Bioregulator Peptides for Longevity

Matthew Cook, M.D. interviewing **Nathalie Niddam**

Matthew Cook, M.D.
Hi, welcome to the Peptide Summit. My name is Matthew Cook, M.D., and I'm here with Nathalie Niddam. We have a whole bunch of mutual friends, including Jean-Francois. She's a holistic nutritionist, a human potential, an epigenetic coach, and is the host of the Biohacking Superhuman Performance podcast. And is also has a Facebook group, which is called.

Nathalie Niddam
The Optimizing Superhuman Performance Group. It has the long and sort tale.

Matthew Cook, M.D.
Had to get that right. But for me, one part of the conversation is speaking to doctors and clinicians who are out there doing things. And I would say as important for me is speaking to the people who are out on the front lines, working with people, coaching people, and on the online communities speak, because you're really out there hearing what people are doing, supporting them. So I'm really grateful for the work that you're doing and I just heard nothing but great things. And so I'm delighted to have you on the show today. Thanks so much.

Nathalie Niddam
Well, thank you so much for having me. I'm grateful to be here and honored, really, 'cause we finally managed to connect.

Matthew Cook, M.D.
Yeah, we finally, it's just me and you and Baby Yoda today.

Nathalie Niddam
And Baby Yoda, that's right. I love that mug, I'm gonna have to get one of those.

Matthew Cook, M.D.
We have Baby Yoda Christmas ornaments on the Christmas tree. I'll send.

Nathalie Niddam
No, you not.

Matthew Cook, M.D.
I'll send you one of those. We ordered like 50 of them for our friends, so Star Wars forever. So welcome. Tell me just a little bit about how you got into Peptides and what's happening.

Nathalie Niddam
Yeah, so about 10 years ago, I left my cooperate job and went back to school and became a holistic nutritionist after having left my studies in human physiology and university more years ago than I cared to count. So I'm not telling anybody how old I am right now, but I kept my hand kind of in science or in helping people, if you will, by being a fitness instructor through my whole corporate career. And then I woke up one morning and said, I'm done with this. I'm going back, I'm going back to doing something that really kind of fills me up in a certain way. And so I went back to school, became a nutritionist, which was great. I did that in isolation maybe for about a year or two. And then I became a human potential coach and that kind of moved me into the world of biohacking a little bit more directly. And the cool thing about becoming a human potential coach is that a lot of that training is really on how to coach people, how to help people get past their own stories.

And I think that you probably deal with this a lot more than I do. I mean, people have no end of access to no end of information. They kinda know what they're supposed to be doing. I mean, they don't always know what they are supposed to be doing, but they're inundated with information, but more often than not, it's really hard to get them to do what they need to do, like get them pass through their own stories. Anyway, so that's what the human potential thing kinda tapped me into. A few years later, I went to a conference and I heard someone speaking about these things called peptides. And if anybody's listening to any of their podcasts I've been on, I mean, I really was just looking for a place to take a load off. I go to conferences. I spend a lot of time in the exhibit hall because that's where you meet all the people who are doing really cool stuff in this space. And I sat down and this guy started talking and I think the peptide, the first peptide he was talking about was Melanotan II. And he's sitting there sporting this really cool tan

and he goes, "And as a matter of fact, "I haven't spent any time in the sun and here I am "just by using this peptide, I have this amazing tan." And then the next one he launched into was Epitalon and by the time he was done with the second slide, like my jaw was on the floor. I'm like, get out of town. There is no way that something can do something like that. And so I lean over and I tap the guy's shoulder in front of me, turns out he was a compounding pharmacy owner. And he assured me that, oh no, this is a thing. And that's kind of what launched me into this whole peptide world, if you will. And at the time, there weren't that many people around and I actually connected with Jean-Franchois very early in the game. So I'm very grateful and proud to call him a mentor, 'cause he has taught me a lot in this space and I started the Facebook group and the podcast really is a way to get people to talk to me about peptide so that I could learn more. And the group has turned into this amazing kind of living lab, right? So it's filled with people who are coming in, who are curious about peptides. Many of whom are dealing with all kinds of health issues that are just really difficult for people to get their hands on. And so we learn together, is what we do. And so that's kinda how I got into peptides and I'm continually amazed at the things people can do through peptides. And at the same time, I keep having to remind people that they need to treat them with a degree of respect because.

Matthew Cook, M.D.
Amen, so then tell me about, we're we thought we'd talk a little bit about the bioregulator peptides, 'cause you've been using those. Maybe give us a little history and a little introduction and how you get exposed to them.

Nathalie Niddam
Yeah, so the bioreg, I mean again, so epitalon is probably if there's one bio regulator peptide that is the most popular kit on the block or the best well known, it would be epitalon, not the mainstream necessarily people have heard of it, but in this sphere, people have heard of epitalon and epitalon is this bio regulator peptide that is essentially derived from the pineal gland of cattle, of young cows. And so I guess, it was one of things I was introduced to. I didn't dive into the bioregulators as much early on because I got blinded by the BPC 157s and the fives and beta fours and it's an interesting thing, And we were talking about this before that the short peptides, like the beta peptides, which are the BPC 157s, the thymus and betaforce, those are kind of like the ones that you use in an interventional way, you get an injury or you have gut issues, you might use those to correct the problem kind of in a more acute situation. With the bioregulators, they seem to be and yet, and again, in the Russian literature, they will use them for therapeutic

purposes as well, but usually as an adjunct to conventional treatment. So the bioregulators, I really kind of heavily got into them, if you will, in the last year or so. I came across and interviewed, well, I interviewed first, a gentleman by the name of Phil Mickens, who owns, he owns a magazine called, I think it's the anti-aging magazine or something like that. But he has a site in the UK that sells oral bioregulators. But through him and a couple of other friends, I was able to connect to a gentleman by the name of Bill Lawrence, who is a researcher who works directly with professor Khavinson in Russia. And professor Khavinson in Russia is the guy who's done the 40 years of background work and active therapeutic work on these bioregulators that we're just now really starting to understand and dig into and get research. I think one of the big issues is clinicians getting their hands on the literature from Russia translated in a way that they can interpret properly.

Matthew Cook, M.D.
And so then basically, there are a constellation of smaller peptides, sometimes two, sometimes four or five or maybe nine amino acids, so much smaller than the other ones. And then there's bio regulator peptides for almost every organ. So there's like two for the pineal gland, one for the cortex, one for blood vessels, one for the heart, three for the immune system. And there's one for the liver, the prostate. And they'll have a little bit of an overlap. So like for example, the ones for the liver sometimes are good for the kidney.

Nathalie Niddam
Yeah.

Matthew Cook, M.D.
Then also there's lots of relationships between organ systems. I echo that idea that the smaller ones and interestingly for immune patients, the smaller ones are much less likely to have any mass cell activation or any immune activation. And so then interestingly, they'll take and isolate from that organ. And so they'll do an extraction of pineal gland of the thymus and so each organ to isolate that. And we were talking, it's kind of like we've been doing this forever in integrated medicine. People would take a glandular extract And so then you could take an extra. So then the reality is that there's some peptides and co-factors in that thymus gland that are gonna help. And it turns out they actually regulate white blood cells. So they regulate regulatory cells and they kind of balance immune function, which is pretty, pretty interesting. And so then you can either take these as an oral or they've been able to synthesize them. And so then you can take

them as an injectable. So then there's different dosing algorithms. And then there are algorithms of people looking at these and sometimes as an oral and as an injectable one, you've been taking, you've done both.

Nathalie Niddam
Yeah.

Matthew Cook, M.D.
What was your experience? And what's been the experience of people who you've talked to in your Facebook group?

Nathalie Niddam
Yeah, the way that the Russians talk about the injectables versus the oral is that the, what I've heard is the injectable will tend to be faster acting, but the effects of it may not last as long and as the oral, which will take longer to kick in, but the effects of it may last longer. And I think that that may well have to do with what we were talking about when you're doing an extract and it's less refined than say just the three or four or five amino acid chain, you're getting a bunch of co-factors with it. So it's a little bit like taking desiccated liver instead of taking iron, which has been just isolated. I mean, that's a gross kind of comparison, but at the same time, I think that the, what we see with with the injectables is sometimes you'll see a faster response. And we see that sometimes with the epitalon.

One of the interesting things I've observed with the epitalon is people who have real sleep issues, it sometimes has moved the needle for people even with some types of insomnia. Again, they have to be doing all the other things at the same time. It doesn't mean you don't have to do all the other work. There may not be other supplements. And I'm not saying that a epitalon, 'cause insomnia is a major problem and it's very complex and it can have many different roots, but epitalon with this ability to, and it's referred to as a neuroendocrine regulator, which I think we tend to hyper focus on, oh, epitalon is going to improve the production of melatonin. And it does that, but one of the terms that is mentioned over and over and over again in the Russian literature is normalizes and what these bio and I think this is why going back to something you just said where we don't see the mass cell activation, we don't see the bad reactions from people who have immune imbalances in their system is that particularly those bioregulators do not boost anything. They're seeking to restore homeostasis to the body. And so, but with the

synthetic, to go back to your question, the synthetic versus the oral, I think the synthetic might be a little faster acting. It's a little harder hitting, but it's still, we still don't see necessarily that immediate hit that you might see with a more traditional peptide. Because if you think about what it's doing, it's acting on DNA, it's upregulating gene expression. It's upregulating the production of proteins. That doesn't happen in 10 minutes. Like it takes time, like it takes time for the body to be able to do this and to be able to integrate. And as a matter of fact, again, reading into a lot of more of these texts as time goes on, it looks to me like even in the Russian circles, they're using the two of them at different times and or together because it's almost like a top up.

Matthew Cook, M.D.
That's right, and so then kind of conceptually, that was a good thing that you've just said, because many of the peptides are gonna be almost like a lock and key, one binds onto a receptor. It does something and it's gonna have an effect for a couple hours and then go away. So many drugs, many molecules are having a mechanistic receptor type of effect.

Nathalie Niddam
Yeah.

Matthew Cook, M.D.
And so then it'll have a halflife and that halflife maybe two hours or maybe four hours and then you'll take that peptide and then you'll feel it for a period of time and then you sort of feel, oh, that's gone. And so then for some of those people, we'll take it a couple times a day, for example, if they're sick, like some of the immune peptides, but on the other side of the coin, I'll notice like the, like if you take the inject bioregulators often for days you'll feel good. And that is because they're affecting at a genetic level what genes were printing.

Nathalie Niddam
Yeah.

Matthew Cook, M.D.
And if you think about sick patients and then this is just gonna be, this is like, I think probably the most interesting thing in the world, probably to me right now is that for those sick patients, the two big things patients with complex illness are presenting with a lot these days is the mass

cell activation, which is a little bit of an histamine type of immune stress. And then the other one is these low blood pressure symptoms, when people stand up, which is called POTS.

Nathalie Niddam
POTS, yeah.

Matthew Cook, M.D.
Postural Orthostatic hypertension. And boy, I hear a lot of people say, "Oh, you know what? "I haven't had POTS symptoms "ever since I started taking bioregulators "or my POTS symptoms are a lot less."

Nathalie Niddam
Yeah, and that's what's so fascinating, right? It's addressing the systems that regulate those processes that we don't know how to fix. And so we're ultimately giving the body the ability to restore function to those systems so that it can address these imbalances in a way that we don't even know how, like I just find it so fascinating, right? Like, my husband has Raynaud's and right now, I've got him pounding the blood vessel bio regulator, and I'm gonna add the central nervous system one too as well, because I don't know, like I'm not a medical doctor, so I'm not fully versed in the mechanism of action, but I'm like, okay, well, it's a circulatory issue for sure. But there could be like a nervous system issue, in signaling the dilation or constriction of blood vessels. So one of the things that I think is important for people to get their heads around is using these bioregulators in stacks, like trying to sit and imagine what are all of the different systems that may affect something that we're trying to address. So for blood pressure, for example, obviously, you're gonna use the blood vessel bio regulator, but you're gonna look at the heart. You're gonna talk to the kidneys and the silent player, I think with the heart and the kidneys that a lot of people don't think about is cartilage because the cardilax bio regulator upregulates the production of collagen and elastin. And those two elements are critical to the proper function of anything in the body that contracts and releases, right?

Matthew Cook, M.D.
And I have to embarrassingly admit, I remember, I don't know when, like six or seven years ago, somebody said, oh, they said, "What is your stack?" And then I thought to myself, I don't know what a stack is. What's a stack? I remember that, I was like, and it was such a, and I remember, well, if somebody's asking me what a stack is, I should probably know. But then interestingly, I

like to say I came from the heart of the medical industrial complex. And there was an idea of unified idea of one molecule that would fix a problem, one drug that would fix a problem or do something. But for major comprehensive systemic problems, often, you have to do a combination of four or five things. And even in anesthesia, what I spent my whole life doing was never just one drug. It was always a combination of drugs that created an experience of sleep. And I always like to say, I spent the first half of my life putting people to sleep, and I'm gonna spend the second half waking them up. And it's a little bit, waking them up is a stack of things, just like there's a stack. And so then that is kind of interesting to think about, but I would 100% echo that idea in combinations and both with the oral and the injectable.

Nathalie Niddam
For sure, and then not forgetting the other pieces of the puzzle. And this is something I see happen all the time. People will, they'll look to peptides and bioregulators. I mean, obviously, you learn about these things at the beginning, and you're just, you found like the pot of gold at the end of the rainbow. It's like, oh my God, who even knew that things existed, but let's not forget and throw away the other things that we also know, right? Let's not forget that for blood pressure, nitric oxide production is really important. And so providing nitric oxide support to the person, in addition to all of these other things that we're doing is super important. And I think that, some of the things that a lot of time, I spend a lot of time talking to people about exactly that, like, people will come in and say, "Well, what's the peptide for X?" I'm like, "Well, why is X happening?" What is X coming from? Why are you sleeping? What's your diet? Like are you stressed beyond words? Which many people are because they're sick. And so they're understandably under massive amounts of stress. And I think for me, like one of the big messages I strive to communicate to people is like these peptides are amazing. And the bioregulators, to your point, what you were talking about earlier are probably one of the most exciting things that we're still learning about very much so, but we can't forget about the foundation. We can't forget about everything else that we need to be doing to allow them to tap into that 42% biological reserve that we may have in our system.

Matthew Cook, M.D.
Did the vesugen help your husband?

Nathalie Niddam
I have to chase him around sometimes. He's not always very good at it, like I'll get him going and then if I don't pay attention, he drifts off. But I would say that he's complaining less about his fingers than he has before in previous years. And I also have him, speaking of nitric oxide, I have him using that as well, because I do think that there's more pieces to the puzzle than the one thing, and I just think he's, now that I think of it, he just doesn't, he used to complain about it a lot more.

Matthew Cook, M.D.
Right, so then that would be a good one to unpack a little bit. So then what happens is you've got blue blood flow going out to your extremities. And so then normally your blood vessels can open up and dilate to send blood flow out, or they can vasoconstrict if let's say we're trying to send all the blood into the core of our body to stay warm. And so then, and that actually is an example of what we call the autonomic nervous system.

Nathalie Niddam
So it is a nervous system issue, yeah.

Matthew Cook, M.D.
And so that is happening really, you don't have to tell your hand to vasodilate, your hand doesn't. And so if you're in a sign and you really warm, your hand would open up. If you get cold, it conveys a constrict and shunt blood into your body. And so then that's happening all the time. As an analogy to that, if I stand up, I'm gonna vasoconstrict my blood vessels. If I sit down, I'm gonna relax. And if that happens normally, then I'm just having a great time and a good life. If that doesn't happen normally, then I might have some problems where my heart has to go really fast to try to catch up for the fact that my blood vessels are all dilated. And then that would be POTS. So then POTS and kind of Raynaud's are almost on a spectrum of dysautonomia and dysautonomia means disc sort of poor autonomic, autonomia would be poor autonomic or poor automatic kind of function. And so then we've had positive experiences with patients with Raynaud's, positive experience with POTS, with vesugen which is the blood vessel bio regulator, but then also with the neurological bioregulators, and really all epitalon, pineal, and cartigen. And so then this goes to the idea of a stack.

Nathalie Niddam
Exactly.

Matthew Cook, M.D.
And so then you say, okay, well, put those together in a stack. And then you said, well, but if we're actually gonna doing this, one of the actual ingredients for doing what we need to do is nitric oxide. It's actually there vasodilating So we also are our big fans of that. And so we have like nitric oxide creams that you can try rubbing on the hand, which is interesting. We have nitric oxide lozenges.

Nathalie Niddam
Yeah.

Matthew Cook, M.D.
And traditionally, they were beat based. And so they had oxalates in there but we've got some now that don't have oxalates in them, which a lot of people with immune problems are sensitive to because of GI issues, interestingly. So then suddenly you can have a stack with some bioregulators and nitric oxide, and maybe it's not gonna stop there, but then that would be conceptually like a way to put together. And then now to try that for a little bit and then take a break and then see how that lasts. And then it's, I met Bill Lawrence and was quite impressed by him and also, the ability to have a stack like this, where you're taking these as an oral is really great.

Nathalie Niddam
Oh yeah.

Matthew Cook, M.D.
Because now, it's not an injection. And so it's kind of in that supplement category. And I think that this is probably going to be an area that may be profoundly helpful to a lot of the people that are having immune problems after COVID, because those are all blood vessel problems and blood vessel nerve, and immune problems. That's like the air problems of our life.

Nathalie Niddam
Of our life, yeah. And they're elusive, right? I think conventional medicine has very little to offer other than maybe trying to suppress an overactive immune system, or like typically there, we're not in a space where we're able to help the body to repair. And these bioregulators seem to offer that possibility or potential.

Matthew Cook, M.D.
Right, and I like that you said that because, and I was dealing with the referral from Stanford yesterday, but if the only real way that we have to regulate or suppress function from kind of traditional medicine where I came from was steroids. And so then that becomes your one thing, but then steroids also blunt immune function so much that there's downsides. And so then a lot of these people that have immune stress, which is immune systems overactive in response to something, and that something is often an infection. And so they've got an overactive immune function and immune stress, but they've also got this infection going on.

Nathalie Niddam
Yeah, and then they take an immune suppressant to reduce the immune function, but then the infection.

Matthew Cook, M.D.
Yes, and so that's the classic conundrum. And so then as you embark on that journey of kind of supporting people, and so then, as an idea, and we're actually supporting patients with these and which is taking these oral supplements. And I found it to be a great place to start because they're regulatory in a way that doesn't seem to lead people more immunosuppressed.

Nathalie Niddam
Yeah, well, it's that whole concept of normalization.

Matthew Cook, M.D.
Right.

Nathalie Niddam
Even with epitalon, I read a study where they had a bunch of elderly people, and for some reason, some of these people had higher than what would be considered normal melatonin

production and the epitalon normalized everybody's melatonin production. Like it raised it in the people who were too low and it lowered it in the people that were, and it's hard to imagine that you could have too much melatonin, but whatever it is, this epitalon seeks to bring homeostasis and balance to the system. And I think that it also, in many ways enhances the safety profile of something like this, because it's for many of these people who are running around, kind of figuring it out for themselves, which I think it can be really problematic, especially when you're dealing with complex issues, the bioregulators, they seem to have, at least as far as we know right now, they seem to have a pretty good safety profile. The challenge is that if you're not working with a practitioner such as yourself who's been methodically applying them to various patients with various issues and documenting what's going on, you're kinda shooting in the dark and you're not building those stacks efficiently.

Matthew Cook, M.D.
Right.

Nathalie Niddam
And it's the efficiency of the stacks along with the other things that you can bring to it. And maybe you do need low LDN to impact certain symptoms to allow the body to heal. And I think that's where the fuller picture of the bioregulators is really going to happen. It's with clinicians, such as yourself who are bringing to bear all of the pieces of the puzzle and integrating these things at the same time.

Matthew Cook, M.D.
So that one is, Nathalie's mentioned something called low dose naltrexone. And so then that's a immunoregulatory also molecule that a lot of people will take that has some immune and particularly with autoimmune conditions. Have you had a lot of people use that?

Nathalie Niddam
Yeah, so, I mean, obviously, I observe this, this is my role as the observer in my group. And I would say that LDN for many people has been a real game changer when they can finally find a doctor or practitioner who's willing to work with them on this, because ultimately, it can help to break this cycle of autoimmune and inflammation. And at least symptomatically. I would say some of the most intractable issues I've seen have been around the mass cell activation syndrome, like

you've probably come across these people where there's like, you look at them wrong and they get set off.

Matthew Cook, M.D.
Yeah, I have seen that. And so then just to go back to LDN, that would be something that might be put in your stack as a part of a theme of this conversation. For the mass activation, I've been fairly impressed with another small peptide and to some extent, I think we're probably both fans of these smaller peptides that A, people are less likely to have an immune activation too, but then like KPV, I found to be quite helpful at actually calming down mass cell activation. And so then you can do that one as an oral. And so then there are some oral combinations of KPV and BPC one by seven that you can take orally, you can take KPV all by itself orally and it can have some effects. And interestingly, I think it can probably calm down the immune cells around the intestines and a lot of times there's food that can trigger mass cell activatioN, then the KPV's interesting there. You can do KPV as a subcutaneous and then you can also do KPV as an IV.

Nathalie Niddam
Oh, interesting.

Matthew Cook, M.D.
Medium dose, like KPV and a dose of like one to two milligrams IV can be quite, I found it to be relatively helpful for people with a mass cell flare.

Nathalie Niddam
Oh, but that's in a flare, so that's in an acute just to calm it down.

Matthew Cook, M.D.
In an acute situation. And so then if you might have a stack that one might be taking that might include bioregulators, but then if that person had mass cell activation, they might put KPV into their stack. And so then now as we're, and it's kind of great to have you and talk about this because now all of a sudden, we have this vocabulary of things that we can do and many of which orally, and so suddenly pretty easy, easy to take and easy to support. And so then I think that that is from a trajectory of helping a lot of people. I think that that's gonna be super interesting.

Nathalie Niddam
Yeah, and actually bring up a good point, 'cause there's a couple of these peptides that are not bioregulators, that size wise, kind of look like bioregulators, right? You've got your KPV and then the other one is GHK-Cu which is, I mean, the Dr. Loren Pickart who discovered GHK-Cu won't talk to anybody because he's writing a book right now. I tried to get him on my podcast, he's like, "No, I'm old and I'm writing a book. "I got no time for podcasts." And I'm like, "Come on just one hour." "Nope." It's pretty funny. GHK is worthy of a book like that peptide, which I almost wonder if it hadn't been discovered by Khavinson, if it would be classified as a bio regulator, what do you think?

Matthew Cook, M.D.
Maybe, I think that, and so then GHK, remember, GHK is with copper, but then there's a synthetic version of GHK without copper. And then the one with copper is blue and then the one without copper is not. And so then if you inject the one without copper, it doesn't burn at all. Whereas the GHK copper can burn for some people. And then interestingly for those people that it burns, often, once you start doing it a little bit and you get used to it, it stops burning, but it can sting a little bit when you first start to use it. And so then, there are protocols where you'll do one or the other, and then also some protocols where you'll do a combination of a little bit of GHK copper and a little bit of GHK, and we're starting to look at zinc copper balance and sort of track what happens as you do that. I also would say that GHK as a connect tissue, okay, is super helpful for aesthetics. And so people are injecting GHK copper in the face and for hair. But I think that it's so helpful. It's almost like a neurological bio regulator, and if you think connective tissue and elasticity, like what we were talking at the beginning in terms of blood vessels, so then GHK as an IV we've seen to be quite helpful for people in neuro inflammatory and then immune inflammatory conditions.

Nathalie Niddam
Interesting.

Matthew Cook, M.D.
And then also it's an intrigue. I found it to be helpful as we're starting to begin to think with ultrasound guided injections. What we do is put a needle right by a nerve and put a halo of fluid around a nerve. And so then GHK, I think is gonna be an intriguing ingredient in a stack of things that are helpful for peripheral nerves.

Nathalie Niddam
Yeah, that's really interesting. Well, and it's this, what is it? Is it Stanford University that did a study on GHK then said that it positively impact over, is it over 1,000 genes over 4,000 genes? Like it literally, you can imagine this little compound running, flipping genes off and on as they need to be flipped. Like, it's a pretty remark substance, and it's not labeled as a bio regulator. I almost think it could be an honorary bio regulator for connective tissue.

Matthew Cook, M.D.
Right, I think that that's true. I think that's a very, very good statement. And then what's interesting about it is, is that there's kind of this conversation and this one is, I would say something to sort of build a bridge to thinking about other immune problems, the classic neuro immune problem of our day that people like to talk about, one of them is mold.

Nathalie Niddam
Oh yeah.

Matthew Cook, M.D.
And so then mold, it's interesting. There's some conversations that essentially what happens is the mycotoxins cause inflammation in the brain. And we've talked about this on the podcast here a little bit, but then that neuro inflammation has a constellation of effects that will do things like lower a protein called MSH. KPV is actually a small segment of MSH, but then what will happen as that happens is, is that from a genetic level, we go into kind of a fight or flight state. So we start to print kinda inflammatory genes, and there's a test called the genie that we do for people with chronic mold. But we're also starting to do this for long COVID. And we're also to do that for Lyme and to build a model of the effect of a neuroinflammatory condition on what genes you're printing is kind of this idea.

Nathalie Niddam
And so are you finding similarities between the three, like long COVID is really interesting.

Matthew Cook, M.D.
Fundamentally there on a spectrum that is related to each other.

Nathalie Niddam
Nice.

Matthew Cook, M.D.
Now then interestingly, historically for the last 10, 15 years, what would happen is, there would be people going through these mold detox protocols forever.

Nathalie Niddam
I see them in the group, trust me, I see them all the time.

Matthew Cook, M.D.
And so then you're going through a mold detox and you're going through it. I've kind of talked about it a couple times, but it's probably worth talking again because I remember so much stress that of people that I just kind of knew in my personal life before I really understood all of this, maybe 10 and 12 years ago, where they were trying to get to this point where they could take this peptide called VIP.

Nathalie Niddam
Yeah.

Matthew Cook, M.D.
And if they could get all the way through the detox, then they could take VIP and then that VIP would then regulate those genes back into a kind of a calm state and that's because VIP, I would think of as also as kind of a bio regulator.

Nathalie Niddam
Yeah, well, it's another tiny little, what is it? Three amino acid, right?

Matthew Cook, M.D.
Exactly, now the issue is that VIP has side effects if you take it when you're sick. And so then what happened is, is you have all of these people who were like on a two year detox idea to get to the point where they can take VIP. Now, what we found is is that when those patients who are in the inflammatory early part of their condition, way before they would really classify or qualify to take

VIP. If they take GHK, or if they take the neurological and vascular and heart bioregulators, start to calm down.

Nathalie Niddam
Wow.

Matthew Cook, M.D.
And they start to feel better. And now that's a mold conversation, but I fundamentally think that that is going to be a neuroinflammatory conversation. And so then that actually is, that conversation is a bridge to Lyme, long COVID, KPV, and that whole constellation of problems that we see.

Nathalie Niddam
Yeah, and to your point, I think the bioregulators are the piece that are tolerated the most easily by people. And just help to, and it's funny, I never think of the bioregulators as doing anything more that they enable the body to do its own reset. And it's a very fine line, but think it's the reason why we don't see the, like I myself respond negatively to a few different peptides with, not that I consider myself to have mass cell activation, but apparently I have a histamine issue with certain peptides. I've never had an issue with a bio regulator.

Matthew Cook, M.D.
Right.

Nathalie Niddam
And it causes me to put a little more emphasis on the immune bioregulators and that kind of stuff so that, just helping my system to become more balanced. And I don't know if down the road, after a year or two of doing that work, will I be able to be more tolerant of certain peptides that I can't tolerate now. It's hard to say, maybe depends how annoyed my immune system got. But I think that's the real path to success with the bioregulators and part of it and something you just said, it's about it's a long road, right? So we don't use a bio regulator for 30 days thinking it's gonna fix a problem. Like there's a woman in my group who had, she had an overactive bladder and she used the bladder, there's a bio regulator for that, as it turns out, there's a bladder. Yeah, there's a bio regulator for the bladder. She used it, I think it was for 30 days. And she came into the group and she was like, "Oh my God, it fixed my bladder." She was blown away.

And I remember at the time saying to her, "If I was you," because this had been an issue she'd had for years, I would probably keep using it 10 days a month for a few months, just to, because one thing about the bioregulators is you get that, you do that initial hit of more acute use, but then there's value in kind, almost like a tapering concept, pulsing it for a little longer to keep reminding the body or keep the repair going, whatever the case may be. Anyway, she stopped using it after 30 days 'cause she said, oh, people are like a little bit, like they're in a candy shop, right? She's like, "Oh, well, I wanna use this one. "And I wanna use that, and I only have so much money." And a couple weeks later she came back and said, "All right, you were right, it came back." like those gains that she made with that initial foray kinda slid back. So she ended up having to go back and then repeat shorter cycles of the bio regulator. But nevertheless, this is an issue where nobody had been able to touch it for her until then.

Matthew Cook, M.D.
What was the condition?

Nathalie Niddam
You know what? I can't tell you exactly what it was 'cause I didn't, she called it like, I think she called it a nervous bladder, an excitable bladder. So basically, she just kept having to go to the bathroom all the time, it was hypersensitive. She couldn't hold urine in her bladder kinda thing. I've met a couple of people like that. Sorry, my do not disturb just turned off. I'm about to turn it back on. So I wouldn't do the condition justice.

Matthew Cook, M.D.
There's in every organ and in every organ system, there will be certain conditions that are multifactorial in cause. So like, for the bladder, an example is interstitial cystitis. And so then people will have an inflammatory condition in the bladder that is, and in almost all sort of inflammatory conditions and almost any organ system, there's often a neurological component to it.

Nathalie Niddam
Sure.

Matthew Cook, M.D.
But then for almost all problems that are multifactorial with four or five aspects that may have a little bit of a nerve input and a little bit of maybe blood vessel input and often blood vessel, a blood vessel component as controlled by the nerve to some extent. And so then those are the problems that Western medicine is the worst at treating. And even doctors who take care of quote unquote, those conditions, generally, Western doctors generally hate those conditions because...

Nathalie Niddam
They're siloed, right? Well, cause they end up siloed and like you're the urology guy and then you've got a neurology guy. You've got another ology guy when really, it's the integrated system you have to be looking at, and this, again, it goes back to the stacks, right? It just goes back to building those stacks because, and definitely, and I'm sure you've seen this, like in the Russian literature, I don't think I've ever seen them use one bio regulator.

Matthew Cook, M.D.
Right.

Nathalie Niddam
Like there's always a stack and epitalon as this kind of master endocrine regulator gets thrown into almost everything at some point or another as does the blood vessel viral.

Matthew Cook, M.D.
They're always doing those. And interestingly, and I had been doing this for years. There were these protocols of a high dose of epitalon and then maybe once a year or twice a year. And then Jean-Franchois came out with the idea of, oh, okay, what about if you went to a much lower dose and then did a little bit every month. And interestingly, what I feel is, when you start doing them, they have a fairly sustained effect that goes days and weeks out. So then you'll go days, I'll wake up, I'll be like God, I feel perfect again. And I'll keep, I feel perfect. And that is super interesting because now, I can kind of, I feel the momentum of them. And so then I'm doing kind of both injectable and oral and sort of experimenting with that, but I've been, it's my favorite thing that I've ever learned about in my life.

Nathalie Niddam
Well, and definitely on the injectable front, Jean-Franchois came out few months ago now with something that he dug up out of the literature that said that for the synthetic injectable bioregulators, we've been overdosing them massively. And he believes that because of a mistake in the translation of the studies. And what's interesting about the bioregulators is they're even though, if he's right and a more appropriate dose might be 100-500 micrograms, or maybe even a milligram at the outside, people have been using five and 10 milligrams a day with no real ill effect. The only thing I would say is the first time I used epitalon and I was using it, I think at five milligrams a day for maybe, I don't know, however long my cycle was at the time, I would be sitting in a chair and in the middle of a conversation, I'd fall asleep at three o'clock in the afternoon.

Matthew Cook, M.D.
Oh really?

Nathalie Niddam
And I remember calling Matt, going like, "What the heck's going on?" He goes, "Oh, well, your circadian system is resetting. "And it just like not taking no for an answer. "And if you're not going to bed early "and you're not doing this and you're not doing that." But it didn't last for very long, by the end of it, I was just fine. And I think that effect lasted for a short period of time, but it was really interesting to me. But since then I've done cycles at a much lower dose or I'll have my parents do it or my husband's doing it. And for the most part, it's very subtle. It's a very subtle effect as to your point, you wake up in the morning and you're like, "Oh, I feel so good today," as opposed to, "I don't really know why."

Matthew Cook, M.D.
Right, and then that gives people a hint in terms of thinking about things. And so then on the oral front then maybe think about just taking one pill and see what happens versus two. And then on an injectable front, people were taking dosing of five or 10 milligrams a day of epitalon

Nathalie Niddam
Yeah.

Matthew Cook, M.D.
Then all of a sudden one milligram a day. And then there, if you look through the literature on bioregulators, a lot of studies will look at 100 micrograms a day or 500 micrograms a day. And so then I would encourage people to sort of, even though we love the idea of a stack, think about trying some of these individually. And then sort of build a clinical experience of how you feel with real low dosing and then evolve into kind of a synergy of more than one.

Nathalie Niddam
Yeah, for sure. I mean, unless you're addressing something specific, but yeah, I mean, an epitalon is almost a standalone, right. If there was ever a standalone by regulator, I think it would be epitalon..

Matthew Cook, M.D.
What else should we talk about?

Nathalie Niddam
I don't know. I mean, I think that the important thing for people to understand is that these things are around and that they are available and that they represent a really, they just represent a really exciting development in the space of, even though they're not aggressive, like regenerative medicine, but it's almost like the baby cousin to Baby Yoda regenerative medicine. There he is, it's a very soft handed approach. And so it doesn't mean that you're not gonna maybe do the stem cell treatments or the exosome treatment, or some of the much more aggressive stuff when it comes to regenerative medicine. But this is almost the daily multivitamin kind of keeping up the maintenance of the body, allowing the body to keep itself well maintained and well oiled and give it maybe a bit more resilience to what's happening in your world, right? And that doesn't mean they don't have therapeutic effects. But when you're looking at the therapeutic effects or you're looking for therapeutic benefit, 'cause you're dealing with a disease state or a serious imbalance, I think that's where you really need a clinician involved because like what we've been talking about, you're gonna need other pieces of the puzzle to help out but to me, the bioregulators, one of the reasons they're so exciting is that they give us the opportunity to, in a very easy way that is not, doesn't appear to be any real danger to it just allows us to keep that regenerative thing going on in the system.

Matthew Cook, M.D.
Right, so then on the regenerative medicine friend, this is a good one, this is a legit good one because if you go to think about regenerative medicine, the classic thing you think about a stem cells. And so then stem cells, the good thing about them is that they, what do they do? They regulate immune function. And then how did they regulate immune function by secreting growth factors and signaling molecules called exosomes. And so then they will have a regulatory and immune kind of calming effect that will last a period of weeks to potentially months. And so then people, and so then imagine somebody is in an autoimmune situation, a lot of times, you'll give someone, if they have rheumatoid arthritis, then they'll give someone stem cells and it will calm immune function. But then eventually, that comes back, and so then people are getting a series of stem cell treatments, and we have a stem cell program, but that's not in the United States because of, we're using stem cells that are grown in a lab.

Nathalie Niddam
So regulatory.

Matthew Cook, M.D.
There's a whole logic for why those would be better from a stem cell perspective compared to an off the shelf umbilical cord blood or Wharton's jelly product. However, that's having an effect and then it does what it des. The nice thing about the bioregulators, and if you think of it almost like a supplement that's regulating in a balancing immune function, then you can do that as a sustained aspect of a program. And so then I ultimately think that we're gonna evolve into using bioregulators before a regenerative medicine procedure and then probably during and then after to sustain the effects so that we bring immune stress down and then we stay on those bioregulators afterwards. And so then I think directionally, I think that's gonna mean important place to think about in regenerative medicine.

Nathalie Niddam
No, I think they've got so many different, there's so many different ways and places that they can be assistive, right? And then we don't have to eat all the nasty bits and bobs that you would need to eat from an animal to get them.

Matthew Cook, M.D.
Oh, well, no, we were talking about that before.

Nathalie Niddam
I think that was offline, right, we were talking about...

Matthew Cook, M.D.
Tell them about that 'cause that's my favorite. I love that you said that because I'm really into it.

Nathalie Niddam
Yeah, well, I think if we think about where the bar regulators come from and where are they being sourced is from the thymus glands, the kidneys, the lungs, the heart, the brain, all of these parts of the animal were getting the extracts. Well, if we think about people who eat a true nose to tailed diet, who are actually eating animal testicles and kidneys and femurs glands and brain, which is touchy these days, right? Like, I mean, in our society, nobody wants to eat brain. I happen to love heart. I mean, I don't know if you've ever had it. It's a really delicious meat, but to me, it's like another muscle. People say to me, "Oh, I could never eat heart." I'm like, "Well, you eat butt, why wouldn't you eat heart?" Like, I mean, it's just another muscle in the body, but regardless, those tissues will inherently provide the bioregulators to your body. And so those people who are eating those true nose to tail diets very often, like you'll read in forums or on websites, you'll see people who've been taking, even the desiccated organs in a form of supplements, who've had transformative healing from different conditions and it can only be that they're getting those bioregulators. And in a sense, they're getting the bioregulators with all the co-factors around it. Like we know that taking liver pills, like desiccated liver is the best way to get your methylated B vitamins and your vitamin A, and your like so many different, it's basically called the multivitamin of food, right?

Matthew Cook, M.D.
Yeah.

Nathalie Niddam
So I think bioregulators is just a more refined piece of the puzzle. So for people who don't have the money for the supplements, the good news is you can buy organ meats pretty cheap, and that will actually give you access to a lot of this stuff.

Matthew Cook, M.D.
We eat a lot of liver and this a little, I'm just gonna say spoiler alert for what I think is probably the greatest TV show in the last 10 years, honestly. I really think this season, but you have to understand where I'm, I'm from Western Montana.

Nathalie Niddam
Okay.

Matthew Cook, M.D.
That's a caveat, but this TV show, 1883, is kind of a prelude to Yellowstone. Have you heard about it?

Nathalie Niddam
Oh, is it really? Oh, okay. I really like Yellowstone, I gotta say.

Matthew Cook, M.D.
And so then there's a scene where they kill a buffalo. It set in 1883 and they're on the Oregon trail on their way west. And so there's a scene with some native people and then they kill with this woman, a buffalo, and then immediately they cut the heart out and give it to her and they ask her to take a bite out of it. And then, so there's a spiritual aspect of it, but traditionally, we've been eating and you look at the Price-Pottenger research, that's a good one for people to look at. We've been eating organs and look when an animal kills an organ, what they do? Immediately, they eat the liver.

Nathalie Niddam
Absolutely, first thing, they go for the organs. You look at traditional cultures like the Inuit, the muscle meat went to the dogs. They consumed the organs, the blabber, they would boil the bones, like who are those two explorers that this is the, I can't remember their name, but there were two explorers way back who to prove a point lived with the Inuit for a couple of years and came back to England and were so healthy and it was literally a carnivore diet because these are people, they don't have access to like lettuce and tomatoes and potatoes and whatever else. And they came back complete in amazing health. They'd eaten things that they'd never, probably would've thought they would've eaten before, and I'm not advocating for a carnivore diet at all. I think that it has its place. It can be a great intervention. I don't know that we do as well with it

chronically over very extended periods of time or indefinitely, let's say, but definitely, those organs, they have a place in our diet. So if we're not willing to eat the organs, we can access them in different ways.

Matthew Cook, M.D.
And so then that's another way to think about that is to think about your stack. And so then for me, organ meat is like a, in the heart of my stack. And so then my stack is like, is food and lifestyles just like crucial part of that. And then to me, evolving into kind of getting really good at that is potentially, may have more to do with how you feel than anything else, 'cause once you get that dialed in and that's a little tricky, but it's actually not that hard. And then once you kinda get into it, then it's like, I would just, I can't imagine eating like a traditional kind of, they call it the standard sad, the standard American diet.

Nathalie Niddam
Yeah, once we've been in this world long enough, it becomes, it's such a foreign concept, right? I don't know, I mean, I think as a matter of fact, it's funny 'cause my husband came home with these gummy candies last night and I'm a sucker for gummies, like it's just a weakness. And I had a couple and I was chewing on one and this is so fascinating. Like I could taste the chemical in the candy. It was the weirdest thing. And I think that when you get into a world where you start eating real food, as this is what you do, like you're eating your food that still looks like what it used, what it came from, kinda thing. You lose your taste for some of that, from some of what we would define as junk food, right? You're now able to almost taste the artificialness of the foods that are really in a sense, bringing people to their needs in our society.

Matthew Cook, M.D.
Right, to me those things and even like sugar in general feel so sort of like kinda toxic that like I lost my taste for all of that stuff. And then that's like a little bit of a psychology piece too, because if you kind of, you almost have to hypnotize yourself into the idea that you don't like that anymore.

Nathalie Niddam
Yeah.

Matthew Cook, M.D.
And there's that part where you, and then you have to just not do it for a little bit.

Nathalie Niddam
Yeah, you lose your taste for it.

Matthew Cook, M.D.
And then you lose your taste and then you're kind of like, and like to talk about a lifestyle hack, that's one and then number two is to start to put these good things in. And then that could be at the nutraceutical. That could be at the supplement. That could be, oh, okay, I'm gonna put some liver in. Oh, okay, I'm gonna put some liver capsules. And then as people begin kind of to play like this, then generally, good things start to happen.

Nathalie Niddam
No for sure. I mean, it's foundation. So I think like when I talk to people about bioregulators, I look at them kind of as a hierarchy, right? So we start with the food, we start with the organ meats, we move to the supplements that are the desiccated organs that are now becoming more readily available. Then we move into the bioregulators. And now we move into the oral bioregulators, which is that extract still from the gland. And then at the top of the heap, which is possibly the one that I think that with clinicians you can start to really play with is the synthetic injectable ones. And so you kind of have this hierarchy of products available to you, and it's almost like they're in varying degrees of concentration, like that money piece is the synthetic at the top, not to say it's the best, 'cause probably as we've talked about, it's best with the oral, like to use both together, but gives you that ability to kind of tap into different things at different times based on the situation and what people are willing to do. I mean, I have friends who are vegetarian who won't even use the oral bioregulators because they came from an animal. And so there's a psychology around that, that the good news is the synthetic gives them an option if they really need it.

Matthew Cook, M.D.
Yeah, there's a beacon friendly solution.

Nathalie Niddam
Yeah, exactly. And then when you start talking to people about the possibility that they may be able to reduce their biological age, that's when you start to really get people's attention.

Matthew Cook, M.D.
Oh, right, yeah, tell me a little bit about that.

Nathalie Niddam
Yeah, so I mean, maybe that'll be how we close. I mean, one of the things that, so when I was introduced to Bill Lawrence, like he's continuing, in essence, he's taking on this work of doing a human clinical trial, a human trial of taking people in and putting them on bio regulator protocols and measuring their biological age before they start. And then as they move through the three year trial and for me, I'd been using the bioregulators kind of ad hoc for a couple of years. Plus I'd been doing lots of other things, right? I use a lot of molecular hydrogen. I have this electrolyzed water machine. Like I've got a lot of different things that I'm doing in my stack on a day to day basis. And when I did my bio biological age, it came out to be already eight years younger than my chronological age. And so when you start talking to people about the fact that these bioregulators have been shown, and if you look at his research, 'cause he's got three years now of data on these people and he can show that using the bioregulators, he's reversed people's ages dramatically, including his own. Not to mention that in his case, and I'm sure he told you his story, no men in his lineage and for four generations had made it past the age of 70. He's the first to do that. And this is really what sent him down the bio regulator rabbit hole and put him on a plane to St. Petersburg to meet with Professor Khavinson and say, "I need you to work with me here."

Matthew Cook, M.D.
Yeah, we're helping to enroll people. So if you wanna reach out to us, you can at that we can help enroll you in that trial. And then we're doing that testing. And so then you can be, you can look, there's some methylation tests that look at at your DNA and your DNA age, and then you can also actually measure the caps on your kilometers and measuring how many base pairs they are. And the companies we like is repeat diagnostics for the telomere test. And then for the DNA methylation is TruDiagnostics.

Nathalie Niddam
Yeah, I use TruDiagnostics. I actually just ease, I use TruDiagnostic for both, but that's part of the reason, part of it is because I'm in Canada and it was just easier to send one test and they started doing the telomere testing last fall or last summer, I guess, right when I was doing my baseline testing.

Matthew Cook, M.D.
Although Repeat Diagnostics is in Canada.

Nathalie Niddam
So I've heard that, but I haven't even find them. So maybe the next time.

Matthew Cook, M.D.
I'll send you some information for them.

Nathalie Niddam
Yeah, so I've actually enrolled a bunch of physicians into Bill's.

Matthew Cook, M.D.
Oh good.

Nathalie Niddam
Well, 'cause you know what it is, like, I mean, physicians hear about bioregulators and like, well I need to know more like I need to, and I'm like, "You know what? "The best way to learn is you go up with him, "be his test subject," and it's part of the way, it's one of the ways people can learn about the bioregulators and experience them for themselves.

Matthew Cook, M.D.
Yeah, and then we're launching this spring with Jean-Franchois, the international Peptide Academy. And so then we're doing a peptide course at Barisal University. So we're taking some deep dives into this, this year in terms of clinical issues and stuff like that. So that'd be fun.

Nathalie Niddam
Amazing, yeah, that's really exciting. I'm looking forward to that actually.

Matthew Cook, M.D.
I'd love to have you love to have you with us. Tell us one more time where people can find you.

Nathalie Niddam
Sure, so you can find me on the, well, on Facebook in my community, you can apply to join that. That's the optimizing superhuman performance group. You can find me on, well, you can find the podcast and soon we'll have Matt on the other side of the mic there, that's the biohacking superhuman performance podcast. And then on Instagram is just my name, Nathalie Niddam and my website, natniddam.com.

Matthew Cook, M.D.
Okay, well thanks for everything that you're doing, you're making an awesome contribution to humanity. So I'm grateful for that. And I look forward to staying in contact with you and learning from you, so thanks for being here.

Nathalie Niddam
Well, likewise, Matt, thank you for all you do. And thanks so much for having me. Thank you.

Matthew Cook, M.D.
Okay, have an awesome week.