Introduction and Speaker Background

Welcome back to the Bioregulator and Peptides Summit folks. Our next speaker brings something truly invaluable to this conversation real world clinical perspective.

Doctor Gus Vickrey is a board certified family physician dedicated to helping his patients achieve optimal health, not just the absence of disease. We've had long chats at various events about this, and Doctor Vickery has been leading the charge now for quite a while.

His work is very impressive. He's been in the trenches integrating bio regulators and peptides into his clinical practice, and what he's observed firsthand with his patients adds a layer of grounding that you simply cannot get from research papers alone.

Today, Doctor Vicary is going to share some of those clinical observations what he's seeing, what's working, what's surprising him, and how these tools are changing outcomes for the people sitting across from him every day.

Please join me in welcoming Doctor Gus Vickrey. Welcome, Gus. Thank you. Natalie. It's always an honor, privilege and every other good accolade I could give to get to have a conversation with you.

Well, back at you, sir. And thank you for taking the time. So as we set up in the intro, we're going to dive in together. I mean, your board certified family medicine, but you've definitely really leaned into this whole idea of longevity and optimization medicine with your patients.

Do you want to talk about what kind of led you there? And then maybe a little bit about how you found by regulators, and then we're just going to dive in because we're obviously trying to keep these tight for our listeners.

And yes, there's a lot to talk about a long story. Pretty short train and family medicine started a practice right out of residency. And, you know, the first ten years of my career was doctors still go to the hospital.

You still if your patient moves to the ICU, you're taking care of them. You're taking emergency department call. Pleasure managing him in clinic. So you learn a lot because you see people in all these different contexts, including severe illness, moderate illness, and then just chronic illness or healthy in the clinic.

And about five years in, you start feeling a little more comfortable with what you're doing. Up until then, you're just like wondering who how on earth people are still coming to you.

You know, but the you begin to be able to step back and just do some meta observation. And what I observed was a population of people who were just not that healthy.

Right. And a lot of these are 30 year old 40 year olds. And it didn't resonate with me that 40 year olds were coming in each year for a physical and had four chronic diseases that I was going to represent medicines for.

Now it can happen. Things can happen to people independent of, you know, their specific agency, their genetic diseases. There are all kinds of things.

Nonetheless, it just didn't make sense. And of course, a lot of it was metabolic disease. But then there was the whole quagmire of fibromyalgia and insomnia and migraines and headaches that were that I was taught about medical school, but there were a good bit of my schedule in clinic, and these people were miserable.

And you realize that the pharmaceutical toolbox is a powerful toolbox. It can be quite helpful, but it's not obviously resolving disease. It's not, you know, reducing the variables that are influencing the symptom of these specific

conditions.

So that was when I began to really step back and take a deeper look at like what's really influencing chronic disease, lack of well-being, accelerated aging, and the population of people who are trusting me to be their doctor.

And of course, what you begin today into is a whole lot of common sense, like nutrition and environment and stress and sleep and toxins. And then as you begin to introduce that and people take action, you see improvements.

It's amazing how the body just starts moving and healing and metabolic diseases are reversing. And a lot of that might have been like early on ketogenic diet, you know, with exercise, which are great for people who have prediabetes to more rapidly reverse insulin resistance.

But eventually you start to then look into the therapeutic toolbox as well, right? Various molecules beyond just medications, nutraceuticals, botanicals and the data.

And you begin introducing those.

Why Terrain Medicine Led to Peptides

And then I was introduced to peptides, probably about almost ten years now, ten years ago, and began to work with immune peptides in people with auto immune disease and gut peptides.

And of course the growth hormone secreted. And, you know, the whole thing is we've talked about many times, and what I saw was a, you know, a pretty significant and that could be measured both objectively and subjectively.

But you talk about this on your podcast all the time, but not unless you've addressed terrain first. Right? Right. And so most of my work is actually programing terrain.

And then what happens when you program terrain is a lot of times you can sit back and watch the body go to work, and it turns out you don't even need to use all these other tools because it'll just go ahead and start fixing itself, which is really fun to watch.

But when people have been trained into disease, there's usually a level of dysfunction that requires more than just nudging the body back, just setting the train.

Typically, you got to bring in some stronger pushes right to the system to get it to undo compensations and retrain normal, healthy homeostatic function.

So that's where peptides, I think, became very powerful tools that we could add on to terrain work to get from point A to point B a lot faster than we used to get.

And it was you that brought by a regulatory peptides my attention, because I presented a case study of a lady, a diabetic case, and it was a great one because it had peptides and hormones and nutrients and everything.

And the woman had a remarkable transformation. I still present that case study because people don't believe it's true what could happen. And you were the one that said after me.

What if you had thought about the pancreatic bio peptide? I was like, what is that? You know, and I was like, tell me long talk. Yeah, tell me about it.

And I think, I wonder when that was. We were both there was that four years ago maybe that we sat together and not I think it's longer. Yeah. We were in Kentucky.

We were at the Wild Health Summit. Yes, it was the Wild Health Summit. And we talked for a long time. And I went home and you introduced me to Hal, and he sent me.

He sent me that little dense canvasing book on all the research. Yeah. And then you set me up with profound health and I started programing bio regulatory peptide stacks for my patients. So.

And I've been doing that ever since. And so we are gathered here today to talk about your observations. Before we jump in, though, I'm curious to ask you where are there cases or people where you're more cautious with the by regulators with is there an instance where you feel that maybe people need to exercise some caution because they're generally speaking, they're considered to be pretty safe, right.

But and I'm bringing this up because I feel like it behooves us to share with the audience that even something that is technically a safe, even when we're talking about the natural bio regulators that are technically classified as nutritional supplements, there might be a population or two of people who might want to exercise extra caution.

And I mean, even with nutrition, right, like you can there are particular diets that wouldn't be good for a particular person, even though they would be considered just classic nutrition.

So it is really important. These are molecules that have a biological impact. And anytime you introduce something that's going to shift biology, you have to recognize that there are this is an exaggeration, but like an infinite number of downstream consequences that you can't account for, right?

Which is typically the story of a lot of conventional medicine, but even, say, functional medicine, where we get really excited about something and it can have these benefits, and then we're pushing it in, and then you start to see later that you created challenges in these other systems because you modulated this one system.

And so I have this deep respect for the infinite complexity of the human system, and that what we know is far, far, exponentially less than what we don't know.

And so when you go to modulate a system, you have to do it with and with deference, with humility and recognizing everything could have a potential impact.

So one, people who are already exquisitely sensitive to biological inputs, and I'm sure you've encountered many of these, I have some of them under my care.

And we're talking even, you know, like a higher dose but not a high dose of niacin will create detectable, uncomfortable impacts for that particular person.

And I said, well, niacin a bad choice because a lot of people it's a bad choice because, yeah, I had a pretty uncomfortable experience with a lot of people that one.

But, you know, let's just say thiamin instead or something like, I mean, and so these people are exquisitely sensitive to these inputs, and you're often getting a micro dose, almost everything that you put into their system, it doesn't mean I would, wouldn't use a bio regulatory peptide, but I would start with the lowest dose.

I could use probably one peptide and make sure that their system tolerated it well. And before I begin to escalate in those individuals cancer, I'm really care.

I cancer to me is you know we it's there's a lot of better understanding of cancer. And I think that the research is great and I think there's a lot of merit to complementary approaches to cancer with a deference to the conventional treatments, if they are research based and probably effective, you don't want to interfere with what they're designed to do, which a lot of complementary approaches could actually serve as a form of interference to the conventional I think, wedding.

The two together intelligently is the best approach, but I don't. If you were to ask me to, I think bio peptides would potentially a cancer, I would say probably not.

How do you. Not likely. But at the same time, their mechanistic activity of increasing gene expression, I would

probably avoid them while somebody is being treated for active cancer in their body.

But once they're in remission, then I would not necessarily avoid it, but I might avoid the target tissue. That was their cancer right. Because if for a couple of reasons one is we never know like if you go and tap the DNA in that area.

Do you unlock some things that you couldn't have anticipated. Probably not would be my answer. But you don't know the answer. Two cancers tend to come back on colleges, ask a lot of questions and you don't want to be sitting there talking to them on college.

Just saying, why did you put them back on a pancreatic DNA modifier when I when they were treated for pancreatic cancer? I don't want to be in the position of answering those questions.

No, no that's uncomfortable. And maybe pregnancy. Yeah. Pregnancy I agree as well. Yeah but I would yes I think that's a great one that yeah I don't treat a lot of pregnant people.

No I know but I but but just if, if we're going to but that kind of covers it so okay. So now you mentioned the you've had a lot of great success with the pancreatic bio regulators.

So maybe let's talk about that one. Because you know these are interesting days. Everybody every second person you talk to seems to be on a JLP peptide protocol of some kind.

There is some evidence that it does. Well, never mind evidence. It gets the pancreas working a little harder. Yes. And maybe a pancreas that's been a bit beaten up over the years and may or may not remember how to do its job properly.

When to Use Caution with Bioregulators

So let's talk a little bit about where the pancreas regulator has kind of surprised you at times. Or maybe at the beginning. And now it doesn't anymore. But yeah.

Yeah exactly. And so in general use, I would look at it from the standpoint of whether it's insulin resistance, beta cell dysfunction or even exocrine.

And I'm not aware of any specific data around pancreatic exocrine function meaning digestive enzyme production. But you know, when we do gut assessments, we commonly see, especially in older individuals, very low pancreatic exocrine function.

And so that's one area that I'm like, well, if that comes along for the ride, great. You know, I can't say that I've been able to necessarily measure that.

But the specific use cases I can give you. So I'm using protocols with the pancreatic peptide for people, whether it's they need to improve insulin resistance or they need to improve beta cell function.

Now, most insulin resistance will eventually have some component of beta cell dysfunction as well. So you could almost just say that's probably coming on for the ride, even if you're still measuring high insulin, right in that individual.

But there's a a type of case that it's not uncommon. It's not as common as insulin resistance where people will present and they'll have a hemoglobin A1 of say, 5.8 pre-diabetic.

Right. So they have glucose volatility. They'll have normal to borderline high fasting blood glucose. All other markers of insulin resistance are normal including a lipid particles triglycerides HDL small dense LDL.

There is not a pattern of resistance. And they're often not overweight. And they're they're fit. Insulin levels will tend

to be on the low side of normal or even low in sea.

Peptide levels will be on the low side of normalcy. Peptide way of measuring endogenous insulin. So with these people, some of the data suggests that and it makes perfect sense.

Low carbohydrate diets or ketogenic diets will prolong their beta cell function, meaning it's less likely to devolve towards like a beta cell type, you know, type of diabetes, where they may actually have to look at insulin as an intervention because that's in these cases, going after insulin resistance isn't going to do a lot for you.

It's purely can we improve endogenous insulin production in response to the proper signal. So in these, you know, so in these cases, you know that this person's borderline high or high hemoglobin ANC is actually insufficient pancreatic production of insulin, likely when they're eating mills, even if they're eating lower carbohydrate, they still might not tolerate much of a carbohydrate at all.

Or if they do, a high protein diet where a good bit of that protein is being converted to glucose, it can still cause that. Now these were at least five, I might have more, but at least five cases of people I had followed for years with exactly the same metrics and who didn't progress, but were also using like low carbohydrate, avoiding sugar, getting movement after mills, doing things to try and make sure that they put less stress on the pancreas.

The only intervention in each of these cases was to do a protocol that included pineal, thymus, blood vessel and pancreas and pancreatic peptide. And the dosing protocol at that time was 30 days right, a 30 day straight push of taking each peptide together, followed by ten days out of 30 for the next 6 to 12 months.

Right. So we were like, this is going to take a while. We're not going to just see beta cells, you know, signs of cell regeneration and a couple of months.

And it was interesting because what happened in every one of these cases, which again, there are other things these people are doing to potentially improve control.

But this was the only new intervention. And what was a stable situation for years. And in every one of these cases, see peptide levels normalized. Now they didn't become like high, but they normalized on the low end of the range as opposed to being low insulin levels improved as whatever percentage of the range they were in.

And AMC is typically dropped from a 5.7 or 5.8 to a 5.2 or 5.3. And so can I say, can I absolutely say that that was the bigger peptide that didn't know?

I cannot not from a scientific do I strongly believe that influence beta cell function? Yes I do. Yeah. Yeah yeah. No that's that's pretty amazing. It's interesting that you kept and so did you keep measuring along the way.

And did some people kind of you saw the improvements at six months or did everybody pretty much take it was really 12 months. And that's the same thing with any other use cases we go into except for, well, not everyone.

But if we talk about kidney, it's the same deal. It was a good year of, well, let's talk about kidneys. But then we maintained right to. So these people continued every three months taking a ten day course of that bowel regulatory peptide.

They're still taking it right. Yeah. Today you know. But but ten days every three months is no longer a massive commitment. You're, you're into. Yeah. You're getting into.

So let's talk a little bit I know you we've talked about you talked about pancreatic. You've you talked a little bit about adrenal and kidney. Like those are those three I mean not that there's not others.

And you know as time goes on there will be others. But those three I think is where you said you've so far observed the most notable shift. And I think that's for good reasons.

You know, I don't manage a massive population of people anymore. So at any given moment there's 200, 300 people. So I'm not going to one, I'm not going to have a high volume of any one particular thing.

The kidney, you know, issues beta cell insufficiency, adrenal underperformance. You know, these are really common in our population. So you're likely going to encounter them.

And they're also modifiable. Every single one of those was modifiable before by introduced by regulatory peptides. We knew that these things could change.

Well I hadn't seen much with the beta cell function actually. Be honest that one. But the others that I have and we can measure, right. We can we can clearly measure objective biomarkers that index to the function of that particular tissue type.

So these are easier ones where it's going to be harder to to actually measure cartilage. Right. Or muscle, you know, or even intestine.

Pancreatic Bioregulator Results

It's really hard to measure like is there is a is there an improvement or not in the intestinal environment from it. But these we can measure. So with kidney obviously kidney insufficiency or chronic kidney disease is very common in our population.

There's a lot of different reasons for it. And I think you've probably had people who are like integrative specialists with kidney on your podcast to talk about protocols that you can.

Yeah. And I have one coming up right after you actually. Yes. Excellent. And so yeah, everything that they're going to talk about doing like from nitric oxide and glutathione and amino acid availability, those are all absolutely critically important.

If you want a chance for your kidneys to at least not progress into a deeper state of disease, or if you'd like to see some reversal of that disease. And with kidneys, there's so many variables that influence it.

And you're never, of course, going after just one and any kind of scenario. So it's hard to say okay. Was it the regulatory peptide or was it this. But these were similar cases in the sense that we had addressed a lot of those other things that, you know, and maybe I'm going to learn more from your kidneys specialist of things that we can do to help those cases.

And we introduced the same thing, a protocol with pineal, thymus, blood vessel and kidney and then monitored renal function metrics and system and see glomerular glomerular filtration rate, urine microbiome and protein, things like that.

And each of those cases, 12 months out we saw measurable improvement in kidney function. And so some degree of reversal of the kidney and sufficiency.

And with the kidneys, if you can stabilize that at stage one. Stage two. And then if you can just yeah, if you can just keep it there and it's not going to progress, then you can go ahead and live another 50 years or 70 years or whatever with kidneys doing that.

So it's critically important. And kidneys effect as you know, everything. Right. So kidney impairment is like it affects, you know, cardiovascular and blood pressure and mineral cortical balance and detox like like it's a pretty vital organ.

Yeah. It's the forgotten organ back there. Yeah, yeah. And so and so kidney is also one like if I'm just doing more health maintenance rotations of bio regs we might not do it every time.

But kidneys getting into the rotation on some kind of consistent basis. Yeah. Yeah. And then adrenal if you want me to if you want to ask questions you can or I can jump over, you know.

Well I mean you know I think with kidney you know, definitely the doctor Robin Rose, who lives in Hawaii. So there's two doctor Robin Rose's, there's one who lives in Hawaii, one who lives in New York, and the one who lives in Hawaii is a specialist.

And she would say that the lion's share of adults in the US are walking around with undiagnosed, almost stage two, if not stage two CKD. Yeah, I don't disagree. I think most people.

Yeah. Stage one we see commonly in the data but it's it's not going to get reported. It's not going to be discussed with exactly. She's like it's accepted right.

The problem it's a little bit like tolerating to high blood glucose or to high fasting insulin. You're awfully close to the edge of that cliff. Yes. And it's it doesn't take much to get you to push you over if you don't.

Course. Correct. So I do think that I think and to your point with the bio regulators, you don't have to wait until you have a problem to bring them on board and do some, I call it maintenance work.

Touch them up. Just touch them up. Just do a little touch up. Yes, exactly. Now with adrenals, what has been your experience with the adrenal by a regulator?

Have you. I've had really positive results with adrenal. Now once again, we're we're addressing everything that might be causing the cortisol signal to be dropping out.

You know, and so this is really common. And the last time we got together and we went through metabolomics, we spent a lot of time on sympathetic nervous system dominance.

And the more that and by the way, the deeper I keep going with metabolomics and then pulling the metabolites and running my own AI modeling on it. And like that, that pattern of sympathetic dominance is like, it's everybody, right?

It's there and it's influencing everything else. And it's not the only thing affecting adrenal function, but is one of the major things that would cause through a negative feedback loop for your your own adrenal glands to start producing less cortisol, amongst other things.

And so it's really common for me, for people, whether they're chronically sick, and that's why they've come to me or they're the high performer, Uber athletic, constantly putting too much demand pressure on their system.

Either way, I rarely see optimal cortisol signal and so must always a little suppressed. It may not be abnormally low, but it's on that low side of the range.

It's not. It's not following the typical pattern we expect. And it's important right. Like I mean cortisol signal is critically important. Yes to a lot of people are on in stress responses have higher cortisol and can that you know contribute to metabolic disease and immune.

Yeah absolutely. But I think from the standpoint of over time what we see more of is low cortisol or at least lower than optimal cortisol. And so, you know, it's a very important signal that you need to address.

Right. Because if you're working on cell membranes and mitochondria and detox and clearing all this stuff, but you're not, you know, restoring hormonal balance and autonomic nervous system balance to the extent that you can then ultimately the that sea is going to become the same.

See, it was over a matter of time, right? Yeah. And so with adrenal commonly see it obviously there are adaptogens that have some pretty good data around their influence on cortisol signal and stress balance.

But they're typically working through a medic basis. Right. So they're often causing a little stress to induce that response. That's not necessarily a bad thing, but there are cases where you realize this person doesn't need any more, like signals of stress.

This is not the time. Yeah. And so I have found and this is one of the only ones that I've done. Well, I've done pineal solo. Right. Like I'll put people on pulses of pineal pineal just because of the evidence around, you know, the pineal gland function, melatonin, telomere lengthening I'm like that's a good peptide to to maybe your touch up might be a really frequent touch up with that one.

I think you can make a pretty good case for that. But the only other peptide that I would consistently use as a solo agent would be the adrenal. And I've seen results with just the adrenal, like just putting people on that.

It started because I would have people that we put together stacks for everything else, and they were already hitting an overwhelm point and they were like, I don't think I can do these for peptides.

So I'd say, why don't we just do adrenal and add it in? And we measured results like was we're measuring adrenal function over time I've had and whether there is placebo or not, I cannot say I've had patients who take the adrenal peptide and say, I can tell that I have more energy.

I feel better now. Yeah, I know, but nonetheless, I'll take it, you know? Yeah. No, I mean, look, even if they think that they feel better, that's it's a win, right?

It's part of feeling better. Yeah.

Kidney and Adrenal Support

Anything that inspires confidence in their own mind that their body can restore health, will will absolutely influence their overall result right from their efforts.

Reprograming help that confidence because the confidence ties into stress, right? Like if you're thinking isn't going to work, I'm a hopeless case. My body has failed me.

There's no hope for me. But hey, I'll try anyway. That's that's just a whole different environment of central nervous system programing, threat versus safety versus.

Hey, you know what I've been saying for a long time, but I do believe my body can heal. And I'm really confident in this plan. And I think this plan will work for me.

Huge difference in outcomes I believe. And so with the adrenal, I've had people subjectively report improvements. I don't know. Right? I can't say one way or the other, but I'll take it.

But we've clearly measured improving cortisol. And I'm not talking about monumental stuff. I'm talking about somebody who's a basal cortisol level. If it was a blood test as a fight, that's low, right?

Especially at 10:00 in the morning, that's cortisol. And then three months later it's a seven and a half, and then three months later it's a ten. Right.

And then it might still take another 12 to 18 months before it's a 14 again. But there's clearly this stepwise incremental improvement, along with go outside into nature and breathe and get more sleep and everything else you need to do.

But I believe that adrenal peptide is effective, I do. Yeah, that's really interesting. So do you ever pair adrenal with thyroid? Yeah, because it's really common to have people with and with both right.

Yeah. Yeah I would is the one where I, you know, I still believe that it has the potential to normalize and balance

that weight function. I haven't measured a lot of outcomes.

And with my thyroid peptide. And so obviously we're looking at for 23324 antibodies reverse T3. And we've added in for people. But I can't say that I've seen a clear cluster like I have with the others of oh wow. Like that our weight is improving.

Let's win you off medication, things like that. Yeah. It's interesting. I mean, I've seen a couple of those cases in my membership community where people were working with physicians or natural paths, and the thyroid bio regular seemed to be the last piece of the puzzle that needed to lock in for them to see real, real results.

But, you know, as you say, like it depends on your patient population as well. Yes, but I'm still I'm still going to keep using it in people. Sure. For sure.

So you've mentioned a few times how that the bio regulators don't they're not going to over perform. They're not your diva right. They're not your yes. They're not the diva peptide.

They're the get in, get the work done and get out peptide. And maybe speak to that a little bit about, you know, how that inspires your work and and maybe even your confidence in using them over time.

Yeah, I think it's really important because what we talked about earlier, all these downstream consequences that we can't measure or account for, things that we don't even know about yet, right, in terms of human complexity.

And so you again, have to have this like cautionary principle when you begin to create new biological inputs into this complex system. One knowing that you're unlikely to cause harm is really, really helpful.

You know, because that's not true of every tool we use. Some of the peptides we use have clear potential adverse effect profiles that you have to monitor for.

And and they're powerful signaling molecules that you're using at higher doses to, to create a particular response bio regulatory or you know there's very elegant there.

You know there are one. They're reproducing something that's a natural process for the body. And you look at their DNA interactions. That has to do with like chromatin.

It's complicated, but it's not just simply I'm just turning these genes on. Right. It's winding the helix. That's exactly right. It's it's potential, the possibility that you could improve this genetic expression.

I improve the protein and enzyme environment of that particular cell line, which might impact functionality, might meaning just because the enzymes produced if it's not needed, it's not doesn't mean it's going to do anything for you.

Because the body is so intelligent. We both believe that there's like an incredible intelligence to our body that can actually do a lot of the counting for us on that infinite complexity that we can't do for ourselves.

It's probably constantly saving our bacon. Right? Like for our own minute of every hour of every day is my theory. Yes. Yeah. It's so it's like, I know you've said this many times, I keep saying this.

It's brilliant at keeping you alive. Right? It's so brilliant. The problem, of course, is it'll keep you alive when all the inputs are wrong. And then that gets to be the entrained homeostatic pattern.

And now you've got to do a lot of work to get it to go back to the other one. But because its job was to keep you alive and to keep you safe, right. That's what it's supposed to do.

And it does it. And it's amazing and I'm grateful for that. But with these peptides, what I see is you're potentiated these improvements. But if these improvements aren't going to actually be improvements as far as the body is

concerned, nothing's going to even happen from that.

Yeah, right. You know, but if they could potentially improve functionality, maybe this enzyme hasn't been robust. And it really is important in the retina when it comes to intraocular eye pressure.

I'm taking a big leap forward on those mechanisms. But let's just say it is. And you know somebody with early glaucoma which threatens peptide. Oh that's another of my favorites which has studies in early glaucoma.

Right. Really in humans. Yes. That and macular degeneration. And so this one, this particular enzyme is no longer being produced in a robust way, in some way mechanistically ties into intraocular pressure.

Now this enzyme is being produced those mechanisms mechanisms click into place and indirect pressure is stabilized. Right. But if in fact there is no issue with interactive pressure, then nothing's going to happen to interrupt your pressure that yeah.

Now of course it's doing more than just. And again I'm taking license with an enzyme and interactive pressure. But I just know that is a studied endpoint for the retinal peptide that has some favorable data to it.

So so does macular degeneration. So then there are other there are other aspects of that genetic expression that tie into the health of the retina itself, separate from say interviewer I pressure mechanisms. Right. Yeah.

So they're elegant and I and I take a great comfort in their safety profile and that we're potentiate the body moving in a direction that is, you know, is in the camp of robustness and resiliency.

But the body will only utilize that if that's what it needs to do. Yeah. Bringing it back to function with the retinal. Do you stack it with others like the blood vessel.

Especially if you would think that's what would be critical. Yeah. So when when Doctor Lawrence was kind enough to send me Kevin's little very dense book, there was a yeah, there was a whole chapter on retina and there were some with the before and after pictures of the fundus right of the retina itself showing these changes and working off of a recall from I haven't read that book and, you know, a few years now, but in my recollection, the retina was always with that core stack.

Thyroid, Retina, Brain, and Lung Applications

What vessel, of course, makes perfect sense. But it's most retinal problems have a endothelial micro circulatory component. But then circadian biology in the retina.

How intimate is that relationship. And then pineal is how how intimate is not only the thymus with the pineal gland. Right. Because those two actually there's some evidence that the thymus influences pineal genetic expression.

And the pineal expression influences thymus, where most of them are influencing expression only in their target tissue. Those two appear to be talking to each other.

So it makes sense to me that if you're going to try and either protect the retina or improve retinal function, somebody who has diminished function, you want all those mechanisms working together.

Yeah. Yeah, I actually think I read somewhere and you've been in the literature a bit more recently than me. I feel like I've read somewhere that the pineal bio regulator actually has some impact on the optic nerve as well.

I'll have to look for that. Did you come? Yeah. I didn't come across that, but it was either, you know, it might have been pineal or it might have been the brain.

I bet it might have been the brain, because the research on that makes me, I've been using it in people with potentially any sign of a neurodegenerative disease post post-concussion traumatic brain injury.

But the the data around the brain. But it's you're going to know this. I'm going to look at it real quick because I think this one is possibly, possibly underutilized.

I don't know what other doctors are we talking pineal on and or cortex in now. Yeah. But it's not it is the there's a couple of them. There's a different one.

So the brain caught so there's cortex and then let's see the strongest clinical literature is around cortex in right which is not a single defined short peptide but a polypeptide complex from cerebral cortex tissue.

That's different than what they call it cortex or something like that, which is. Yeah, well into the synthetic the data is much more robust for cortex and then quarter gen.

Yeah. Yeah. Well it's you know, the nomenclature of these beautiful molecules is enough to drive someone completely batty. Yes. Yeah. What of my giveaways for this summit is actually a table demystifying names that will help people enormously.

Yes. Yeah. I remember in Kevin spoke them you know, looking at it was, you know, it would count as antidotes because it wasn't like a high number. But looking at post traumatic brain injury, but also post-stroke and saying they were favorable at least mechanisms.

But cortex was associated with better recovery of motor and cognitive function and improved EEG patterns, including increased alpha activity and reduced slow wave sharp wave activity near the ischemia zone with no side effects.

And this was an early ischemic stroke. Yeah, yeah, yeah. So you could imagine I mean, I definitely know people in this space who have their pre-mixed kind of their pre-prepared stacks in the freezer with a big note on it.

You know, if I get a stroke, this is what you're doing. Yeah. Early intervention. Yeah, yeah, yeah. Along with all the things. Right. The molecular hydrogen.

Yeah. We're not we're not going to just put them on, you know, and then call it a day. Right. We're going to be supporting every other aspect of brain repair I think in a kind of brain injury, you know, a person could go ketogenic.

But exogenous ketones is a very good intervention. It's a lot faster for starters. Absolutely. But the two that I I'm interested in all of them, I think all these peptides like, you know, I'd like to use them all all the time.

But the two that from the standpoint of case study treatment, like, you know, can we modify disease that have my highest level of interest outside of what we've already talked about, are the core cortex in and the long bronchus?

Jen, I think there's a lot of potential there in earlier stages of lung disease before it's become just fibrotic scar tissue to change. Yeah epithelial expression and alone beautiful.

Well surprise, surprise sir. We filled up over half an hour of content here. What I'd like to do is invite you to share with people your coordinates, where they can find out more about you and your work that you do, so that if anybody needs more guests in their life, which I can tell you, we all need more doctor guests in their life.

Sweet. They know where to find you. Yeah. Thank you. Our clinic is called Authentic Health. It's in the mountains of North Carolina. We do work with people from around the country.

Depending on where they're located. That's health, authentic health. I do have a personal website. But we're for the most part, we're trying to migrate all that into our clinic umbrella.

But those would be the ways to find me and find information on our clinic or blogs or anything, like all the podcasts that I've done with Natalie that are so popular would be listed there.

We've got another one coming up in the fall sometimes. So yes. Stay tuned. All right. Well, Doctor Vicary, thank you so much, as always for your time and for being so generous with your wisdom.

And we'll talk again soon. Thank you. Yeah. Well, thank you for introduced me to by a regulatory peptides. Natalie. My pleasure.