that, that, that, loss of growth hormone, which means you're going to not hold on to muscle.

The next step is you start to lose your ability to make ferritin. Well, why is that important? Well, because your iron to ferritin ratio gets off when you're metabolically inflamed.

The inflammation that your immune system is pushing out doesn't allow you to store iron. So you don't make pharaoh portant and you don't make fair to.

Now let's we're going to keep going down this lens of why peptides matter. That means that you're not going to be able to get the thyroid hormone T3 to attach to the cell.

When you don't have ferritin and drive mitochondrial function. So all of us are all about oh I'm going to use this peptide for the mitochondria I might have.

Right I get it I'm into that I love mitochondria I could talk about mitochondria all day but but the issue is, well, if you're not fixing why they're compromised to begin with right.

This inflammation signal. So as we go down this cellular journey what's the next step. Well, the next step is why we've had the GLP one revolution, or I would say pandemic for of, of use in many cases inappropriate use.

But as your, as you're flying all this inflammation around this is why GLP one work by the way lower inflammation. So we should we should know like well if you're we're talking about peptides how do they work and why did you get here.

You have to have one anyway. Yeah. So so then you're making more TNF alpha which you know post-Covid people know TNF alpha. It's an inflammatory cytokine.

More interleukin six IL six more toll receptor four. And that one's a little higher. But that's not told receptor like this. No no. But when you do that you turn off your insulin receptors.

So your insulin receptors it's called ERS one, insulin receptor substrate one insulin receptor substrate two. They get turned off. So your body's got to make more insulin.

And over time you start to overproduce glucagon. And now your body is a position of storing fat not being able to burn fat because you know your mitochondrial function is compromised.

And typically you're catabolic. You're not be able to hold on to muscle. And that brings us to the next category of what we can do with it. Because we're going to have peptides for all this. Right.

And people move through this through their time in their life. Oh wait a second. That inflammatory chemistry I'm losing bone and my cartilage and ligaments are getting broken down.

Yeah. And it's not just a small, silver haired, blue eyed Caucasian woman anymore with osteoporosis. She got men by the age of 40. They have low testosterone.

They've been on pills for 20 years because, you know, they couldn't stop eating nachos with the K, so dip on it, right? Oh, well, I guess only if you're having a problem with that.

But but the reality is inappropriate eating right leads to Gerd. You take the med now, you can't. You can't absorb protein when you're on that drug. Yeah.

So when we wonder why we're at this crash and then let's go to the really last two phases to this because peptides play a role in all of it. The next phase is you start to lose neuroplasticity.

Yeah. And you don't you're not creating new neurons, right? You're not busting new neurons because the inflammation blocks the progenitor cells a little right after the stem cell there's the progenitor cell, the imp, the cortisol and the neuroinflammation block that neuron from getting to grow.

And now I've got what I call pushing a thought through Jello syndrome. Right. I ask people that all the time. You know, I was like, do you feel like you're pushing a through jello?

And there are answer. It's amazing. Answers like this. Yeah. Yeah, yeah. It's slow now. They're cognitively foggy. They're cloudy. Right. That's because we're losing neuronal vigilance because of microglial activation in the brain.

And that's where things like cell like C Max, you know, of course, the popular one that I yet to see it get into the country and I hope it will at some point.

No it's terrible license. Incredible. Right. So there's so then there's that and then there's the final drop in the funnel, the loss of mitochondrial vigilance when you've broken down and created so much inflammation that the mitochondria break or breaking down, you lose your Nadia to Nadia ratio.

Oh no. Oh my gosh. So I inject energy. Should I do an hour. Should I do an a man. Should I do m0 USC no, wait, wait. That's Disneyland. Never mind. But, but the point being is we lose mitochondrial capacity and and that starting that force is coming from a lot of different regions.

By that point, low thyroid insulin resistance, the inflammation signaling. Maybe you're on medications that are damaging the mitochondria. Right. There's all that going on.

And so why is the peptide revolution kind of finally taking hold. It's because we're trying to fix this stuff. And trying to put we're trying to get another set of tools in the toolbox.

Right. That can help people at a deeper level. I would still say that people a lot of times reach for for peptides as a

bandaid on a bullet hole. 100%.

And I think I want to I'm that's what I, you know, because at this point people are sitting there listening to this going okay just describe me, I'm going to go find the nearest bridge and jump off.

So you go down so you can reverse it all. Don't despair. And it's not it's not all grind. You know what guys? You have to do your part. But what we're going to talk about is where do the peptides fit in.

What are the peptides that you can use right now. Because we're this was the other topic we were going to talk about today is what's the current state of affairs with peptides.

Inflammation cascade: ferritin, insulin resistance, and mitochondrial decline

Because it's right people. Every three days there's a new message that comes to them. Right. And so we've got the injectable peptides where, you know, a lot of clinicians have had some, including you I'm sure have had tremendous success with injectable peptides.

The FDA has gotten super nervous about them and so has like slammed on the brakes, which is upsetting to a lot of people. Sure. Including clinicians, frankly, that we're having such success with their patients.

Just as a point, we had over a million. So we went to the PCA committee. You know, the basically the FDA's meeting for pharmacy compounding on peptides and we had collected over a million prescriptions from nine compounding pharmacies without as one severe adverse event reported.

And we were just presenting what clinicians are using these successfully. You're going to you're we're going to take away something that was helping their patients.

Yeah a really interesting topic on that. So you're right there was a little bit of a there's there was a hiccup. I, I'm very hopeful that the hiccups going to go away.

I feel like the information because I do know I am as the chair of the International Peptide Society, obviously written a couple books on peptides, that are really more, I think, for consumers.

But a lot of doctor buyer, is, is that I think there's just got to be a middle ground that comes an area where we've got a little more some guardrails.

You got to have some guardrails. I mean, guardrails are bad. Yeah. And and you know, it was this plethora of, you know, and I don't want to I want to I don't want to be a party crasher, but it's the, I am a clinical pharmacist initially and learn compounding, and I teach for compounding.

You know, it's there is an elegance to making those for human use. And rules that guarantee safety. And I think people miss that point of, you know, it's safety first.

It has to be. Yeah. Yeah. And so you know so the you know, where are we at now. I think we're at the crossroads I think we had this tremendous freedom freedom got ranked back.

And I think then we're going to get some freedom back again. And I'm and I'm really encouraged by that. And everything I've heard says that. So I think that it's going to be really, you know. Right.

I think it's gonna be a phenomenal next year. Good. So for when they come back. Yeah. Let's talk about the role. Yeah. Let's go CVS and the like I mean you've mentioned growth hormone.

That's the growth hormone secreted Gog world. We've mentioned inflammation. That's where k-p-d BPC 157 even something like thymus and alpha one. Right.

You can thymus in beta four like these are really powerful TB five GB five TB 5062506. So that was the BPC 157 standard that everybody got crazy about, right?

Yeah. That's where that came from somewhere. Yeah. Over there. Over here to the left or the right however it's showing up. So let's talk about about where these will fill in and I'm and I would love us if we have time to touch on when did the mitochondrial peptides come in?

For when the day they come in. Could they come out? Because what I'm seeing is a lot of people will jump. Oh yeah. Like Motsi and I keep trying to say to people, guys, if your engine's not tuned up, all you're doing is running an engine that's not running properly and you're going to damn, you're going to do more damage than good.

So let's talk a little bit about this order of operations. That means we've kind of introduced concepts. And I'm so happy that you said that, because what I find continually in kind of the and this new world of biohacking and, you know, I have people come in and, you know, I've got clinics, I have physicians, nurses, dietitians.

We're a team. It's been now and and my practice know all the way back from in Ohio. We you know, big institute 3 to 400 people a week. Right. We're always working as a team.

People jump to step three before they get step one done. So when you're when you're looking at your body and trying to rebuild, there's some very simple constructs that you have to think about in order to say, for example, get rolling on, hey, I'm going to do something for my mitochondria.

Yeah, you know, so, you know, one thing isn't a peptide. It's, you know, you probably need to do some phospholipids. You know, you know, things, you know, like phosphate title, colon phosphate title ethanol I mean first title serine just to repair the cell membrane so it can accept the signal.

Because if you've got all that inflammation your cells are pretty darn damaged up. So you want to you want to repair that. So I love that thought of phospholipids.

The other thing is is you get identify. Well, what could be triggering the inflammation in you. Like where could it be. Right. Yeah. People talk about root cause and I'm, I'm, I guess I'm a root causes.

I'm a I'm a believer that people have a lot of different inputs. Probably one of the big inputs is stress and sleep. And then the other input is, you know, exposure, things like glyphosate and then, if you've been if you're like me, 65 years old, when I grew up, I thought of moxie.

So and bubble gum flavored was a part of my meal plan. I mean, I was on some of the antibiotics. I thought that grape flavored dimetapp man at night. And I was just.

Yeah, I love that. I love that grape flavored dimetapp. Basically, I grew up with, you know, living on antibiotics, having to take allergy shots. So I had a lot of immune dysregulation.

So when I talk to people about where they begin, it's about where is your. Because when you have immune dysregulation and your gut gets permeable and your nervous system, the nervous system connecting to get to the brain is not in balance.

It's hard to really get any footing on a person's chemistry. Now, it's one thing if you know you're 55 years old and you need a hormone because you've run out of hormones because of your age, right?

You're able to buy identical hormone replacement. Or you could use try using kispert. Then if you're if you are perimenopausal or almost Sandra Postel back in the day.

But I think things like why BPC so important. Why KP v is it KP vs three amino acids. It's a little bit baby by a it's a little baby thing. It's an unwritten unrecognized by a regulator.

Just like GCC is. Exactly. Well let's talk about those three to just do that. Yeah. Let's just talk about BPC, GCC and what was the KP PPV. Yeah. Like what about VIP?

We're talking about VIP. All right. Yeah. So let's do those three for starters. And why do I love KP v which basically is a by regulator. It's what it is.

And we'll talk about that right. It's because of its ability to help regulate. But you know, this is what we're doing. Homeostasis TNF alpha release inflammatory cytokine release out of the intestine.

So when you read about it you know, you see all these biologics on TV, right? Enbrel and all that kind of stuff. It's kind of working like that. But you don't you don't build resistance to it because it's not foreign to you.

Yeah. And that's what's kind of interesting about KP v. And I really like that peptide, because most of the people I see they're in chronic inflammation.

Like if one over two people in this country are either insulin resistant or already diabetic, one out of two people have inflammation. Yeah. Before you even get to the people with colitis.

And when I was going to say then the other one of the one out of the two people that aren't metabolically imbalanced, they have inflammation because of a different reason.

So yes, exactly. So okay. So so so KP v for me is just this great, solution for people to help them regulate inflammation signaling, especially given the fact that most people have their their guts are broken down.

They probably have improper bile acid release. Right. So those bile acids are eroding the mucosal barrier and causing the tight junctions to break up.

Right. So you get that whole, you know, bile acid imbalance going on. So KP v to me is pretty important because it kind of keeps the fire dampened while I'm trying to heal.

And how are you going to heal? Well, you know, you do have to think about because your guts got permeable. There's the whole issue of food sensitivity, right?

So people start reacting to foods when they didn't used to. So what are the why do I like PPC? I find that when people used PPC and remember this is when I wrote my book.

I wrote my books because I thought, you know what? Even if Bpcl's gone for a while, it's going to be back. I'm sure it is. And people need to know about this stuff.

Gut healing peptides: KPV, BPC-157, and Larazotide

And of course, people are using all BPC and and the so the the point being is PPC really helps with that mucosal barrier. So that you get protection on those epithelial cells of your intestine that have eroded and the tight junctions are broken.

And now bacteria is getting through there. That's called bacterial translocation. And that makes your immune system get mad. And then peptides from food get through there.

And it triggers antigen presenting cells. Antigen presenting cells creates an allergy. And so that's really bad. And so you want you want BP. It's like PPC I always love because it accelerated my time of gut healing.

You know me doing this 40 years ago because I was doing it 40 years ago. It's like, oh yeah, we're going to give relic acid. We got to give Cats Crawl.

We got to get probiotics, got to give glutamine. Hey, we're got to do aloe. You know, it's like all the natural

compounds, you know, all all the things it takes, at least that we would do.

But the thing I noticed over these 40 years was that gatherer gut just kept getting more and more banged up. It was harder and harder to get them over that and get back to homeostasis.

When the peptides came around, that really helped that acceleration. The other one that's really interesting from that is La Raza tied. I was going to bring it up.

I'm like, yeah, I mean I know it's not three letters, but what about the rest of La Raza Tide? That's like a new car or a great meal. I'll take the La Raza Tide.

Right. It's, no la Raza Tide is important because, you know, phase three trials, and it was still designed initially, for people that that had incidental gluten exposure if they had celiac.

And if you, if you know anybody with celiac, if they get an incidental exposure, it could throw them off for a week to two weeks. Yeah. I mean, pain, foggy headedness.

I mean, it's very bad. And, it turned out that this was pretty effective at helping the most severe, compromised immunologic response to a food. And it did it because it helped the down regulate Zanten.

And it turns out it's a compound that gets released. It's in the intestine, that either by infection or by by stress, anything, it makes it get more leaky.

So lower as the tide closes the tight junction. So you got you so you've got designing and keeps the tight junctions open. So all the bacteria, all that stuff go flowing through there.

La Raza Thai goes now we're going to close it back up. So then. So it's a great triple when you when people are out looking at it they always talk about La Raza, Thai, Cfpb and BPC together.

So let's get that through. Right I'm closing up the junction, I'm building back the barrier. And I'm retraining the body not to release so much TNF alpha.

Yeah. So that's a nice combo right. It's a beautiful thing I have a question for you. Is La Raza Tide naturally occurring in the body because because they don't all naturally occur in the body.

Yeah. There's I would say that it's close right. Like a lot of them are. Yeah. Okay. We're close. Yeah. And then of course you mentioned one of my favorite copper peptide GHQ because what we find is people get metabolically inflamed.

Right. And you turn on your HLA gene snaps and you go towards autoimmunity. Right. You start that change your epigenetics. Right? Yeah. You create more if you turn genes on or turn genes off that don't belong there, right on or off.

And so the problem then is, well, how do I get them back. So that's is you got to work through your inflammation cycle and get rid of all the layers of crud that you have in your body.

Okay, fine. But what's cool about copper peptide is it is a genomic stabilizer. Yes. It's good for collagen. Yes. It's actually quite interesting because it's a copper peptide protecting against Candida.

Yeah. Yes. It's you know, so has a little bit of an antimicrobial effect which is very interesting. But I think one of the most fascinating things about it nobody talks about is it's a genomic stabilizer.

It helps to keep your genes like intact for a thousand genes. Yeah, it's 4000. And you couldn't even think about it like you can't. We couldn't even yeah.

You can't come up with that many things and it just does it. Exactly. So I love and wide and here's the thing. So I just did a talk I actually just did a talk for I do a lot of teaching with so.

Com so the dietitians and the docs for Special Forces and we were just talking about this because you don't realize it is the guts eroding. And you've got this inflammatory signaling you're getting a change in your epigenetic expression of the tissues there.

And that's where the colitis is come in. And the Crohn's comes in. And and you start to get this erosion right. And because they're, they're rapidly replaced tissues.

Right. So they're yeah they're terrible rates quick. Yeah. Yeah. So and of course, you think of like I said, we think of glutamine and all those good fun things.

But I think when you have the peptides at your disposal, that creates a lot of, of just incredible benefit to accelerate the healing signaling process.

And, you know, I think that, you know, once again, you know, we think of peptides and you hear the word and you go anti-aging. I'm going, yeah, well yeah.

But why? Yeah. Well, because it's protecting you. All of these peptides have different roles in protecting the integrity of your cell to cell communication, as well as the integrity of the tissues.

You're only as strong as your weakest organ, right? Yeah. So so let's so now we're going to move on from there. Well actually before like because I think before we've even moved on from this quadra of peptides because it was going to be the triad, but it's the quadra because we threw in the tide unexpectedly.

You were thinking it, I was thinking but with BPC and Gchq, I think what's really interesting is when we and and even with Cfpb honestly because yes, they are incredibly tactical to the gut which affects everything else.

Sure they also have systemic anti-inflammatory and regenerative properties. So maybe we can before we move on because I I'm with you I'm like okay. And then there's the mental health stuff.

And so let's talk about see like consumer action all the things. But before we do that sure. While all this is happening and I think this is this is what this is the magic of peptides that gets people so excited is they're so player tropic.

They don't necessarily stay in that one place where you think you have a problem. They are going to affect other. Once they've taken once your body's like the way I think of it is the body has a checklist of priorities, and the top of the list is what's going to kill this person first.

And right. Whether you agree with that's the thing, you know, that's not that's the first thing that's going to get dealt with. The exact right and probably gut health for a lot of people is at the top of the list.

It's not your sore back, it's not your bum shoulder. Right. It's not the skin that's wrinkling body could give a shit about your wrinkly skin. It's like your skin. Whatever.

Yeah, but once we've dealt with that first offense or once it's had, you know, maybe it's used the resources it needs for the guy, we are going to get kind of satellite benefits from these things.

Maybe we want to talk about that a little bit. Yeah, absolutely. That was use the analogy. What if you're a circuit breaker box and you know, you're you've blown these circuits because of for whatever reason, right.

The reason for the inflammation, the first job of the of a peptide is to go out to the garage, flip on a circuit breaker, because you know what? You could be in your house that that circuit breaker that's blown on and you could turn that light on 100 times and you'll go, wow, I wonder if it's I wonder if it's unplugged.

I think I'll, I'll plug it in and out. Yeah. Oh, well, that didn't do it. I wonder if it's an old bulb. I think I'm going to put a new bulb in it. That wasn't it.

It's it's you. You've got to heal in a hierarchy. But to your point, I and I've always thought of that way. And so, you know, BPC is interesting because known as body protection compound, it has a lot of different to your point using that term atrophic, which I love.

It has a lot of different, signaling capacity. So from connective tissue to bone, to helping with repair of neurotransmitter vesicles, even, it's that it's that repair, you know, things that are damaged get repaired and I and that's why I've been you know, I think that BPC but you know, it's interesting about BPC, honestly.

Tell me about this. For me. How come it have so many benefits and literally hundreds of thousands of people will attest to it, including physicians that have used it for their patients.

Right. Hundreds and hundreds of thousands will attest to it, the lack of human studies on it. Tell me what you explain this to me. That's what I'm saying.

It's like, how can we not have studied this more and have all this obvious benefit when we're around this? Right. So that that was to me, was it still is a conundrum for me because I think it's one of the most important.

You know, I know where my, my son at all is from injury, which is basically, you know, you tear ligaments in your foot and in football can be career ending injury. It takes about a year and a half to get over.

Well, we use this is back eight years ago. We use peptides. He went in for his surgery. Well first we used the peptides. They couldn't find the tear. What they had to do seven they had to do seven sets of MRI's on his foot to find the tear.

And it was significant. But the inflammation was out of it already and it just the tissues just laid back down. Right. So so they had a surgery. And typically with that surgery you get what's called sausage foot.

It's really bad. Your foot it blows up. It's a pretty significant surgery. Sounds off. He had no inflammation because the doc the author pod dropped peptides in put some stem cells in the area and then put us on a regiment.

When he got injured, we were giving him for those 48 hours before we got to the MRI peptides, you know, and he ended up healing. In five months. He was able to he was able to spin, not just heal, but spin on that foot that was affected.

Now he won the California State discus championship. Amazing. Five months after the injury. And that's what got me. So BPC, I think, we've all had these this experience of connective tissue wonderment, stress fractures that don't want to heal.

Right. Yeah. Yeah. Right. I mean, so it does have that global signaling that's incredibly important. And I think the is like I said, if you you have genes and all your body and obviously collagen is really important as we get old, we don't synthesize our collagen as well or we our college it's more friable.

Right. And we thin out our basement membranes. Right. So copper peptide helps to build that back up. Right. So and I just want to say for the audience like don't just think of collagen for, for what you see.

Collagen for your heart for your lungs, for every for the connective tissue in your body, for every organ needs collagen and elastin, both of which are upregulated.

Exactly. And that's and as you said, and the gut like GCS, is really, really beneficial for gut healing. Again, like all of these tissues that are bound together.

But GPC and BPC also have a mental component to it. Just saying to your lytic, which I only like, you know, is one

of those things.

Copper peptide, tissue repair, and BPC-157 effects

And I think BPC also, every time you go piling into the literature, you come up with another little, yeah, it's another good thing I look right. I just found something, you know, this, but can you do you have any theories about BPC 157 and why?

Like you just said something really interesting that it heals with the neurotransmitter vesicles or it has a beneficial effect on them. And yet I know that you've probably heard of these people who use BPC 157, and they either stop experiencing emotion or they get depressed or they get I have one guy who's like, my my dog hides under the bed if I'm using BPC because I get really angry, which is a paradox.

Seems like a paradoxical reaction. Do you have any theories about why that could be happening? I don't really have a theory on it. I think it is paradoxical.

You know, I think, you know, we just don't know enough about neurotransmitters because we can't crack people's heads open and see what's going on while it's happening.

Now, imaging is certainly coming a long way. I mean, we had done studies at least looking at, you know, a cell calling the glutamate ratios and those kind of things, you know, that you can do with a tracer that I think more than likely, you know, it's that, going to step three before step one.

Right? I think more than likely there's something it's occurring that way where, you know, the body was, you know, it's not ready for that signal. And that's probably what happened.

Or it's paradoxical. So yeah. And I don't see that as much. You know copper peptide other than it hurts a little bit. Right. And so I don't see that at all. Yeah.

You don't see anything with that. No. And even with BPC it's I know for me it's pretty rare. Oh it is it, it's it's like, you know, it's reported but it's pretty rare.

You know, versus like the secreted dogs were a fair amount of people will get a little bit of a histamine will or a little rash. And you got to watch that if it, if it's getting bigger every time, you probably should get off of it.

So let's talk about that. So let's talk about the secreted dogs because they do they come into the conversation about reducing inflammation and up regulating healing because BPC what does it do.

It upregulate the expression of growth hormone receptors, which by the way, if you happen to have more growth hormone around you're going to heal faster, which is super cool.

So let's maybe, you know, as we're going to try to cover some ground for people here, let's talk a little bit about the role of these growth hormone secreted dogs and what they are.

Well I mean there is several that were out previously. You know, one of the most I think interesting ones was Tessa morel. And Tessa Moreland was really interesting.

Now that's a biologic because there's too many amino acids long. So you know, you're not really. So is it off the peptide. It's off peptide developed as a drug though for people who were having HIV therapy.

And yeah. Yeah. So it's a I think it's 42 amino acids long. It's out. It's out past the that the limit of peptides now arbitrarily set. What's the new limit.

Because I thought it was anything under 50 I think it's like 40 or less I mean it could be in there goes there goes I'm is in beta four because that's 43 amino acids.

And I think, I think that that's where the legislative changes will occur where they're going to okay. You're probably going to see like Tb4 good. You obviously got to 11 now, which is a different thymic peptide than to one that probably will even pass as a it's by a regulator.

You know, it'll pass to 11, will pass as a bio regulator. It'll be an oral that you can do really. But but so is getting back to this secreted guides.

You know right now Somalian is, you know probably the most readily available secreted guy. Yes. And and then you know it from Maryland and CJC. So but Maryland CJC also some are working on growth hormone releasing worms, some are working on the ghrelin receptor.

When you combine the two, you get a little extra push on your growth hormone. So why are they important? I'll tell you why I use some Moran. I'm not using it because, oh, you're going to lean out.

You're going to look like you're on growth hormone. No. Yeah. You're for brows going to start to grow. Are you sure you want that? Yeah. It's, you know, it's not that.

It's the fact that if I give it to an old person. Wait a second. I can't say that I'm old. If I give it to an older person, we're raising the definition of old to 70 plus.

Oh. Do that. Gosh, I got it. Now. She's. We are five years in five years yet? Yes. So, anyway, they sleep better. Why do they sleep better? Because it's helping to restore circadian rhythm.

Right. That's it's one thing that that signal for growth hormone releasing at night all of a sudden is helping with the master slave clock. Beautiful super charismatic nucleus restoration.

We love that because when that's restored the signal to all your other organ systems on what to do, when to do it happens. The other piece that's important is that it's what gets shut down when you're under allostatic load.

So when you flatten your cortisol curve right when your cortisol is too high or you flatten your curve, which is even worse. Right. Because once you flatten your cortisol curve 333% increase your risk of cardiometabolic disease, neurologic disorders and mood disorders.

Right? That's not good. So, you know, you want to use something to restore the HPR axis hypothalamus pituitary adrenal axis. And so getting sur morale and on board or a growth hormone secreted ECoG is going to help with that repair of Alo stasis.

Right. Alo stasis is your body's ability to react to stress and recover from stress. Right. Shake it off like inflammation. No. No inflammation stress. No stress under sustained duress, like inflammation, psychogenic stress whatever you get allostatic load.

And allostatic load is when your brain no longer operates like it should. It either fails to respond or it gets stuck in over response. Yeah. So now you start making too much cortisol and now you're not getting your growth hormone release anymore.

And so people hear the term adrenal fatigue. Yeah. And that's a great marketing term. It's not a medical term. It's great marketing term. It's descriptive I get it.

But what it's really going on and why the secreted guys are so important is that under allostatic load the hypothalamus pituitary. They're not saying what you're supposed to say.

The rest of the body, that circuit breaker box is broke. And that secreted guy helps to bring that back. And that's part of the process of repairing from allostatic load, where your body is no longer in sync on how it should be releasing its hormones.

That's why I like secreted guys. They have a little bit of an immune, you know, response to them, which is good, right? It's favorable. It's good for healing.

Like you said, you have growth hormone receptors in those tissues. You if you you get that growth hormone going, you're going to stimulate that repair that much better.

That's great. Obviously they have a metabolic effect. You burn fat a little bit better. So if people are wanting to use them for fat loss, they that's the people that are doing them three times a day.

I'm not a big, I'm not big on that. You know, as we talked before we got on, I'm really big on people figuring out what do you need today?

Growth hormone secretagogues and stress recovery

And how long do you need to take it. Yeah. Right. So actually that's a really good once we're done with the growth hormone secreted because I'd love us to talk you know as we're going to finish up.

Yeah. Let's talk about cycling and appropriate cycles. And how do you know how long to go and how do you know when to stop. And how do you know when to start again.

So let's finish up on the growth hormone secreted them. Yeah. The other one on growth hormone secreted guys. It's real simple. When you repair the HPA axis there's something called the HPP a t axis.

Right. Yeah. Hypothalamic pituitary adrenal thyroid axis. And then there's the hp a g axis. Gonadal. Right. So when people have high cortisol and they're not making sex hormones what do they do.

They run to get hormones. What should they do. Run to repair their brain. Yeah. And then depending how old you are you may have to re kickstart that. So using things like what was being used the peptide kiss peptide was used to retool the signal to either the ovaries or to the latex cells of the testicles.

Right. Yeah. And which was very interesting. Or foxo for another peptide which helps to clean up old, lady cells that aren't functioning. And yet the other ones moving again. Right? Yeah.

So so was once secreted guys are much more than oh I mean growth hormone. And that's the youth hormone. It's actually necessary for longevity so that you repair your alpha status.

Now the younger you are once you repair that probably don't need to be on it. The older you are, you may chronically need to be on it more frequently, like, hey, I'm going to be on it three months and off for a month because when you're older, by default you make plenty of growth hormone, but you don't get the signal anymore.

Just just by aging. Just thought the aspect of age we get older and that's why people sleep better on it. That's why their lean mass gets better on it.

If there's someone in there years above us. Now, so when you're in your 60s and 70s, you know, even from 60, even in the 50s, 50s aren't. Yeah. Well, I mean, I think we're seeing a lot of this happening in 50s and sometimes even in people's 40s.

I mean, I think there's. Oh, yeah. On testosterone replacement who are in their 30s now. And I think it's huge mistake. Part of it. I mean, it's a big mistake, but part of it is just the, you know, the onslaught of stressors that are hitting people, without a doubt, just they just can't manage.

Right. And greed and whether it's environmental or, or, as you had said earlier, like just social media work, family like what's happening in that know it is the world right now.

Like it all just piles on and then you tack on an unhealthy diet and it's just like this. The system's going, you know

what? I'm checking out a lot. And all the medications people are on and medications are a big one.

Polypharmacy is huge for this. Yeah. For for shutting down functions. Right. And once again, medication saved people's lives. Medications can be very beneficial for people as part of their plan to stay alive.

But the issue it's anything. Yeah. If you don't do if you're someone is not going to do anything for your health. What medications are your future like?

People would say, well, if you go off of GLP one you gain all your weight back. Well, if you didn't exercise, you'd take in protein. You didn't look at yourself and say, what else do I need to do to correct my health?

Yeah, it's just like if you were on blood pressure medication and you went off of it. Yeah. Same answer would be, well, your blood pressure is just going to go off up.

If you're if you're off the medication. Well of course you don't lose weight. You didn't exercise. And I'm not being critical that my brother was 476 pounds.

I love people of all sizes. Yeah. Unfortunately, my brother also died young. Yeah. So, I mean, I'm very I'm very compassionate as it relates to people of all sizes, all problems.

Because I lived in a family like that. Yeah, they all have problems with their health. And I think it's what drove me to be doing what I do. Right. So anyway, now we're going to get on to this other piece to it, which is you asked an important question about, well, when do you start working on the mitochondria.

Kind of depends. Like if you're a Covid long hauler or you got surge, you may have to work on your mitochondria a little earlier. Yeah. And I think you got to do a little bit of mitochondrial fuel.

It's one thing just to give something like moxie or SS 31. Right. But things like nicotinamide ribose side and Co Q10 and PCU, pyro Quinlan quinone or benefiting men that help that the generation of that.

And you just got to remember mitochondria in general are going to be compromised. And people that are insulin resistant or or diabetic. Yeah. It's just it's just this.

And so here's what I have seen is that some people that are very aggressive, I have some people that come to me that are on, you know, they've got an Excel spreadsheet of everything you're taking.

You know, they got one page for the paps, one page for the nutrients, one page for the body, for the hormones and the and the and the prescription compounds.

One page for the powders that they drink. Yeah. And then one page for tracking all the things, you know, all the things like, when do I put my Faraday glasses on?

When do I do my cold plunge? Why do I do my infrared? When do I do my red light therapy? God bless them. Yeah, yeah. And yet when I look at them and this is no criticism, I like, do what you love doing.

So first of all, I don't put judgment on any of it. If you love it and you're getting joy, don't do that out of fear. But the most important thing I found is they're still not having regulated glucose.

Yeah, a lot of times you still got marginally elevated lipids there, kidney functions compromised still. You know, there's there's all these imbalances that are still in their body because they're not doing it in an organized sense to be able to really repair.

And then sometimes the people on those, these super aggressive stacks, I'm on a, I'm on an advisory board for a, for, you know, mitochondrial testing, just, you know, for exposure.

I mean, I'm on a bunch of them. I mean, I'm on probably ten advisory boards in different industries, for sure. But that's one of the ones that that was interesting is that we found that the people that were really deep into the biohacking, like, really going at it, their mitochondria scores were that were struggling.

Is that my screen? Yeah. Yeah. Well, I mean yes I mean they're struggling. Read the riot act by the movie screen guys. You talked to Hamel. Yeah. Do last. Yes.

Yeah, exactly. Do last. I mean, go after the reactive oxygen species, go after the oxidative stress, but do a little bit less. Repair your cells, because until you get the redox down, you get your redox balanced.

The mitochondria just going to keep getting damaged. Yeah. Yeah. So that's the big like if somebody was listening to this I hope a lot of people are. Yeah.

You know it and take it for somebody that's been in this. I write about it a research. I, I really do have a full thought about this. I've been passionate about this field for 40 years.

Is it's really about identifying what you need to do, and first and then repair and then cycle. So you talked about epi talen. Yeah. Like people don't need to be on AP talent all the time.

No, there's no reason to be on AP talent all the time. You should be cycling that like a seasonality two times a year for ten days or three times a year for ten days, if that's what makes you feel good.

But, you know, every talent actually being that, you know, one of the, you know, the pineal gland or the super charismatic nucleus regulators, right? So yeah, great.

But, you know, you don't need to keep screaming a signal to that organ. It gets it, it picks it up, it functions. And then you want to give it a little reminder every once in a while.

Yeah. Yeah. Now things like if you're, say you got an autoimmune disorder, a lot of times people will do something, you know, back when it was readily available and hopefully available soon again, or using things like the thymic peptides.

Yeah. A lot of Islamic peptides have long half lives. You don't need to inject them every day. Yeah. You inject them every third day. You don't need to do them daily because once again you say, oh, I want to build my immune system.

No, you want to balance your immune system. One of the things I look at when people, when I look at when we're looking at their labs, and I wrote a book called Your Blood Never Lies. Right.

If they, wrote a book on about everything, I think. But that but, you know, almost. But but the point being is when your neutrophils are high on your white blood cell count, it means you're you're pushing your immune system really hard.

Something is pushing your immune system hard. So your neutrophil to lymphocyte ratio is something it says hey are we we at idle. Are we doing okay. Are we overworking or have we overworked so much that now I can't work?

It's really interesting because you hear of people using thymic.

Cycling peptides, GLP-1 use, and practical treatment strategy

So thymus and alpha one for example, on the daily and and even with we could talk about this even with GLP ones right now there's a trend of people saying, well, I'm just going to take a little bit every single day, instead of using it once a week.

So, you know, this is part of the cycling conversation that I think that's really important. So so let's but before let's

hold on to that with the BPC, the Cfpb, that where we started.

I think that I would love to share with people what does a healing cycle look like when you're going after gut inflammation and gut healing. Because again, I think that if after I and this is my opinion, if after 8 to 12 weeks you haven't seen progress, you're missing something or you're barking up the wrong tree.

Do you want to weigh in on that? I, I, I agree, I probably say a minimum of ten weeks, minimum ten. And I would hope that you're doing other things right.

You're. Yeah. Okay. Because always, almost always that gets attached to the brain, man. You got that enteric nervous system. And I always try to get people to understand if you're under a lot of stress or your cortisol levels are high and all you're doing is working on your gut and you're not dampening that stress response, that high cortisol activates clotting, too, in your lining.

You're testing and you're fighting and junctions are up. So you gotta you just have to understand that. Right. So if you're not getting benefit to your point, I'm going to do a gut protocol because, you know, I'm gassy, I'm bloated, I feel distended, I'm foggy headed.

I heard I got Candida. No, it's a parasite now. It's a pair. A Candida bacteria. Right. It's like all those things. I have mold growing in me, which is really funny.

Yeah. Because you don't have more growing in you. You have an immune immunologic response to to mold. Yeah. So, so anyway, that but the point being is if you get if you get going on that and you take it and you obviously should be giving nutrients that help the BPC work.

So things like resistant starch helps you to make more butyrate, right? Yeah. Being on a probiotic might be good. You know, so, you know, just to name a few, just for example.

But point is, you know, I usually it's like if it's gut and they've got food sensitivities, it's typically 12 to 16 weeks okay. Yeah. So that's so that's your typical cycle.

So let's go back now to the people who are you know we're going to close with this. But let's go back to the to this trend that we're seeing where if some is good more is better.

And so this whether it's the thymus the thymic peptides. I'm so glad that you said that about climate peptides because again like Tb4, if you if you were back in the day it's Monday, Thursday, 72 hours, it's 72.5 like.

Yeah, exactly. Wait. And you should do them daily like the GLP ones. You brought up the daily. But you gotta realize they have a long half life. So it's building and you're going to keep building and eventually you're going to probably have an adverse event.

Okay. Because because and I'm even seeing people now what about the idea of people splitting the dose. So they're saying I'm and and and again like I mean so I'm hearing this from people.

Well it really does a great job on my appetite for the first five days. And then after the next two days, I'm really I'm, I get hungry again. Yeah. And I'm thinking that's probably not a bad thing because it's not the worst thing to have a little bit of a re feed and then go back to less food like it's, it's kind of like building variation.

Yeah. I mean I, I guess I, I think I use that, I use that tactic when people are stopping losing your weight. But okay. So when they hit the wall, I never like I always am addressing people stress when they're doing GLP ones because if they're stress eaters, that's why they've got that's why they have food noise.

Yeah, yeah. Food noise. Because, you know, your dopamine is all depleted from all the stress you've been under. And now that potato chip or cookie equals love, right.

And you know you're not going to eat one. You're not going to hate even numbers. You're going to at least hit three. And once you see part of that all gone, you're going to go for that whole cellophane package.

Like, I like that row empty. You know, it's like you rationalize. So. So we teach a lot about all that. I use it for breaking it. I wouldn't do it all the time because once again, you're messing with that.

That half life where you're you're still you're giving us something that's got about a six day in the body three days, and then you're doing three days and then you're doing three days, and so now you're over.

I mean, it's not that you're overdosing it, but you're using a higher dose than you think you are. Yeah. And and and and look, I, I'm not yeah. You got everybody on like, there's Facebook groups on GLP ones, right?

And you got people telling people all kinds of stuff. And I would say it, there's people that have used GLP ones and they stop working. Right? Yeah. They just said they stopped working.

That's your sign that you missed your spot as to what was really going wrong. Right. Or I have to keep going up the dose. You know, the way we have done this, I teach this at, American Academy of Medicine.

I mean, I have a whole GLP one certification course that I developed is that you have to assess where is my stress, how am I eating? What is my sleep like?

Obviously your blood sugars. I wouldn't be doing a GLP one. Where is my thyroid hormone. Where are my sex hormones. Do I have environmental burden. You get started on that GLP one.

You get started right away. You're going to lose weight. But you kind of want to have an inventory of what else needs fixed in the ship. So as you're losing that weight, you're knocking down some of those other barriers so that you can get to a point where you titrate off and you can use other compounds, like for example, everybody's heard about Carla curb, right?

Carla curb hops extract. It was going to work at about 70% of the time. It's not 100% what you but it works. I mean, I got a lot there's more and more data coming on that.

It works. The other one is the fish polypeptide that won the 2025 Neutral Ingredient Award. It's got evidence of GLP one and JLP two activity and two studies to show that people lost weight.

And it would be a drink that you drink. So you could. My goal, unless you're diabetic, all bets are off. Then you got to get treated. How you treat it is if it's just weight loss, you want to use the minimum amount so that you're not screaming at those and in hormone receptors.

And when you take the drug away they're going what did you say. Yeah. Right. I don't I they don't hear any signal anymore because you upregulated that signal too much.

And that's where the real problem lies. Yeah. Yeah. So I love that I mean minimum effective does, you know extra virgin olive oil. I was just doing some research on it.

It blocks dpp4 which is the enzyme that breaks down GLP one. Right. Right. So it's interesting how we can, you know, that whole idea of fixing the diet while we're on the GLP one, but even fixing the gut, right.

Yeah. So addressing like that whole stack we talked about earlier, there's a really good chance if you're carrying around a lot of extra weight and now you've got a lot of inflammation that your guts been damaged.

And so maybe when you start the GLP one, you're working with someone to help to heal the integrity of that gut lining and the microbiome. Like this will set you up for success down the road so that you can come off the stuff eventually.

Exactly. That's the idea. Yeah. And and use them as you need them. A tool in the toolkit now. Yeah. The older you get probably the more you're going to reach in that toolkit a little bit because we start to forget how to create those peptide signals.

And yeah, that's but in the end it's create homeostasis in your body. Create balance in your body. Don't don't think supercharging. It's the answer. Yeah. It's it's it's about balance.

Thank you. There. And improve repair and improve Jim this has been a great conversation. I had every expectation that it would be I feel like we could keep going for a really long time.

Probably. We haven't even gotten to the brain yet. I mean, we don't have to do that someday. And we have barely I mean, we talked about a pedal on, but there's a whole other plethora of other by all the by regulators.

Oh my gosh. I mean, we'll do, we'll, we'll, we'll talk about those as well. So I do want to thank you so much for today, for taking the time to join us on the summit.

And, are there any resources? Is there any place where people can reach you or learn more about what you do? Yeah. It's easy. The real Jim Lavalle is on Instagram.

That's where I post all my goodies. I mean, they can obviously go to Jimlavalle.com they can look me up at lifetime, right? Yeah. Fitness. And then of course, metabolic code is, you know, my cloud based informatics company that I've done a lot of research in.

Love it. Thank you so much. It's been an absolute pleasure. Yeah. Same.