Introduction to Dr. Holtorf and Bioregulators

Welcome back to the Bioregulator and Peptide Summit. Ladies and gentlemen, we have a great guest here with us today. Truth is, if you've spent any time in the world of integrative or functional medicine, chances are you've come across the work of today's guest doctor Kent Holtorf is a physician, researcher and the founder of the Holtorf Medical Group in Network of Clinics at the forefront of evidence based, cutting edge medicine specializing in thyroid disorders, hormonal optimization, chronic fatigue, Lyme disease and longevity medicine.

Doctor Holtorf has built a reputation for going deep into the science, not just adopting emerging therapies because they're exciting, but rigorously interrogating the mechanisms and clinical data behind them.

He's a published author, a frequent speaker at leading medical conferences, and a physician who has treated thousands of complex, hard to crack patients, often after conventional medicine has fallen short.

What I love about having Doctor Holtorf for today is that he brings both a clinical lens and a scientific one, and that's exactly the kind of perspective that we need in this space when we're talking about one of the most fascinating and still underappreciated areas in longevity medicine bioregulators, these short chain peptides, many of them developed from decades of research out of the Saint Petersburg Institute of Bio Regulation in gerontology, are beginning to capture serious attention for their ability to restore tissue specific gene expression, slow biological aging, and support organ function in ways we've barely scratched the surface of Doctor Holtorf.

Welcome to the bio Regulator and Peptide Summit. I am so thrilled that you are here today. Oh my gosh, you are so kind. I need to hire you as a PR. Thank you.

Absolutely. Well that's true. Well, no, you deserve all of that. It's a little bit. You've been you've you've been in it for a long time and fighting the good fight.

And I've always said this to me is especially in this day of social media, where people will plant a flag on a hill and they will die on that hill. And it doesn't matter what comes up, what they learn, what's new.

They've taken a stand and that's just where they're going to sit. And what I love about you and to me, the hallmark of a great physician is someone who's a who's able to acknowledge that we don't have all the answers and who's willing to change and evolve.

As the as more information unfolds and that's what it has to be all about, right? Because we just don't have all the answers. I don't know that we ever will.

And I agree with that. And now it's like, you know, I 20 years ago there used to be medical debates. Now all of a sudden, like you try to have a medical debate like, look, my, my point of view, here's yours and it comes.

It breaks down to like, your racist, you know, or it's crazy. And like, la la la la. I don't care about the studies. This is what I believe, you know.

Yeah, and I missed that. Yeah. No, I mean, we I think the wheels kind of came off that bus back in when Covid happened, right? It just the world became both hyper polarized and allergic to a healthy discourse, which, frankly, is the foundation of medicine.

It's the foundation of science. It's the foundation of our society that. We live in. Science has been hijacked. It's horrible, and I apologize. I'm talking very strange.

I had oral surgery, so I'm kind of a filly. Thessaly Whitley, doctor. We're all good. We understand where I'm grateful

you're here because we couldn't. We?

I kind of stuck you on the time. So we. It is what it is. You're still speaking very clearly. We're we're good with that. And and further to that, there are some one thing I, you know there's a before we get into what we're going to talk about today, we know that there's some real naysayers out in the industry really putting down the bio regulators.

Personal Journey into Peptides and Bioregulators

And it's almost like now we've got two camps. We've got the camp that says bio regulators are an emerging tool that we really need to pay attention to.

And frankly, in the. Same camp. That's our that's our camp. And truthfully, emerging is generous because they've been studied for over three decades in Russia and they're still being studied, and not just Russia.

I mean, Russia, that whole part of the world. Right? Not to mention that there's universities in the US that are doing studies. There's universities in Italy doing studies like there's it's there internationally of interest.

And frankly, if they were so useless, why would the FDA bother putting one of them on its no go list? I'm just saying. Right. So if it doesn't work, why be scared of it?

Right. Exactly, exactly. So, you know, before we jump, we've got a list of questions for you here. But I think before we jump in, why don't you tell us a little bit about your history with bio regulators?

Like when did you first hear about them? What caught your attention? What have you seen in your practice that's made you kind of sit and stop and go, wow, we need to pay attention to this stuff.

Yeah. I mean, so my whole introduction to peptides was I've been chronically ill, you know, chronic Lyme. I got in vitro, chronic Lyme, BBC, Bartonella and was doing okay all through my life.

And but all of a sudden in medical school just just totally tanked. I couldn't think just anxiety or pain all over my, you know, skin couldn't sleep. And I would go to, you know, basically doctors or doctor university doctors like, oh, I don't know what's going on. We can't help you.

And and basically I said, look, I'm going to off my shelf or I'm going to cure myself. So I went around the world looking for treatments. Never heard of peptides in my life.

We went to Mexico and got a bunch of plasma freezes and basically natural killer cells and dirty cell therapy ended up in Europe and it was in Belgium.

And I got some peptides just wearing them. Like two days later, I couldn't, I couldn't not a chronic heart failure because of heart failure. I could not stand up.

I could not walk upstairs. So I'm like traveling through Europe, bent over, walking one mile an hour. And B cardiologist said, maybe in ten years you can get 10% better.

And and so I'm just like, okay. And then I went and went with Terry Hertog actually. Yeah. And then he prescribed some peptides for me. And then two days later I just walked up the stairs.

I'm like, I'm standing upright like, what the hell? I go can't be the peptide. And then it kind of tailed off and I did it again. My God, it transformed me.

So just really got into peptides. And then and then from there, you know, from peptides and bio regulators. And I think those bioreactors are a subset of peptides, short shorter peptides.

But I mean it changed my life. And I've seen in the last 20 years changing the lives of my patients. And you know,

myself, as I mentioned, and just been expanding it from there.

Yeah. So you you mentioned the so when Doctor Hertog prescribed the peptides, were they the, the signaling peptides or were they by a regulators at the time.

Yeah. At that time it was it was be injectable. But the injectable bio regulators are injectable like like a T or invaded. Alpha one. Okay. V BPC. But that got me introduced to the whole.

That whole area. Yeah. The whole scene. The scene baby. The peptide scene. Yeah. So what about the bio regulators scene? What got you there? Yeah. I mean, I think just, you know, being enthusiastic about it just started looking like, hey, what about these?

You know, looking at these studies on with Cabazon and Pavlov, you know, you know, reversing the basically deterioration of their military personnel and just it's fascinating.

And they fricking work. And I've seen them work over and over and over. I mean, patients that are so sick and they work. Yeah. So it's like you have to just keep expanding because so many things are actually so helpful.

I've had a couple of doctors on this summit actually. People may have I don't know what the order of operations is going to be when we release these episodes, but talk about how the bio regulators in particular, as well as peptides, they feel like it's cut the time that it takes them to move the needle on complex patients in half.

Absolutely. For instance, the kidney bio regulator, we I gave one of our medical assistance there. Her mom was on dialysis. And I go, I take the kidney bio regulator.

And I forgot about it. She forgot about her mom. I talked to her and says the doctor said she's never seen anyone get off dialysis. Yeah. You know, and.

The only thing, just the kidney. No. No blood vessel, nothing else. Just. Yeah. Just gave her just the kidney. But you're right. Like the blood vessel makes everything work better, right?

Yeah. I'm not going to talk about his stacks, because, you know, this one works, but this works better.

Safety, Mechanisms, and Oral Bioregulator Basics

Yeah. But yeah. And I'm like, oh, my God, I totally forgot. We gave it to her. And of course. How much did you get? How much did you give her. How long did she take it for.

She must. Take no, no, you know. Gave her a. Bunch of it. And that. What. You just gave her a bunch? Yeah, exactly. Whatever. The technically defined as a bunch.

Yeah, like a shitload. That infamous dose. Yes, the magic dose. And I don't know what what she took, but I was like, oh, crap, I forgot about that, you know?

But we have so much. In fact, this may be a little TMI, but I have chronic kidney disease from chronic Lyme, and I have so many autoimmune diseases and I have actually show Grenz disease.

So I have no make no saliva, which by my teeth are all ept up. But I tell people. Oh, do you have foamy urine? Right. It shows that you're dumping protein in the urine.

Take the kidney by a regulator. And again, if you had the vessel and some other things actually make it work better, and after like sometimes 6 hours or 12 hours or a day, the foam goes away.

It's that. And so that's interesting. You know, I would never I never believe that they worked that immediately. But I guess that you're you're talking about this.

And I interviewed somebody else yesterday, Hunter Williams. And he was talking about the synthetic injectable cartilage peptide and talking about in his case he finds he feels that it it acts almost immediately like within a day or two.

Yeah. No, I see it myself. And then of course, he's eating herself. And then you use it on people and they're like, yeah. So now my friends are like, I got from a year and give me whatever you.

Do, I need that bunch. So speaking of the bunch, right. I think that brings us brings up a really interesting point that you would feel comfortable just handing a bunch of this product over to, to this person who, you know, has a kidney issue, but you're not really that concerned.

Is she going to take too much? Is she going to take too little? Do you want to talk about the safety profile of the bio regulators that you've seen clinically?

And that is that is documented in the research? Yeah, I mean, because I am the most lazy patient there is. So I will instead of trying to take two a day, I can't do that.

So I'll just take 21 time and but yeah, there's there's no I've never, never seen a side effect. I've never seen any even allergic even with the, you know, Sears patients, the patients.

I've never seen a negative reaction. Yeah. I think part of it is that the mechanism of action, right where the, you know, all of the research that Kevin Sun published really speaks to this normalization of function rather than a boosting or a suppression, and that really sets the bio regulators apart from the signaling peptides and drugs.

It's not pushing. I don't think you can overdose. It's like and to your point is probably taking 20 probably not the best way to do it because yeah, because when you look at the mechanism of action that it's better to do a little bit over a long period of time than any big.

Yeah. Yeah, no for sure. But the, you know. Not as I do. Yeah. Well and I think that one of the things, one of the studies that really highlights that is when Kevin did the old people studies and then went on to talk about the effect of the pineal gland regulator on sleep and melatonin production, is that if you were to give that same pineal gland bio regulator to a young person who's sleeping great, doesn't have any circadian issues, they're going to be like, this stuff doesn't do anything right.

Whereas in an elderly patient, it's magic. Which shows the safety of it, right? It's not going to push you out of the abnormal realm. Yeah, yeah. Which is that I mean, to me that's just the it's the magic of this stuff that it just it's just very.

Now, I have heard people talk about how in very hypersensitive patients, they sometimes have to reduce dosage or, you know, modify their protocols a little bit, but almost always they're able to work people up eventually to that, that.

You know, those super sensitive patients like, you know, it's the whole look at the pill, you know, think about the pill for a week and look at it and then smell it and then lick it and then yeah, you know, I mean, they react to it's amazing what they can react to.

But it's anything it's like a new basically food or something. But yeah, I mean that's a rare population. But they know who they are right. Yeah. And someone says I'm sensitive.

Doctors have to listen. They go, oh yeah, yeah, yeah. And they give them the same dose. No no no no. 100%. So let's talk a little bit about what we're going to be talking about today.

Today we're speaking specifically to the oral bio regulators. And we're talking about the natural extracts here. Right. So this is so we have in the bio regulator realm we have the synthetic bio regulator which is the isolated amino acid chain that the Russians, the researchers determined was the most active of the peptides and small molecules in

that extract.

Whereas when you're taking that natural bio regulator in a capsule, you're getting you're getting kind of like it's almost like an organ extract, but it's more refined than that.

Does that make does does that. Yeah. And what makes I think it comes down to like, you know, people say, well, I'm taking extract pancreas or by miss like what is the difference.

It comes down to molecular weight. So like really what the key with Cabazon and everything is how how small they can basically purify it down to. So if you look at a bio regulators, about 500, maybe 600 Daltons, and they can purify down to 5000 or now we can do 2000.

And so the whole case purification. Right? Yeah. And I've heard him speak about there's none of the animal protein left in that. Right now. There's no allergies.

Cause exactly. There's virtually nothing to react to. What you're left with is really these components of active compounds that will epigenetic elicit a response at a cellular level in whatever the target tissue is.

So let's get to the meat of it because we're keeping these short to to respect your time. A bunch of things. But I'll hold. Off well. Well, you know, I mean once we get going.

We'll be here for the next hour and a half, which works for me. Except apparently that's not what we're supposed to do. So we've all heard of peptide stacks, right?

So we have in the longer chain signaling peptide world, we have the Wolverine stack, which helps people to heal faster. That. Term I know, me too, me too, me too.

But you know, they it's a guy. I'm sorry, but it is a guy thing. It is. You know, if god damn guys. Right out of the bro gym world, we have the Wolverine stack.

And then there's the glow, and then there's the cloak and all the things. But does the same hold true for bio regulators? Do we benefit from creating or putting them together in stacks when we're trying to help people move through or slow down aging of a certain system or organ or whatever.

We're using the term stacks, but absolutely. Okay. Okay. That was that answer was too short. We need more information from you, Doctor Walter. That's good. We'll get into particular ones and and.

Yeah. For instance, like what? And you've mentioned already a couple of times alluding to it like like you're like you didn't take vascular with it. Like what.

What by a regular make everything else work better. Yeah. The Bessel or bachelor by a regulator and and I don't know if you have a thought on this, but is it because it reduces the inflammation of the vessels, allows everything absorbed better?

I mean, that's a theory. Do you have any other thoughts on that? Yeah. Well, from what I've seen and learned is it really does. It enhances and and helps.

Stacking Bioregulators for Specific Systems

It helps to restore the lining, the endothelium, the lining of the blood vessels. And so if we can improve the lining of the blood vessel, things can get to where they're going easier.

And the cells can dump and get rid of whatever they need to get rid of easier. So it's all about, you know, the our bodies are like anything else. It's all about access.

If you have a construction site, your construction job is going nowhere. If you can't, if the road getting in is clogged and it's definitely not going to go anywhere if you can't take out the garbage when you need to.

You don't want. Alternative theory is because I've seen this like you know about immune activation or coagulation, right? So where are you? The body with inflammation will lay down fibrin, which basically the body is trying to wall off the infection and lays fibrin.

Now that's good. But now it takes like oxygen normally takes two seconds to absorb. Could take up to two minutes. Also waste products don't get out and nutrients don't get in.

And I have noticed when I give vascular bio regulator and we check people's coagulation hyper coagulation it goes down. That's so interesting. Could that be the mechanism where it's it's getting rid of that fibrin on the best.

Yeah. Or one of them. But to your point of earlier it's normalizing fibrin. Not because you haven't seen. It in there. But you haven't seen it. You haven't seen it interact with something like somebody who's on blood thinners, for example.

Have you seen it be a negative for someone who's on blood thinners? Is there going to be a compounding? Not and so many people are hyper coagulation, I'd say 60% of the population, especially if they've been vaccinated.

We we monitored all people in vaccinated. Their immune activation goes up, up, up. Their natural killer cells function goes down, down, down. And so now normal is hyper able okay.

Yeah. So there you go. So if it's I mean look if it's enhancing the the flow in whatever way it's going to be a benefit and it's going to be a benefit to any project you're taking on in the system, whether it's the heart, the liver, the kidneys, as we talked for neurodegenerative not I mean, not that it's a treatment for degenerative disease, but it's going to support brain cognitive function just by enhancing blood supporting proper blood flow.

I wouldn't even call it enhancing blood flow. It's just bringing it back to normal. Yeah. It's like, what is it doing? It's allowing all the nutrients to get in the waste products.

Get out. Yeah, yeah. So you touched on this a bit earlier and I want to go back to it because there's a real difference between a bio regulator and a glandular.

And it's the first place people go when you first talk to them about bio regulators, you know, anybody in this space is going to sit there and scratch their head and go, well, is it like a glandular?

Is it like the, you know, an extract of thyroid or an extract of, you know, whatever, an extract of adrenal. And what do you say to those people? Yeah.

Again, it comes down to the size and, and just going from like 5000 Dalton to 2000 and ends up being three times as potent. So extracts. The problem is it's all huge amount of proteins and peptides.

So only a small very small amount of active bio regulators like maybe 1 or 2%. So that's the difference between being 50% or, you know, or 60% or 30%.

So yeah. And so there are bio regulators in extracts but tiny percent. That's and I was going to say that you're getting and the way I explain it to people also sometimes is look if you eat liver, you're probably getting some bio regulator from that liver, from that meal.

If you then get desiccated liver capsules, you might actually get a slightly higher concentrated concentration of liver. What the bio regulator, the natural oral bio brings you is a therapeutic dose of the active, the bioactive that you want from your food without the without the vitamins and minerals and.

The other. I think that's where all these bio regulators have an effect is the food we eat. But you got to eat pounds

of liver or whatever it is. Yeah. Which will make you sick from vitamin A toxicity.

So, you know, trade one problem for another. Yeah I forgot about that. Yeah. And that although somebody. Ever now. Yeah some doctors say there was you know I've had a few run ins with the medical machine this year for a bunch of reasons.

And I was telling a doc. Oh, yeah, I'm eating a lot of sardines. So then I'm, you know, I'm supporting my bone health and vitamin D3 and all the things.

And he goes, well, you're going to get vitamin A toxicity from sardines. And I was like, what. Is that? When do you know how many sardines you need to eat to get to that part.

Like that's a lot of sardines. But you know, but he may have also been responding to, you know, these trends on TikTok and on Instagram where people are doing these sardine fasts, which, again, you know, like it's I in my mind, if you're eating fresh sardines, maybe that actually would be a great thing to do.

But most of us are eating canned sardines. And there's a there's an upside and a downside to a canned sardine. With everything upside down side, how much heavy metals are in there or PFAS?

I mean. Well, the lining of the can, like all of those things come in. I actually found one brand that that sells sardines in glass jars, but I never found it again.

So anyway. All right, let's get back to our our stars of the hour here, our bio regulators. So if you had to if you had to say if I asked you, doctor.

If I'm putting your feet to the fire here, I want to know what is. If there was one core bio regulator stack, what would it be? Yeah. And I think a parent like you look at the core.

What how what started this whole thing. Right. And with Cabazon and Pavlov, they said, you know, you need to fix these, you know, military personnel. And it was basically by and pineal.

Right. And so those two are core now. And then you get into some subsets of that like with thymus. How about thymus Jin and Byline. So there's two in that subset.

And then with the pineal you got uptown was so as you know so many studies on that like increasing, you know telomeres and reducing aging. And and it tends to work for so many different things.

For instance, like giving someone who's diabetic pancreas by a regulator. But now if you add the pineal by a regulator, it works even better in an interesting I wouldn't necessarily think this right away, but if you add the subcortical brain, which is pinyin, which terrible name because.

It's not pineal and it's got pale in it. Yeah. And it dramatically, it works dramatically better. So that's where the stacks come in. And sometimes they're not intuitive.

But yeah. So I think those core things are going to do anything for anti-aging or general health. Pineal and thymus. Yeah. Well Simon and Velan that you mentioned are both synthetic.

You know, it's interesting because I think there are two of the components that you find in the thymus by a regulator. Exactly. So I'm, I went towards synthetic.

But you're right. If you do natural it's fine by a regulator, thymus by regulator and pineal by. Yeah. Yeah. Yeah. So so you touch on you touch on on diabetes which we'll get back to.

But there, there was a study I think that you mentioned on bio regulator combinations with for men in particular with insulin resistance and low tea. You want to talk about that. Yeah. So it's interesting.

So they they combine people with insulin resistance and low testosterone which it goes together. And they basically gave testes and also pancreas which worked.

But if they also added adrenal and prostate, it worked much better now. And what found is that you could use like it didn't matter which ones you did.

If you used any three, any three, it worked. It worked better, but it was like trying to figure out which ones are really the effective ones. Yeah, but it was like, it doesn't matter.

You have to add, you have to have three of the four. It didn't matter any combination. It worked just as well. So it kind of shows that again the stacking.

Yeah. Of stacking. Yeah. Although intuitively you would probably go to I mean for me, if I had to pick three out of those four it would be testes adrenal and pancreas.

Yeah that would be my that would be my pick. What's prostate doing in there. But it's like state work. But you know for men be adrenal. And pancreas tends to work in any combination for whatever you're doing.

Pancreas men with insulin resistance and adrenal seems to really augment that. And then for women. Yeah. It's thyroid. And they do so much better if you add thyroid into any combination.

For women. Yeah. That's really interesting. Well I mean and that makes sense right. If you think about the percentage of people which is not documented officially, but if you were to think about how many people are walking around with subclinical low thyroid function.

It's like it's like it's been a women. Yeah. Everybody needs a little, whether it's child childbearing year from childbearing years or going through menopause or whatever the case may be, the thyroid just tends to take a hit.

And for whatever reason in women, and it's not like men don't go through stress because they do. But for whatever reason, in women it's just seems to hit that thyroid more predominantly.

So I don't know if you already answered this. We talked about the insulin resistance with low testosterone for men, but is there a bio regulator that because you said the thyroid bio regulators tends to help all of women's issues like it, you would just throw it into all the stacks?

Thyroid Axis, Immune Support, and New Bioregulators

Is it? Were you just saying it's the adrenal by a regulator that you would throw in for men that would be supportive. Like that? With men, the adrenal seems to help almost every combination.

And you got the vessel which helps everyone. It just makes everything work better. But for men adding the adrenal, it seems to work and I've been kind of testing it out and adding it.

You know, it's hard to get data, but you know, you get you get a feel for it. Yeah. And feel has a lot to do with this right now. I think, you know, I think that it's a little bit again going back to your I gave her a bunch answer.

People will say to you, okay, well what's the cycle. You know, how often do you how long do you use it for. And and I do feel certainly also in therapeutic settings, you need to be running the labs so that you can see what's moving and what's not.

And and the beauty of these bio regulators is you, you can kind of keep your patients on them for a few months until maybe you reduce the length of the, of the application instead of doing 30 days, you might do ten days a month, but you can keep kind of poking that, pushing that lever until it's almost like it's until it sticks.

Yeah. And it's like, you know how we do meds. We try not to, you know, give people, you know, a lifetime of meds.

But yeah, it's kind of like, you know, people say, oh, do ten days on and three months off.

Well, there's only two studies I know of that that used that formula. And but what I see, especially with like let's say the kidney bio regulator like they work immediately and but if they go off, there seems to be a couple of weeks later it starts coming back.

And so I don't think there's any great studies showing this is the dosing schedule, right? Yeah. And and so I'll tend to if they need it more, I'll tell you to do it more constant.

And then throw in ones that they may not be core but you know it tends to all again work. And there's no super scientific rationale behind it. Yeah. Or there is. But we just don't know what it is yet.

Yeah exactly. There probably is somewhere the other one that I like to throw in quite often and, and I don't know how you feel about this one and if you've used it much is the cartilage bio regulator.

Because I have this I have this little pet theory that cartilage like collagen and elastin, which is what the cartilage bio regulator impact is a component of your blood vessels, your kidneys, your lungs, your stomach, your liver, your heart.

Every one of those organs is going to function. Is is especially in an aging person is going to could probably use a little bit of a refresh on that pliability.

What do you think? You're very good. Because you look at the studies that I was almost going to throw in, what helps with the vessel was gonna say cartilage because we think of yeah, they're very tissue specific, but they also have crossover cartilage has a ton of crossover.

So I think you're right on. Yeah. Yeah. So what do you. I'm not sure I'm going to be honest with the audience. This question was given to me to ask. So I'm as curious about this as you are going to be when you hear it is what is the difference between a thyroid axis bio regulator and thyroid bio regulator? What's the thyroid axis by a regulator?

So when you look at the thyroid bio regulator, regular thyroid by it, it dramatically improved T3, T4 levels. But it didn't touch autoantibodies. Okay.

But the thyroid axis by our regulators actually will dramatically reduce autoimmune Hashimoto's and grazes. So what's the thyroid access by ratio. Basically it's epithelial.

So basically the pineal. So it's a stack. So this is where you've put together two different bio regulators. Yeah. And it shows to dramatically reduce autoimmunity with so many people have Hashimoto's and less less so grapes.

But yeah it it's add that in. And it actually also improves the increase in T4 and T3 And what if you through the thymus bio regulator in there with that help.

Or you found that. The famous is actually poor my lecturers blah blah blah immune system. The t.h one the RD2 immune ship and the immune system is the core.

So there is again your intuition is so great. It's it fixes so many things based on just basically tweaking that t.h one to teach to. I find it even like much easier to use than a to one because to one because can just push things the wrong way for the wrong person.

It just and it's very, you know, basically intense. It can be especially for these chronically ill patients who are the ones that typically take it. And so I think the, you know, the dynamic bio regulators kind of basically a little softer but work over time.

Yeah. Yeah yeah I love that. All right. We're looking at us. Look at us. Look at our timing. This is like brilliant. Our last question is are well maybe our last question.

I might have a couple of quick fire for you at the end there. Are there any new bio regulators on the horizon? Yeah, there's a couple coming out. One is there's stem cell bio regulator and skin bio regulator, but one that it was when I was working in a clinic that exclusively treated the Chinese medical tourists.

And I brought in penis by a regulator. They would fly in for penis by a regulator and we would do it. I A penis by a regulator. Penis by a regulator. Okay.

And they called it power and they would fly in just for, for that. So that that's going to be out there in the marketplace as well as the stem cell, which I think will be huge in skin biology.

And so where are these coming from? Like are you are you synthesizing them yourself? Are you like this? This isn't based on Kevin's work anymore. We're now often yeah.

That we contracted with in Germany and also in Mexico. We have a lab that's like basically testing all the basically bio regulators and the looking at, okay, what's actually the active and these extracts and things like that.

So yeah, those are from those that research. That's fascinating that you've got me on the penis bio regulator. I'm like that's like there's an arm bio regulator.

It's a body part. No it is I'm telling you I, I don't know if it works honestly. Okay. But the Chinese came in and they said it makes them powerful. Well yeah, the Chinese are interesting people.

They've got this incredible. I mean, look, they've got a 5000 year old medical discipline at their fingertips, right? It's kind of like I heard to their these are these are really old, but they also do have a tendency to use animal body parts.

And then there's also men like, you know, they're taking whatever tiger being. Well, that's what I mean. Like they're taking body parts from animals and, and and inferring magical properties to them.

So I do have to say the skin and stem cell by a regular totally different. Okay. I have an easier time with those. Yes. Yeah. That we're showing dramatic upregulation of both the fibroblasts doubling college and production from fibroblasts.

Wow. And stem cells dramatically causing differentiation and activity of stem cells. And when will those be available? I hope and I always say two weeks but but I'll say two months.

Yeah. In the next couple of months. Yeah. Well I'll be looking forward to getting my hands on some of those. I definitely. Will be. The first person will be send them to you.

Okay. Well. Yay me. All right. So what's one myth? This is just a quick fire. Few little questions to close off with. What's one myth about the bio regulators that you would like to later rest right now? I can do that one. Nope.

Yeah. I mean, it drives me crazy that they don't absorb orally. It just. Well that people say that they don't. Right? Yeah, exactly. Yeah. That is the myth I don't like.

I don't know what people are saying about them. No, but that's good. That's probably enough. Honestly. That's that's a myth that just needs to die right here, right now.

And is there anything else you'd like to share with the audience before we say goodbye? What I can think of. No. All right, well, how about we tell people where to find you?

Yeah. So connect with your work. Yeah, with the whole Holtorf medical group. Love. These products can be found at Integrated Peptides. But, no, there's no.

I did not talk about any specific or brands or products in this talk. There was nothing reference to any brand. But

there are some interesting bio regulators that integrated peptides and bio regulator expert.

Beautiful, beautiful. Thank you so much as always. It's been an absolute pleasure. Thank you doctor Holtorf. Thanks, Natt.