## Introduction to Dr. Robin Rose and the Peptide Dome

Next conversation. First of all, welcome back to the Bioregulator and Peptide Summit everybody. Our next conversation is one I have been genuinely excited about.

Joining us from the beautiful islands of Hawaii. Is Doctor Robin Rose, a physician whose work sits at a fascinating intersection of functional medicine, regenerative therapeutics, cutting edge peptide science, and their I say, nature.

Doctor Rose brings a deeply integrative lens to some of the most complex, chronic conditions we face today. And she's going to introduce us to a concept that I think will possibly reframe the way that many of you think about peptides entirely, a new term that doctor Rose came up with called the peptide dome.

This isn't just a buzzword, it's a whole systems level understanding of the body's endogenous peptide landscape that we talk about. Never. And what happens when that landscape becomes disrupted.

Today we're going to explore that concept through the lens of chronic kidney disease, a condition affecting hundreds of millions of people worldwide, often silently.

And one that the conventional medical toolkit has struggled to meaningfully reverse. Doctor Rose is here to change that conversation, and she is living proof that it can be done.

Thank you so much, doctor Rose, for being here and I'm looking forward to this conversation. Thank you. Me too. I love this conversation. Yeah, it's a good one.

So let's just get started. I know that you wanted to. I mean, you've done you host a very powerful community on Facebook. Am I allowed to say the name? Yes.

Yeah. I mean, it is. It's specifically for physicians and other clinicians and its secrets. So people can't find it. They only can reach out. Well, we won't.

You know what? We won't really say. If somebody really wants it, you're going to. We'll. You'll have to reach out to either myself or doctor Rose and we'll connect you.

But regardless, you've managed to build this beautiful community of physicians and clinicians on Facebook. And it's really it's this beautiful roundtable mastermind and exchange of ideas.

And you lead it beautifully. And I'd love to invite you now, really, to kind of unpack for us this concept of the peptides, some of the terminology around it that we're going to use.

And then we'll finish off talking about a bit about KD, which we must, because after all, you wrote that unbelievable reference book that at some point you're going to lift up for the camera.

There it is. Let's do it now. Yeah. Peptides. I own that book. It's you know what, guys? It's like this reference Bible type of book. It's really something.

So doctor Rose talked to us about the peptides and some of the things that we need to get anchored so that we can then move forward from that. Yeah. Thanks.

I love this idea. It's it's really come from my own, first of all, passion for peptides, which you've been an inspiration and a number of other pioneers.

I hopped on the bandwagon a number of years ago now, and personally, it's my life. And so the reason I wrote the book is because I think bio regulators and kidney disease are a marriage made in heaven.

And the point of all of this, I'll say the endpoint before I start is that we really have to take care of the rest before we add peptides. It's not pill for ill.

We have plenty of pharmaceuticals you know. And you just go in there bam and something happens. This is really a paradigm shift.

## Defining the Peptide Dome and Signaling Fidelity

And so I call this listening to the peptide Doane peptide 101. So the first question is what is it. And you did a really good job. You took some of my thunder.

It's like it's a conceptual shift in a clinical way. And you know you think about the omics and the genomics. This is what we're talking about. And it's I didn't make this up.

There's a huge body of study that, you know, dabbling into. I'm a I'm a nursery school here. Peptides. And what's the peptide dome. It's the dynamic network of all of the bioactive peptides, the endogenous ones, the ones that our bodies make.

So it's the totality of peptide signaling. Sidebar. Remember, peptides are signaling molecules. Don't forget that. And so it's the signaling environment.

And it really forced me to start like listening. What does that mean. They're signaling. How do I perceive that. How do I use my brain and my intuitive self to tune into my own health?

Because a lot of this turns out to precede the lab work that we use. And that makes a way more precision clinicians and patients. And so it's really a complete set of all of endogenous peptides.

And it's in organisms it's in tissues organelles. There's a lot of them you know there's neuropeptides and mitochondrial and immune. These are all what our bodies making.

It's not stuff we're eating or shooting into our bodies. I mean everybody knows insulin. It's a peptide. Yeah. The goal isn't to keep taking this exogenous.

And the thing to know. I live by the ocean, so I use the poetry of the ocean. But the peptide is constantly changing moment to moment. That's really hard to wrap your mind around.

It's a dynamic thing. There's constant Momoa changing waves, changing currents, and it has to respond to the surrounding conditions. And so, you know, for me that's a meditation.

And so the dome is really about adaptation to what's going on. And our bodies are wise. I mean, you know, the innate healing is wrapped around in us. And so, you know, the question is, what is this?

It's tied to oscillation, which is a term that I, I didn't I'm defining some terms for everybody soon. But oscillation is really important that circadian life is in waves.

And so the mitochondrial state tissue repair stress adaptation, the circadian timing inflammation resolution. And so it's not only about the concentration or the amount of peptides.

So we know DNA codes for proteins. The body is constantly cleaving these proteins into bioactive peptide fragments. These are the signaling molecules.

And in disease which I don't like using okay. Here's how. Here's disease. It's like here's resilience and here's

dysregulation. There's pathological peptide fragmentation ecology I love these words.

You know in other words it's not working. You know the peptides are not good peptides. So what do we do. And we're going to talk about that. First I want to say what's signaling.

Peptides are signaling molecules. If repeating that it's the language of biology. And we can begin to listen to this symphony of the endogenous peptides I'm obligated to.

And it's a process of communication to coordinate function in cells and tissues and organs. And there are systems of this. And so these signaling systems are interconnected and their networks that sense these changes.

And it transmits information. I mean I think like little molecules talking to each other, you know, I have all kinds of cartoons. They orchestrate the adaptation in the body and through these systems of signaling are bodies can perceive stress, no danger or danger.

Coordinate adaptation, direct repair and ultimately determine whether a challenge becomes injury or resilience. Another term that's bias. And so what we do we'll get to the lifestyle part of this because it's not like fluffy optional demanded of us to bias.

What happens if I eat crap? I'm biasing my pathways to do things I may not want. There's many of those. And so can we talk about signal fidelity? What is terminology?

I mean, I've been having so much fun with this. Is the signal clear? Is it coherent? Is it proportional versus is it loud? Weak? Chronic? Noisy? Contradictory.

So here is high signal fidelity is adaptation resilience which has become a very favorite term of mine. And we have health low fidelity where there's, you know, we ignore etc.

it's maladaptive. And we have this regulation and disease. And so what we want to do is build a favorable signaling environment. We all know this. We're putting it into a concept that is, you know, in a way it's like, I have faith in this.

I have faith that restorative sleep and there science to it is going to change my life. My personal story I've told too many times, but I had to stop being a night owl.

Forced myself to get to sleep before midnight. So circadian light movement breathwork go to Vegas. Nerve Vegas. Wait, what? Nobody has ever said go to Vegas? Yes.

You know, breathwork and cold showers. It's like I said, I like words, and I tell people, go to Vegas, they know what I mean. Yeah. Stress regulation.

That's the go to Vegas. Nutrient dense food in kidney disease, phosphorus reduction, nitric oxide enhancement. And so I just spent a month earlier this year in a war zone, and I witnessed people around me who were incredible.

And I came up with this idea of resilience. Is is a survival. Yeah. Scheme. And when I came home I started researching like cellular resilience. And what it is, is the capacity to bend without breaking, to adapt, without losing integrity, to recover from disruption, without losing function and recover despite the challenge.

And I was witnessing people in that mode. So, you know, we're looking at the peptide dome. Flexibility is the ability to respond to stressors appropriately, not inappropriately, and return to equilibrium.

That's the resilience that makes us thrive. And so it becomes the biological art of becoming stronger through challenge. We'll be talking about more misses because there's something very connected here and reflects the organism because this is happening, you know, to the dog, to the plants.

I mean, we're all we're all in this together. Ability to transform stress into adaptation rather than injury. Think bias.

You have some control.

## Kidney Disease as a Signaling Disorder

And so it's the expression of intact signaling. Right. So you know keep peptides in mind. The peptide being coherent. The organism can sense change can adapt repair recover.

And dysregulated signaling erodes resilience. That's what I experienced when I was there. Yeah just regular lot of noise fumbling. Yeah. And so that's where some of this came from.

You know we go through challenges and we learn and we come out and resilient coherent enables this resilience. So we seek coherent peptide orchestration.

Think of a symphony. And when there's a cacophony of noise you know something's going on. Not okay. And I hear that. Can I hear that in myself. And I perceive that in a patient.

And I, I believe I've known this for a long time because I come up with diagnostic stuff that it's like, I don't know why I thought of that. And so it's an organized flow of information, harmonious coordination of biological signaling across everything cells, tissues, organs.

It's really also across societies and how we relate with each other as people. And it allows complex systems to act with unity, precision and purpose.

I love the words. Yeah, transforming stress into adaptation. And when we lose coherence there's fragmented signaling and disruption. And so I'm going to ask I want to interject with a question here because, you know, when we when whether it's physicians or practitioners or whoever bring peptides in from the outside, exogenous peptides, because it seems that when we're out of balance or, you know, the system has gone towards a place where it can't heal on its own.

And so now we introduce something like a healing peptide or an immune peptide. So I think that what you're saying is, and correct me if I'm wrong, is if we're we need to address and restore this kind of calmness or balance in the system in as much as we can.

Because even though the endogenous peptide, we may we may have some in the system. It's not enough. But now when you're bringing in the peptide from the outside, it has a better shot at actually helping to move things in the direction that you need to move them in.

Absolutely. That's all I and I learned the term terrain from the nature path and that's, you know, all old nature up at the end. I've always loved it. You know, I'm a gardener.

I understand, Doyle, and, you know, the body's terrain matters, you know, and I'll get to that a little bit more. And what I, you know, I put together a bunch of stuff here because I know this is all of us need to know this and do this paradigm shift so that we're out of peptide frenzy and into peptide wisdom.

One of the terms that I learned early on when I was looking into peptides was Hermes. I adore this concept. And so for Mrs. Means that small, well-tolerated challenges stimulate the body to adapt, repair and become more resilient.

Yeah, so it's the biological art of growing stronger through appropriate stress out of this. And when signaling systems are intact, challenges become opportunities.

You know, we were just talking about that. They become lessons. They become useful. They're blessings, not curses for adaptation, resilience and growth rather than sources of the curses of injury and misery.

And so the peptide dome is one of our bodies primary translators of her medic signals. So, you know, I'm weaving these concepts together. That's why I had a really talk about it before we get to the peptides and kidneys.

And so you have two little challenge. There's stagnation. We know that as people, you know, like somebody who's sitting there like watching TV all day. They're stagnant.

Moderate challenges you get out of patient and growth. But excessive challenge, which you and I both know about injury and dysfunction doesn't mean you can't get out of it.

It's just a more uphill and an illness. There's a distorted curve and this is really important. I think this is like, you know, so you look at every substance.

I've this is what I've learned, every substance but led as a harmonic amount. There's no safe amount of lead. Everything else a little bit. So it's like, you know, without without the, the cushion of homeopathic.

It's like, you know, little doses of things actually trigger our ability to defend. And so in illness this curve gets distorted. And so small stresses that used to be fine can overwhelm overwhelm us and then delay recovery.

And so then we get into survival signaling instead of thriving. It's really very fascinating because now when you look at systems and you look at terrain, it's really different than looking at, you know, you have Parkinson's, take this drug.

Yeah. And you know, I can't say there isn't a place for that, but there's such a richer realm. And, you know, my name's Rob and I like early bird medicine.

What I'm really talking about is finding things even before the labs stow you. You know, people will come to me and they'll say. The doctor said I looked.

All my labs look fine. I don't feel good, though. And it's like, okay. And the doctor said, I'm fine. It's like, I'm not fine. I mean, I had that experience myself, you know?

And it's like, come on. And so, you know, a lot of that is about this, that we become way more tuned in to listen. And instead of jumping to how do I treat this, listen like really what's going on because it's so complex.

I mean, if you sit for a moment, take a breath and tune into your body, can you imagine how many things are going on just in that respect that it's astounding.

It's like beyond, beyond. So then we get to the card part, and I have kidney based signaling failure and the peptides. And so the first thing that I always tell people is look bigger.

The kidney isn't just a filter. What's the lab. Everybody depends on ruler filtration rate. It's useful I use it all the time. However, it's kind of useless early on because and you and I talked about this, I think the last time we did a talk about tubules, there's real you know, I'm finding labs and some of them functional docs are talking about finding labs to look at tubule function.

But I'm going to do a sidebar and say the tubules are incredible because what they do is discern what do I keep and what do I excrete? That's life. That's your lifeline.

And they're getting damaged before anybody knows it. By the time the GFR shows up, even in stage two, which many people still are saying is normal and it isn't.

There's a lot going on. And and this community of regenerative functional nature, of path, holistic, whatever word you want to use, we all know what to do for a lot of these issues.

And so but it isn't just like it's a nitric oxide issue. You know, sometimes you put nitric oxide in or whatever. The one thing everything's better. Wow.

Look at that. My neighbors should know about this. It's not always that simple. And so the kidney is really a bunch

of signals dopamine, nitric oxide cloth, renin prostate gland and ATP.

And so the kidney participates in regulating, interpreting, amplifying, degrading and generating peptide signals. And it affects the whole body. And the end of what I'm going to talk about and why my book has all of the bio regulators in regard to kidney is because the kidneys talking to everything, all the blood goes through the kidney and all the blood goes everywhere else.

They're talking. Those are messages. You know, I have a lot of cartoons. And so it's one of the most sophisticated signaling organs sensing changes in oxygen, blood pressure, fluid balance, electrolytes, inflammation, metabolism, stress.

And it translates these into endocrine, paracrine, peptide mediated responses that influence all the other organ systems. And so each day, each moment, the kidneys are a signaling hub filtering resource being degrading, modifying, responding of peptide signals.

And that's in each moment. That's why I can't wrap my mind around this, like, wow. And why when I sit with somebody with kidney issues, it's not just like, oh, here, take this, you'll be okay.

Which was what I was offered. So the paradigm shift is TCD is a signaling disorder way before it becomes a filtration disorder, long before it becomes a disease of filtration.

It begins as a disease of signaling in the early manifestations may be disturbed at the dome, loss of adaptive signaling, altered cell communication, impaired repair signaling, reduced biological resilience.

That's what you don't want.

## Early Warning Signs, Terrain, and Lifestyle Factors

And so it's very interesting. And there was something else that I came up with is it's both an instrument and a conductor in the Pentagon where it receives signals from other places, you know, ran an angiotensin peptides vessel present and total and insulin, blah, blah, blah.

You know, mitochondrial circadian signals. And it also generates its own signals, renin some of these things, you can measure erythrocytes and prostaglandins, nitric oxide growth factors.

So here since I love tubules it's become my favorite playground and kidney. They don't know they the cells don't know they have CKD. They know about the signals.

There's oxygen issues. There's glucose phosphorus, cortisol nitric oxide. And the cells behavior emerges from the symphony. The cohesion, the integration of all these signals gets more complicated.

And so the fate of these cells is really determined by the signaling environment. And I love this concept. Again bias what's dominating. You know. And so when you were talking it's like if all this stuff there's like a lot of chaotic stuff and here comes this quiet little higher that's going to out signal it.

And so this needs to get dealt with so that when that peptide comes along, it gently enters. And so, you know, I like to look at the early kidney changes because allopathic medicine really hasn't been like you know it's the frontier cloth goes down, FGF 23 increases dopamine dysregulated, melatonin, dysregulated, blah blah, blah, blah, blah.

You know, I have more notes than I have time for compared to you all. And so we have big changes in the renal pepitone before the GFR decreases. That's really the take home.

And we are not just blood tests and kidney markers. They're evidence that nephron signaling is dysregulated. And so for the lab work could be a useless.

Yeah. So can we could you maybe outline for people. What. Are there any signs they should be looking for. Or are there any indications that they could pick up in their body that's telling them that things are starting to go sideways?

Or are there certain types of behavior that is really going to disrupt that system and start to lay down, you know, the lack of resonance that is that could potentially lead to what you're talking about here.

Well, one of the biggest things that I found that I got ridiculed by some more conventional doctors is toxins. And then where, you know, where in toxin soup.

And, you know, as a CKD person myself, I've done an enormous amount of work to avoid them. I avoid going places that I know, oh, they're going to be burning a chemical mosquito coil.

Yeah, I'm not going to do that to myself. So there's that, you know, in very subtle. And that's why I think medicine really hasn't come up with how do you how do you tell this stuff?

You know, sometimes people see bubbly urine in the toilet. Anything. Seriously, even if the labs normal, that's not supposed to be that way for Teague.

Okay, that could be 100 things, but consider kidney mitochondrial changes that you know, the tubules are full of mitochondria. So you know fatigue infections that don't go away so fast. Fear interestingly enough you know when anxiety and fear start happening it may be reflecting dysfunctional kidney.

You know. So there's there's a lot of things gut issues are huge. I mean the gut kidney access, you know, brain changes, sleep changes, you know. And so what this says is it's not kidney specific at all.

How do you know? And maybe there's family history. Maybe it's a little bit of swelling in the legs. Subtle. Nobody's going to take it that seriously. You know, it's like I look for like I used to tell people, my patients complain.

They're like, well, I don't want to complain, no complain. That's that's how we know. Like, something's not quite right. And so, you know, a lot of it is what's your diet like.

Are you eating stuff that could be you know, I have an issue with this heavy, heavy meat, high protein thing that's going on. It's probably good for some people, but it may be ramming other people.

And that's an interesting thing. How do you know? Can I intuit that sometimes I'll just know something. Is it? Is it any protein or is it specifically meat?

That's the problem. Like could somebody be getting their protein from other places? That's not meaty matters, you know. So if you have however red meat in particular, you know, I mean and this is a whole nother lecture on, you know, the phosphorus and the acidity, blah, blah, blah.

You know, the gut microbes that are influenced by the animal diet versus high fiber plant based diet. And so, you know, there's there's a lot to do. Before we get to my last section, which is peptide therapy, you know, and and a lot of people will approach me, you know, I have this what peptide should I use.

Like how did you sleep last night? Not good. Why? Well, you know, what did you eat for the last week? Oh, you know, and you know, how much physical activity have you had in the last, you know.

And so. And I get annoyed like, that's not what I wanted to talk about. And it's like, well, go talk to somebody else then, because this is what it is, you know?

And it's humbling. So, you know, the first thing is willingness, you know, am I willing to do what I need to, you know, can I give up things I love to achieve well-being, you know, and that's already like people are getting into, you know, somebody in their 50s with a GFR of 64, I don't.

Ignore that. You know, even 74. You know it's like okay, let's look how are your mitochondria. What's what's your urinary citrate look like. Because that might tell me about your tubules.

And there's there's things to do. And so you know peptide therapy is after attending to the peptide on which there's way more than we were having ability and time to talk about now in the first goal is signal reset, not replacement.

That's not. I don't have enough BPC. I should put some BP thene. It's not exactly how we do. The aim is to reroute and restore endogenous signaling intelligence.

So the goal isn't to, you know, add yet another thing. It's to reclaim the innate healing that our bodies have. And if it isn't doing that, let's keep looking for why not.

We can restore. There's a variety of peptide domes. Every organ has it. And you know, and so we're looking at layered signaling restoration. You know the mitochondria.

There's a whole set of thinking with that. The autonomic nervous system, extracellular matrix immunity, metabolic microbiome, microbiome, mineral signaling with kidney is a big thing.

And because it's layered, sequencing and timing isn't optional. So just like you say, you know, you may have too much going on. And I learned this from Fiona Chin.

You know, it's like and also from Alex Greenberg. Where do you start? Yeah. Because where do you start? It's so hard. Yeah. You know and it's and it's different for different cases.

I mean that's I have an enormous history form and I take a long time to gather information before I even look. We haven't gotten there yet. Let's gather like, what is it that where what's the terrain and what's the mindset in that terrain?

So, you know, when we treat with peptides we're looking for adaptive peptide diversity, one of these terms to restore rhythmic. You know because there's the oscillation decreased signal noise improve the mitochondria.

Interpret what's going on I need to look into that more because that's that's a new concept that I was just like oh yeah. Restore responsivity. In other words in harmony.

Because when you're sick it's smaller. So we can do that endocrine timing, you know, the whole circadian thing. And I came up with this idea like cells have PTSD.

Yeah. Well I think some people call that some people might call that cell danger response. But yeah.

## Peptide Therapy, Bio-Regulators, and Kidney Success

Yeah. And so they remember the threat and pattern and are reacting, you know, just like me, like my husband is often said, I'm not that other guy you were with who was abusive, right.

You know, and I'm like, oh, sorry. You know. And so what what we're doing is trying to change this cellular memory of threat, because a stimulus that should be building resilience could be causing injury.

Again, you know, the concept. And so here's a really important piece of this. And you know there's a few big take home messages. And this is context and insight.

The very same peptide can restore. It can also inflame or fibrosis. It can increase or decrease immunity. And it can affect promises one way or the other.

And it depends on the state of the peptidase. That's exactly what you were saying and the terrain upon which we place these exotic escape. And we can't ignore that.

And I think the frenzy has ignored it. I could be wrong. I mean, I'm hoping not, you know, and so not everybody I mean, it's you know, I think there's different layers, right?

I think practitioners and physicians like you are paying attention. A lot of the I would say, I'm pretty sure I stayed away from the frenzied masses for interviewing for this summit, which might be why folks are noticing there's common threads that are running through every single interview.

There's, you know, in your own way, each one of the people that it's been interviewed for this summit has echoed not always as elegantly as you do and not in terms of the peptides.

But everybody has essentially said, if you're not addressing the environment that you're bringing those peptides into, if you're not calming the system, taking care of the foundations, dealing with the environment, you're going to be at best, you're going to be limited in your results.

At worst, you're going to get no results. And potentially to your point, you know, maybe drive a histamine reaction or some other, you know, people having bad reactions.

And this what, you know, triggered me to go, well, it's not supposed to be like that. Why? I was asking why, you know. And so I want to talk about the bio peptides because again, I'll show you my gorgeous cover.

Yes. Love and artist did this for me. And their unique larger peptides don't do what these small peptides do. We call them bio regulators and they regulate.

And I like this term. They altered the probability landscape of future signaling states. Okay, another take home. I didn't know this until I was researching this stuff.

In other words, it shifts which peptides the organism will generate subsequently. Remember we're always making proteins. So our DNA is making proteins.

They break down into fragments and bio regulators are talking at that level. And so they're signal editors. They bias transcription. They sculpt proteome Stacy's and they attract things in the peptides.

So they're reshaping. Here's the take home the future peptide dome. So it's elegant concept. So we think that bio regulators alter gene expression. There's that you can use that.

But I think there's more precision in saying they alter transcriptional accessibility shift the stress response accessibility modify Proteus basis. I mean, you know now we're getting down into like okay, it's working on the genes.

Yeah. What does that mean. Alter degradation patterns. And here it is. Change what proteins are synthesized and then what peptides emerge endogenously later on.

This is insurance. This is creating the future you know. And so they don't force physiology. No. That's the way to do even the way some peptides are a little bit more like pharmaceuticals.

And you know, and so in they're not kidney stimulants, they're really to restore signaling fidelity in the nephron. And then all of its supporting systems and you know, they're small.

And their information, they restore the coherence in a dysregulated signaling brain. Wow. You know, I mean that's cool stuff. And it's a different way of looking at it.

I think it's you know, it expanded my thinking. And so, you know, to your request I put together like, so what do you do about CKD with with bio regulators?

And I'm going to laugh because my whole book is about that. And so it's not a simple answer. Yes. Renowned

kidney success I write blogs sometimes and have lots of interviews and the book is quite amazing.

I'm still impressed that I actually sat right here working on this for a long time, and it's like a PDR, but with a lot of information added on. And so what do we think?

I mean, I love pilots, it's amazing. And which is another one? I don't know that one. What's so pillow tax is the is the natural kidney by regulator. Well right.

I mean and is there an older formulation. So it's a little bulkier I would say people might react to it a little bit more because of that, but it is available.

Unfortunately the formulation that I found has fillers in it that I don't like, and I'm very particular about that, which is why I like certain companies that do not put stuff that I tell kidney patients don't do.

It's like, here, take this pill that has stuff that you shouldn't take. Yeah, yeah, counterintuitive for sure. And so, you know, okay, in the peptide dome framework, pilots will stick to pilot attacks.

I mean, I adore this stuff. I've seen incredible miracles with people. They support nephron specific signaling, gene expression patterns. There's a lot of genetics happening in kidney decline cell repair pathways.

We need that adaptive responses because you know the kidney will adapt. But is that a good adept or is it a maladaptive response which then downstream is going to make you sicker?

And so, you know, the kidney is not in isolation. And so I wrote down bio regulation. Management extends beyond the kidney directed peptides. And so then I wrote peptides to the rescue third time. And and so I have a list and I'll go fast because it's you know we have we're short on time.

Hi Neal. Peptides Andalusian epithelial a wonderful thing where you place it and how you sequence. It depends on each case. Parasitoid I love bone because phosphorus is a problem.

And this is by a regulator that can modulate that issue. Blood vessel the kidneys a clump of blood vessels. So using blood vessel bio regulators liver obviously is the Pal in detox pancreas because he was you know, diabetics pretty much are guaranteed kidney decline.

And kidney decline sometimes guarantees pancreas decline. And so there are some business cycles thyroid big conversation, big section in the book. It's commonly gets some messed up and even, you know size stat and see a lab that is really helpful gets tweaked by side being too high or too low.

Worth knowing about bone marrow. Bono. Marlowe is obvious. Advanced kidney disease. People have anemia. Start early before that happens. Thymus, obviously.

I mean, in the section in the book about how kidney and thymus interact is fascinating. And it's a huge thing. So, you know, to your question, like funky immunity, like, how's my kidneys?

You know, am I detoxing? Am I, you know, and the brain, obviously, you know, brain, heart and kidney are one conversation. And, you know, when I cycle people, I include all of these almost every time.

At some point, it may be once a year. If somebody has a more significant issue, it might be two or 3 or 4 times a year. It just depends on the presentation.

Always important. And because I was about to ask, what about cartilage? You haven't brought up cartilage yet. Yeah. Cartilage. I mean, you know, in some of the original research that the Russians did, you know, they used cartilage, liver and kidney.

It's a nice combination. And I have I'm talking way too fast, I apologize. Shout out to sign my beloved sign. It's two

amino acids. It's an over-the-counter thing.

I think it's pretty safe to use for a prolonged period of time. And when people eat less meat, they need. And I'm telling people eat less meat with kidney disease.

And so these all influenced the circadian immunity, vascular signaling, stress adaptation, neuroendocrine. They all contribute to this broader signaling environment, the terrain that kidney cells have to operate in.

And so if everything else is going funky, the kidneys are going to struggle way more. You know, you hear different stories like, oh, I got to go for this.

And, and I, you know, and then, oh, you know, and so it really and you know, I have this thing like functional challenge testing, you know, there's things that we can do like do a protein challenge, you know, get a GFR before and after a protein challenge, you know, exercise challenging fasting.

You know, there's things to do. But I have I have two more statements that I want to share. A dysregulated peptide is not defined by a deficiency of peptide.

It is defined by a loss of signaling fidelity. Yeah. Yeah I appreciate that. And then the other one is the question is not whether peptides are present.

The question is whether the right peptide arrives at the right view at the right time and the right concentration there. There is the tofu and and garbanzo beans of the whole issue.

Doctor Rose, as always, brilliant and poetic all at the same time. So you've held up your book a couple of times. Please remind us the website where people can find the book and can find some of your work, right?

Correct. So I made up the term Rinaldi because it means the art and clinical science of kidney success. Yeah. Change is your aura. I watch somebody when they hear that who has kidney issues.

Because failure, failure, failure is not what any of us want. And so I realized that this early bird medicine and this concept of altering the terrain is renal.

And now people are using the term it's a it's a really important concept. And so is kidney success. Alloneword.com is my website. And you can put in renal peptides.

And I think 2 or 3 things down on a search. There it is. Boom.com okay. We will absolutely include that in the show notes. Doctor Rose, thank you for taking time away from your garden and your research and your writing to be here with us.

Always a pleasure, and I look forward to talking to you again soon. Yes. Thank you. Hello, everyone.