The #1 Poop Secret For Reversing Aging & Boosting Immunity! l Dr. Grace Liu l Ep #428 Transcript

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Intro: Poop, Longevity, and the Gut Institute

Hi, welcome back. I'm Natalie Nidam, your host. Today's episode starts with a sentence I never really thought I'd say on this podcast. Poop might be one of the most powerful longevity tools that we have at our disposal.

Dr. Grace Slough is back and we're unpacking the idea that your gut isn't not just about digestion. It's literally shaping your immune system, your lifespan and even your health span.

We talk about the surprising science behind fecal transplants and how they've been shown to extend lifespan in animal models, why your gut bacteria are training your brain from birth, and now modern life from antibiotics to ultra clean environments is quietly wrecking your microbiome.

Now you may have heard of Dr. Grace Lu before as the gut goddess. She is the founder of the Gut Institute where she markets some very powerful tools to address microbiome imbalances.

If you want to check them out and some of Doctor Grace's signature probiotic blends, we have a link for you in the show notes. Plus with code NAT10, you get to save off your purchase.

Now this episode is brought to you by Troscriptions Trozee, Wizard Sciences Oracle, and collagen peptides from Puree, all with special offers just for you.

Check out the show notes below for details and enjoy the Show. Dr. Grace Liu, finally we get you back on the shows. Welcome back. Thank you for having me again.

I can't wait to talk all poop and longevity and regeneration. They are linked! They're absolutely linked. You know, at the end of the day, everybody says it, but really it's just about the poop.

Exactly. It's the evidence. So where I thought we would start, and Folks, we've done at least one, if not two other episodes together, so we'll put the links in the show notes to previous episodes.

But today, one of the things we're going to talk about is gut health as a hallmark of aging. And we know that there is a Hallmark Of Aging that's directly, yeah, dysbiosis, right?

Dysbiosis is number 12. So when we talk those hallmarks of ageing, people think, I mean, they talk their mitochondria, telomeres, zombie cells. Talk to us about why the gut deserves a position on that list.

So just like the authors of that hallmark study or review about the hallmarks of aging, adding in the three extra hall marks in The 2023 Publication, it's wild because gut touches every aspect of senescence, zombie cells, growth, regeneration, healing, healing soft tissues.

Where does BPC come from? The gut. We love Bpc 157 in general, like not for Mass Cell or SIRS clients, but we love it. You know, we loved all the gut peptides.

Who doesn't like GLP-1? I mean, I'm in love with that peptide, small molecule. So it's probably, yes. Yeah. And then my colleagues, you know, physicians, pharmacists and other colleagues like they're appalled that poop can heal people, but it can.

We even give it like in quarter cup, half a cup dosages to heal Clostridium difficile colitis and certain other conditions can really benefit actually.

There are some FMT studies in, in old rats, old rodents and mice. Um, they took young poop. you know, poop from young rodents and stuffed it into like the older one.

And they got younger. Their telomeres extended. There was lifespan expansion. Yeah. But I want to speak to the dark side, right?

Gut Health as a Hallmark of Aging

Because it is super powerful. And when you find something that's that powerful, if there's a dark ride, it's going to be as powerful so FMT, fecal matter, is it feco matter transplant?

Yeah. Fecal microbiota transplant. That's what FMT stands for, for anybody. Yes. Yeah, a poop transplant and so therapeutically it has been shown and I know that I've even read things about autistic kids sometimes or like really crazy cases, but talk to us a little bit about why you shouldn't just try this at home.

Don't start feeding yourself poop from random donors or your dog. If you have pets, you are getting mini FMT microdoses from your cat or dog already. And your housemates or partners, you know, we share a lot.

If you've had little kids, they touch the button and touch every doorknob in the house. We're all getting microdoses in some way, shape or form. But it's part of our immune education, right?

It's a part the immune system. And I think that maybe what we could talk about a little bit, because one of the things I want to touch on is, is it possible for that gut to age faster than the rest of body?

Is it possibly for the gut, to be driving either accelerated or decelerated aging? Does it have that lever? And one the thing I'd love you to talk on, that link to the immune system, next to the gut is one of the most powerful systems in the body that literally affects everything, like from your mental health to your heart disease risk.

And so they work in tandem, right? You're so right. Exactly. And I will be talking on more stages about like the brain mapping, but you're right at every stage of our birth and development and growth.

If the bacteria aren't there, our brain doesn't develop. That's why we see so much autism and spectrum and ADHD and depression, anxiety, social phobias and everything.

Literally, if they can put the bacterial there at the right timing, those conditions don't. We're at a place now where One out of seven, one out 10 child born has autism.

And we didn't have that. We didn' have 10 years ago. It was much less. Definitely 20 years or 50 or 100. So post-industrially, a lot of things break our gut.

Living in these hyperhermetically sealed homes, the mold kills our guts. They make antibiotics, so they kill our guts. In this antibiotic era, millennium, and that kills the gut, C-sections and formula.

We're not feeding the flora at the right stages. Our brain breaks. Literally our brain brakes and nervous system can't heal. And then we're weird. We were distracted.

Were not happy. Were not grounded. So yeah, the gut flura stages all of our development and our healing and they trigger all that. They're our main defense system.

Some people don't really understand that, but let's say I travel and there's Bolly belly or Indian. gastroenteritis and Montezuma's revenge. But when I take my probiotic, I make a probiotics, right?

And if I took it, especially a lot, in fact I'm actually compliant and actually my health gets better. I lose five or 10 pounds, and I can start eating anything again.

Also I am usually not in the USA if i'm doing that. Well, what you're really doing is crowding out the bad guys with the good guys, There's a lot that they do.

Yeah, they're mapping our brain. They're turning on our natural killer cells, lowering IL-6 and TNF-alpha and all the immune factors that get turned on to heal.

We get better healing with less fibrosis. I love the regenerative studies. So I don't know if you're familiar with Michael Levine, Dr. Michael Levin, Tufts, and then, yes, you should get him on show.

He's wild. I don't, I wish I did, yeah. And other people in that field, they're terrible. They kind of do these Frankenstein experiments with frogs and chop their legs off.

But I love these experiments. I just was a big fan of Mary Shelley and I love Frankenstein. But they do it in the most humane way. They have anesthesia and it's as healthy as possible and pain-free.

Some people in their regenerative medicine field, when they blasted frogs and gave them antibiotics and then chopped the leg off, compared to control, they did not regenerate the limb.

Because frogs have to regenerate. They regenerates. Well, older ones don't. Only tadpoles do. And then certain salamanders and others naturally do, but frogs are a great model for us because we don t regenerated very well.

We regenerat with a lot of scarring, unless we're a fetus or a toddler. Okay, we have those high hormones and high regenerative capacity, right? But yeah, they found really interesting things about the microbiota.

and nuclear receptors, which I've always been into, like P par alpha, P bar gamma and P part Delta and the FXR PXR and bile acid receptors from our gut.

So what do they do? Tell us about. Well, when they're dysregulated, if we don't get enough omega-3 in the right fats, they get dysreglated and then they don t do what they re supposed to, w hich is nutrient sense and turn on our regeneration.

Interesting. They turn on our regeneration in the best way possible without scarring or fibrosis, which is what we want. And so we don't want excess fibrocyst.

Right. Because that means plaque. Yeah. It means amyloid plaques in brain, scaring, you know, like it's in your liver. So what are those nutrients? You mentioned omega-3.

Yeah. What else? And try a butyrate? Butyrates. Buterate is one of the biggest factors for both P par alpha and beta, I mean P part alpha, delta and gamma.

Okay. Yeah, buterates. And butorate comes from half of our microbiome, literally 40, 50, 60% of microbiota in the stool. make butyrate if they're fed well.

They cook resistant starches. That's called type three. We've cooked them. It's unnatural to eat raw starch. Raw starch will feed yeast and E. coli, citrobacter, all the things that turn on autoimmunity.

I've seen some cases flare with raw If you're using a sauna and you are not following a specific protocol around it, you ARE sweating, but you may not actually be supporting detoxification properly.

And that's a problem, because the difference between a session that just makes you hot and one that genuinely moves the needle on your health comes down to a few key steps that most people are NOT putting into practice.

So I put together my complete sauna protocol, the exact pre, during and post-session routine I follow myself, and I'm giving it away completely free. Now this is not a generic guide.

This is what I actually do. So of course you always want to do what's best for your body. But if you want Because now that we've kind of opened that little trap door, what are the five what do the starches that people might be might be told are good for them that they should probably think about staying away from and what would be a better form of that starch.

Basically, people are looking for shortcuts, right? So we know cooked and cooled potatoes, cooked in cooled rice, asparagus, all of these things give us resistant starch that feeds the gut bugs appropriately.

But then people want to get it out of a bag. So what are the things- Exactly. We always want shortcuts. I would love a shortcut, I'll tell some shortcuts okay.

So, ancestrally, humans cooked and roasted, fire-roasted tubers, underground tubars, USOs, Underground Storage, you know, starches. And when we heat things, they change their configuration and they're not carbs for humans.

They're resistant carbs, fiber to the bacteria. What further modifies them is stomach acid. and changes with like temperature.

Fecal Transplants, Immune Education, and Brain Development

So like going hot, cold, and cold and hot. Each time there's a cycle, it changes their configuration and it makes it less and less glycemic index. Yep.

It's low, low glycymic, which is what people want. But if we make plenty of stomach acid, if you have good gut flora, we do. And that's one of the first things to go as we age.

But when people take like bifido multistrain probiotics like ours, they actually will start making their acid again and get good pancreatic digestive enzymes secretion again.

And we can see this as their body temps go up. Like everyone should have sort of a normal body temp. That should be one of the hallmarks of aging too, 98.6 Fahrenheit, or as high as we can get it.

Without hitting a fever. Yeah, without hitting fever, but sometimes when we're ill, we stay at 95, 96, 97. Well, guess what? There's no stomach acid. You're going to have to take BTN-HCL.

and there's no pancreatic enzyme. They may be present, but they're not active. Their temperature regulated. Interesting. So with every half a degree or degree of body temp, the enzymes are exponentially more active because they are meant to be active, they re home through evolution for millennia to the active at 98.6, 37 Centigrade.

Okay. Yeah. And yeah, so getting back to your question, like what are the best starches? Well, there's really great Israeli data on microbiome. We have six taxa that are important for carb digestion.

They have all the enzymatic machinery to help us break down carbs plus our own pancreatic enzymes. There's six taxa. These are mostly like Bifidose, Bipidoses in here.

And they're all butyrate makers. So that's known as the Custidialis group. Literally half of our gut should be there. But when I check 16S data, like Bytrak, I know you love Bytrack, you funded them.

I love them, love, them love. Baby fun. I'm sure they love your contributions because they're growing and thriving. I love them. So I track on there what if those taxa are available and usually they are not.

And these are the people that have to go carnivore or they keto, whatever, because starches will trigger. They don't have the flora to help turn on our own machinery and their ability to break down the carbs.

Right. which takes just training them and expanding with the core microbiome that should be there, then they can support the B-rate makers to anchor and stay.

So then you can switch. In the beginning, if someone's really affected, we don't do that much starches, but we start within a week or two, a few bites every couple of days.

And we add on some lorazetide to tighten the gut, which is that level up. They can use your code or limitless use, your And we sell testing, like toxins kill our gut flora.

So people can do all kinds of protocols, but if they're full of toxins, it hits the wall and it just doesn't stick. Yeah. Because the toxins are all antimicrobial.

They'll prevent the bifidos from hanging in there. The best starch is, depends on the person, eventually we want to get a diet that's ancestral. So that may be, you know, if we look at centenarians that are eating their ancestral diet around the world, whether it's Italy or Sardinia or Icarios or Costa Rica, which I know you go to Dominican Republic, where you got to often and have retreats.

It's usually very rice and bean based. There's a lot of cooked type three resistant starch. And if they have good stomach acid. Yeah. They have the tubers too.

But- And they tubbers. Tons of Peruvian and Central American potatoes that are all different colors. A lot antioxidants. I think what's really important to say is that That's what works for them because that's where they're from and that their ancestral diet.

And I think I find sometimes we get into trouble because we read about, oh, these people in that place halfway around the universe have this amazing diet and they live to be 100 years old.

Well, if it's good for that, it is going to good to me. is we come from a different lineage. We have a difference ancestry. I'm Mediterranean. There is no freaking way that a Japanese diet is necessarily going to be optimal for me.

And what you said a minute ago, when it comes to those starches, First of all, you got to go slow because if you don't have the right guys in the gut, because you'll be looking three months pregnant, whether you're a man or a woman, which is really embarrassing.

Because you've got the wrong guys breaking down that starch and producing all this gas. But I think that the other thing I really would love you to talk about a little bit is What's happening on social media right now is people are pushing really hard on certain sources of starch and fiber.

that, and I mean, unfortunately people find out the hard way, right? Like they find, they they're like, Oh my God, I, that sounds amazing. It's going to do this, this this and this for me.

And they start dumping, let's say for example, potato starch or, And I'm curious what you think about green banana because I know that eating bananas that are greener gives you more of a certain type of starch, which is good for some people in the right context at the time.

But then you can buy a bag. of green banana powder. And I'll bet you that if you start dumping that into too many things, and you're not the right person with the environment, things are going to start going sideways pretty quickly.

So do you want to just speak? Yes. Yes, I can. Yeah. It was like a little fad thing. Usually a fadd thing is it's not really based on that much science or ancestral and natural science, right?

And translating The science of translation is really important, as you're saying. So many things don't translate to humans. We're not simple creatures.

You have a big brain, we have big vagal nerve, and we're complex, so complex. That's why we become the apex predators on earth, right? Yeah. What study shows with raw starch is that it does turn on butyrate, but it also will turn so many pathogens.

When it's compared like head-to-head against other fibers, there are some problems. Just because you have butyrate doesn't mean it's going to be healing and anti-inflammatory.

Because if you're turning on pathogens that are present, they create dysregulation. And that's what I've seen in clients as well as some of the studies when you read it.

There's not really benefit outside of butyrite. Right. ancestry, your genetics might be more, it might navigate a lot better. Like, and as you're right, like I'm not like Eskimo, I would not eat a keto diet, but they evolved and where babies will actually have problems if they don't have, you know, the right amount of glucose and ketones and know, there's a lot of problems because they've evolved and they are very keto based in their metabolism.

So you can't, we can translate what they eat to other humans. And you're Mediterranean. You grew up with vegetation. Your ancestors had vegetation that had sunlight all year round.

Yeah. That transferred energy from sun and photons to the plants and your body thrives on that and the starches in that area. beans and rice and everything.

Fava beans, everything else, your glucose six PD. Yeah. And I'm Asian, like the Mediterranean diet. I love it, but I don't eat it every day. No, I. Don't I, don' process.

II like rice. If I rice makes me diabetic, literally it sends my blood sugar to the moon, which makes m But it's not my friend. Yeah. Well, there are other starches in Mediterranean and I would look at your vitrac, the shotgun as well as 16S and track those species.

You'd be surprised you might add to the edge of carb digestion. focusing, having a strategy to get those species in there. Some, some people don't, you know, it's, a, complex protocol.

Okay. To get the species back in their, yeah. And it depends on genetics too. Like if you're FUT2 or you have ATG16L, which promotes more proteobacteria and E.

coli. You know, we definitely push more bifidos when any of the mutations are present because you're kind, your kindred may have grew up with so much fiber.

It didn't matter that they lost the ability to have fiber in their gut. Like, FUT2 makes fiber for good flora to stick around, bufidos to stay around.

I'm negative. So I got to eat high fiber, which is a pain in the ass. Unintended. Yeah. Literally. I was telling you, I had gastroenteritis a couple weeks ago and I'm rebuilding and like, oh, get gut pain.

Because I am pushing all these prebiotics. Oh, yeah, got to rebuild all this and get it. Okay. So the favorable fibers, if someone is getting on the healthy trajectory, is looking at your ancestral diet, wherever your kind and kindred came from, and adopting those kind of macros, protein, oils, fats, uh, carbs, everything.

Microbiome Damage from Modern Life

Polyphenols are the most important. They feed all our good gut flora. All the keystones eat polyphenol. So all the bitters and purslane from the Mediterranean, you know, it's that the green that she, that's a little bitter, the bidders in Mediterranean.

There's so good for the gut Flora extract. Yeah. A berry extracts. And these, these guys are sour, they're hard to eat. And they're not always tasty, but wherever our kind grew up, that's what we are adapted for, and the flora are

adopted too.

So for carbs, whatever macros that are sustainable at the time, depending on what's going on and what the composition of the gut flore, for feeding the bifidos, we need actually a minimum of 15 to 20 grams of FODMAPs, GOS, XOS FOS inulin.

Interesting. Yeah. Yeah. The minimum. And even if I go off that, like I'm FUT2 double negative homozygous. So I don't feel so great. I start getting little autoimmune signs and symptoms.

Like if i'm really pounding gluten and I am not taking my liver acetide around the clock, you know, I'll get a little psoriasis on my knuckles. elbow crease, whatever, you know, I have all these signs I track KPIs, everyone's body's different.

I love labs, You know. You asked about what is the GI track aging marker. So, pulling the Vi track and looking at the inflammatory markers, and other testing we do, like you can use NAT 10, your code, we have the GIMAP.

We can look at SIGA, so secretory IgA. EPX, we can look at Zonulin. All these markers, if you're aging well, these will be minimal unless you have… So centenarians and super centenerians, These are studies done by Biagi and a lot of the longevity researchers, Otomaki and Wang and Kong.

These all published like really seminal articles in 2015 and 2016 on the gut microbiome and longevity. You know, they look at the gut flora and they have the ABCs in the super centenarians.

These are people who lived to 105, 110, 115. Semi-super centenerians are centenares and supercentenaries. And they all have ABC's. these are all anti-diabetic species, bifido, acromansia, and Christiancinella.

Nobody talks about Christiancinela. So there's two things we can touch on here. Acromantia. Again, it's another one. Yes. It's the Cinderella. I don't know if it's Cinderella, I may be getting my…

But it won't live unless people have this at home. Well, number one, and the other thing is, if you have none, that's no good. And if have too much, That's also no-good, right?

Yeah. Yeah, yeah. Acromancy is the one that really, really drove home to me the message. don't just blindly pour stuff and feed them, right? Cause I know, I heard your story like so many times.

It can hurt you. Even ours, if someone isn't in a good trajectory, If they take too much of ours they will be in bed or worse. Like, Oh my God, like have to go to the doctor or something.

So it's all about timing and trajectory. Yeah. So anyway, so so I guess the short answer is yes, your gut can be I mean, if your God is accelerated is aging at an accelerated rate, there's a really good chance you're aging and accelerated, right?

Like, I don't think I Well, sometimes we can have like a good thyroid or a Good brain and that will compensate. But don't you think that a dysbiotic gut fundamentally is going to create an inflammatory state?

It might not show up right away, but eventually it's going start to show in a million different ways. Your fountain of aging and your fountain youth probably live in the gut.

Yeah. Like, what is our biggest organ? Okay, well, some men might think their penis, right? It's actually the gut. More than the skin. Not the penis. No, definitely not the penis.

Oh, is it because of the villi and the microvilli? And I think if it's perforated, it is probably even larger. It is a football field if perferated. Oh, wow.

Okay. The surface area just changes, right? But if it's healthy and good, apparently the microvilli and the small

intestine is as large as a tennis court.

Even our brain, which is so varied and convoluted and the surface area is high for memory, it's not as big as the small intestine. But with the skin, its important.

It doesn't have as many barriers as this skin. We have like seven, eight million layers, right? Well, because we're really trying to keep the outside out through the scan, whereas the gut is designed to allow the inside in appropriately.

Exactly. That's part of its function. So you trained as a pharmacist, right? And I love pharmacists because I always say pharmacism are the people that get pathways more better than pretty much anybody else.

There's nobody that gets pathways like you guys. And so very often when I have like knowledge breakthroughs, it's because I've been talking to one, someone like, I'm talking with you.

It's like oh my God, who knew? Like, you blow my mind somewhat somewhat aspergers. No, no, but because, because you, guys have been like studying all these pathways.

So there's a deeper level of mechanistically getting what's going on. What made you start looking at the gut, not just as a, as digestion, which frankly, even as you maybe might've looked at the gut maybe for pathway things, but not digestion, really looking at that as a control center for longevity.

What made you kind of, what made that switch? Yeah. I was in pharmacy. Yeah, and I seeing just outrageous healing in clients. Like I as CDE, certified diabetes educator.

So I'm really into what breaks down carbs and how to have good glycemic regulation. And yeah, some of my functional medicine friends are like, oh my God, you should really get into microbiota.

I'm like oh, my god, poop. Last thing I want to do is like study poop, so I studied everything else, like advanced cardiology and lipid lipoprotein refractionation.

But everything's affected by the gut. Like all the coronary calcifications are affected my oxalates. And what breaks it down? Well, we have six species that break down oxaloids.

And those are important because if they are proliferating, they're going to harden all your arteries, your organs, I had my own health issue. That's usually what brings us to the forefront of our transition, right?

From dysfunctional medicine to functional. And I come from a big family of doctors and healthcare people, like total farmer-driven people. Right? And so it was a little unheard of to leave as the black sheep and everything.

But I have my health thing. I was healing ancestral trauma, apparently. And then I had super bad black mold toxicity along with mercury. We apparently probably had a bill and drill, drill and bill dentist.

So every time we went in, we had multiple quadrants with Mercury. And even now, every few years, I have to detox and chelate mercury Yeah. And I probably, you know, we joke in functional medicine, what's the best way to detox mercury or have, or any, any toxin have a baby, which men can't do unless you change in transgender.

Because a lot of it, depending on your snips and mutations, 50, 80% will go to the baby. That's not great. Yeah, I know. But they're young and they are usually okay and healthy.

And they can dump it themselves. Yeah. They can eventually dump. So I had to heal from that. It took many years. Then I realized like, wow, no one's talking about the gut.

I'm going to share about it and then develop the probiotic, which is just game changing, life changing for so many people. I kind of took a break, you know, and then I'm kind getting back into it again.

Yeah. So I was really excited. You know. And then we were supposed to go to the conference. I learned all about Cavinson. But I met Cavison and his wife Svetlana Trofimova and learned so much about the peptides.

Then I studied every podcast you had on peptides on your platform. You've gone into the stratosphere beyond me. That's for sure. Someday I'd like to make them.

I know. Let's do it. They're powerful, but they also can switch things. Like I saw also a lot of cases, people getting fucked up with BPC-157. and all, you know, all these things and no one talks about it.

So now, and we have no human studies.

Resistant Starches, FODMAPs, and Ancestral Diets

There's only two retrospective. I actually remember back when, when people were first starting about talking about peptides. Um, there was a guy, our friend, JF our mutual friend.

We talked about, there were a couple of human studies that were done in Croatia. Remember he used to talk about those? I could not dig them out. You know why?

Because they broke the rules. What happened was they did human that showed amazing things, but they had to be taken down because they didn't follow protocol.

They didn' proceed them by animal studies. And so, which is so interesting, right? Like the system was so crabby with them. They're like, no, we don't care how valuable this is.

You didn't follow the rules. And, so we're taking your studies down. I guess they must've been up at some point. That's why they're not on PubMed. Yeah.

It's funny, I go to ProCure now often, and I might have to go visit those labs and see who's there. There's some great scientists out there, like they do really great stuff.

So, okay. So let's get back to our regularly programmed program. Let's go back. All our changes are fun. Look, I mean, peptides are always… I'm sure there's a bunch of people listening to this going, Nat, what are you doing?

No, go keep going down the peptide trail. And we'll come back peptids. Dr. Grace just dropped a couple of bombs here. Number one, lorazetide is your BFF for sealing the gut.

We know that because it specifically seals the tight junctions. BPC-157 is amazing too, but it's more of a generalist, right? It's got other drops it might do in the body.

And as a result, for the wrong person, it may flip the switches on the right day. So, going back to the gut, if we frame gut health alongside the classic hallmarks of aging, Where do you think it intersects most powerfully or is it equal across all these things?

Is it inflammation, immune regulation, nutrient sensing, mitochondrial function, or would you say? It's all of those. There's no greater effect on any of these.

That's what it's about. I have to admit, I haven't dug into all those studies yet to talk with familiarity. Even the gut as an aging organ. I'm not all familiar with all the studies and references there yet.

I wish your AI brain hasn't gotten there. You gave me homework now, Natalie. Give me a week or two or a year or 2, okay? I am not at your speed, but I'll try.

Yeah, I think, like, our gut can, the studies that Ortiz talked about in his review and the other authors there, it touches everything. And I really think What immunologists feel too is like 80, 90, 100% of our immune system is the

GI tract and the flora there.

And they're not even understanding all the roles each keystone species has. But it's really scary because I co-relate diseases, childhood, toddler, infant.

teen 20s or 30s to the species, you know, and we can see the trajectories of what the gut microbiome composition is and what's missing in that signature.

Yeah. The bankruptcies. So that can be problematic. I mean, that's the next question. You can go down that road. Basically, how does the got change as we age?

Yes. Yeah. So we have some… Yeah, so Biagi in 2015, 16, and 18, she and their team and the whole lab, which includes a lot of really cool people like Marco Castano and really people.

And they looked… They were able to take data and they could see as we age into 30s to 70s, there's a a decrease. These are our full years. And there's a decrease in everything and an increase in path of violence.

Okay. So we lose the good guys. Yeah. Probably, you know, it's modern living, modern pollution, low fiber, SAD diets, and no one's supplementing. And it is important what you supplement.

Like certain supplements, they're high in strep. I wouldn't touch that. Strep triggers so many autoimmune diseases. No kidding. Every autoimmune disease, pandas, everything neurologic, skin, vaginal, like prostate strep is on our skin.

So we can have good versions, but we often will have bad ones after stress or antibiotics or, you know, things that kill it off. Like I'm not a fan of all the biohackers doing Ibu and methylene blue, there's a point where high dose methylenine blue is shown to increase proteobacteria in all these pathogens.

It's just like antibiotics. Yeah, I think high-dose methyline blue Again, if you're doing high dose methylene blue, it's got to be because you are working with someone, there's a reason for it, and it is a very short…

It's an intervention. It is little bit like going to carnivore, or going keto, going vegan. Its an interventions for a reasons at a specific period of time.

You know what I mean? It not some willy-nilly, oh, I read methylened blue is amazing for mitochondria, so I'm going pound it every day and sit in front of my red light and think that I am going get super mitochondrion.

Well, just like you're talking about, we don't know about all these molecules, right? And we really don' t know what they do. But we know that methylene blue is an MAO inhibitor.

Like, who's not depressed? It's an antidepressant. It is our oldest class of antidespressants. People feel great. Well yeah, because you just had an anti-depressant effect.

And it's temporary. And now you also white, you could have popped, if you barely had bifido, and you don't have the ABCs that we just talked about, the signature of longevity, acromantia, biffido bacteria, Bifidobacteria longum and the butyrate makers and Christian Cinella.

You're fucking your microbiome and your longevity. Yeah. Because you feel good. People go by how they feel. Well, that doesn't tell you nothing. doesn't tell you about your telomeres or DNA methylation or things like that.

Right. And that's a powerful point, right? Because what you're conflating is how you feel right now with what is happening long-term under the surface.

What you are talking about, which is such a power statement, is that both function and dysfunction build over time. And so just because what you're doing right now feels good to you right, if you don't have a good grasp of what's

actually happening under the surface, what deficits you could be building up while you produce this feel good, you could be robbing robing your future to pay tips.

Yeah. And there's a cost when you're agnostic to what's in the microbiome. If you haven't done a vie track and using your code, you know, um, and tracking, like are the, I don't, okay.

You've mentioned it a couple of times by tract is a really powerful task guys. But Vytrac has they made a very powerful decision in order to keep that test powerful.

They've stopped going direct to consumer. The only way you really can get a VyTrac now, I believe, is to work with a practitioner, which is the right way to use that I don't know because the information you're getting is so nuanced and sophisticated that I think in order to provide the value that they really wanted to do, like Dr.

Shadozie, he's like, I can't dumb it down. It doesn't make sense for me to dumb down so that the consumer can maybe get a glimmer of information, I would rather train practitioners to really deep dive into this information so they can powerfully help the consumer.

Right? So anyway, so that makes sense. Yeah. Because I don't even, look at the front review. I pull the taxonomy from the backend and then I track what's going on.

So that make sense, right? Yeah, and the scary thing is unless you're doing 15, 20 grams of FODMAP, So the GOS, XOS FOS Inulin, frequently with good probiotics, people will not have the signature of longevity.

Pre-pandemic, this was not the case, Natalie. Something has happened post pandemic. Our guts are fucked. I don't know if it's the vaccine. Some people believe the spike protein is a bacterial phage.

That means it targets and kills bifidos, which makes sense because all the FLCC So that's the frontline chronic COVID caregivers, you know, they push Bifido based probiotics, BIFIDO based dominant multi-stream probiotic are the best to combat long haul COVID as well as prevent future COVID infection.

Interesting. Yeah. So we need our BFIDOs and we're vulnerable to COVID. every time we travel or go to the gym or touch a doorknob, because if we don't have the bifidos, they are the key to our immune system.

They literally unlock our longevity and mucism. Bifidobacterium longum? They call it longom because they only find it in centenarians at high amounts.

Short-lived people don t have it. So we could say that bificidos are critical to longevity. Very critical. Everything they do. They kill proteobacteria, they maintain our skin, our hair, or our brain.

All the things. Their cell wall literally binds black mold toxins and we poop them out. The cell walls of lactobacillus, like rhamnosus and soil probiotics, which is in our… We have spore-based soil probacts in microbiome mojo.

We're disconnected from nature. We should go to Sardinia or Icaros and hang out there for a month or two or three. I'm in. Let's do it. Yeah. And we'll dance until 7 a.m.

with other ladies that are 100, 105, 110 years old and drink their wine. Their wine is so special, apparently. It's very vinegary, kind of like maybe Persian wine and others.

So it's got good short chain fatty acids in it from fermentation. Interesting. So even if we don't make it, we can drink it. Yeah. So probably I would do better because I'm Mediterranean and you might have your Mediterranean.

I could rice with you. Um, okay. Yes. Okay. Back to the, and I do want to say one last thing. in a negative light because people have lost tolerance to the FODMAPs because of a gut imbalance.

And so now they have to be on a FodMap diet that excludes. Exactly. Even big academic centers, Cleveland Clinic

and Mayo, they push the anti-FODMAp diet.

What I'd love you to touch on, right, is for someone who might be… Thank you for bringing that up….on a Yeah, my sense is that shouldn't be the end of the story, because what the goal should be is to work to rebuild the gut population so that you can go back to breaking down those FODMAPs.

Exactly. You need them for longevity gut. Right. Yeah. So FODMAP stand for like monosaccharides, disacchorides trisaccherides whatever, like short carbs as well as also sweeteners, artificial sweetener.

But our diet is, if a healthy ancestral diet has a rich amount, even beans, they have something called ROS, raffinose oligosaccaride. It makes people fart.

If you have plenty of lactobacillus in your gut and you soak and ferment your beans you're not very likely to have a lot of gas or bloating or anything.

And also your kindred likely had ate these all day It's like a great way to get nitrogen and protein, you know, before or, I mean, after industrially, with agriculture and, less hunter gathering.

So we've lived with this for tens of thousands of years. It is just what happened the last 50, 100 years, we had antibiotics, which would kill our carb digesters.

and FODMAP digesters.

Testing the Microbiome and Longevity Signatures

So what studies show is that with FodMap intolerance, there's high bilofila, wadsworthia, it's a species that makes a lot of gas. But when I look at clients and we do surveys as well as certain testing, like tapalomic testing not VITRAC, but we oat, organic acid, they have high fungal overgrowth.

Yeah. Arapinose is high and all the F use. Furoic acid and others that are produced by mold, black mold aspergillus and fusarium and other species. So they compete for the real estate.

And we want to, our gut is like a garden. By gardening it, we can extend the telomeres, the lifespan. One really interesting, it's really amazing you brought up the age of organs because there's one FMT animal study and there were some reasons just looking at the ovary age, these animals, but they did the FMt and the ovarian age extended.

And there was also overall telomere extension and lifespan. I'll send it to you if you're interested. Also in a study, like it was really looking female gonads and then they're going to do a male one and look at male gonad and aging those organs.

One of the CEO founders, she's already gone through our weeding, seeding, feeding protocol. She's like, oh my God, Grace. all my numbers are better. And I'm like, yeah, of course, like we're fixing everything.

Our gut is everything if the gut. Is permeable and LPS and improper proteins are getting across the guy. Let's talk about really that'll probably have an impact on, let's say, inflammation, right?

Because there's going to be an immune response. Let's talk a little bit about how that microbiome signaling and leaky gut might potentially feed into immune imbalances as we are aging.

Yes. Oh, absolutely. Because there's a lot of energy that goes to tighten the keeping as much as the body can tight for the gut because we eat three times a day and snack and forage and blah, blah blah.

Forage. Yeah. Well, forage in my kitchen, you know, in the pantry. Yeah, sometimes I eat crumbs off the ground, but whatever, it depends on how hungry I am.

I'm like a dog. But yeah, the permeability, what studies show is when we have leaky gut, we had bacterial translocation and fungal trans location. So all the pathogens that are wherever they are, they start to migrate and they're like, wow, It's a field day.

And I go have fun and party. The worst condition is dementia. We know it as type three diabetes, Alzheimer's to Parkinson's and dementia. And when they did autopsies on dementia cases, there was fungi mold and candida in their brain.

Wow. When you look at age match autopsy, they didn't. Yeah, it's just translocation. And that's why GLP-1s work so well and other, and gut healing. So when I, when we work with clients at the gut institute, we always do in parallel healing, will heal the brain.

Literally, I do concussion protocols with even the simplest gut permeability cases. We heal. The brain and the gun parallel because whatever's in the guy ends up everywhere.

Study shows in, the breast tissue for women, it's a prostate testicular tissue from men, whatever is in. That ends in breast milk. And I bet if we did it, if had autopsies, well, we do have the, you know, the dementia, some of the studies, but they're not looking at the gut.

But without a doubt, whatever's in the guy is probably also in brain. I see for women, I do a lot of vaginal, protocols with women because whatever is in vagina is the good, what ever is good is vagina, which sounds terrible.

So we to tongue to tail, sort of like, presumptions and then medical translation from animal studies. And then we do protocols. So we are healing sinuses and the whole ear, nose, throat, and sometimes eyeballs if needed.

Sinuses are so powerful. Tear ducts. optic nerve, eye, it'll have shit there. Like we know the placenta is not sterile, whatever's in the meconium and amniotic fluid and placent.

It's from mom, It goes to the baby. This is how we get the lineage, the legacy from our grandmothers all the way many generations back, what kept them healthy, strong and resilient.

We get every man and woman. And we get to mitochondria. Exactly. Mitochondria are everything. Mitochondria from rickettsia, from intracellular bacteria.

So when we treat our mitochondrion, well, I'm so lovely. I love hearing all your mitochondrial peptides, broadcasts. And I learned so much. mitochondria are synonymous to our microbes in the gut.

So when they're healthy and happy, our my microbes are generally healthy. And happy to whatever we do for our microbe's makes our mitochondrial happy and better too.

Yeah. They're in parallel and our brain. Our brain is huge, but when we get permeability, we have leaky brain, so it's known as the BBB, blood brain barrier.

It gets leakey. Well, right along with the guy, I mean that people will say, if you have a leaki gut, you most likely have leaky brain and that means it's being invaded.

And so the immune system automatically becomes activated. Yeah. Right. People have like eye issues or ear, nose, throat issues, you know, ear infections.

They have a leeky ear nose throat, they have Leaky tonsils, the leaki thyroid parathyroid. they Have leeki joints. Okay. Women, we get so many things, right?

We're really literally, permeable to the world. through the vagina, we get leaky ovaries, leakey cervix, and endometrium. So if we heal the gut and we heel those parallel organs, the whole body is going to regenerate and heal well.

Okay. Let me get back to Michael Levine for a second because he uses antibiotics, he use methylene blue. He loves the ionic channel benefit because…

He doesn't apply electricity, but he likes the bioelectric effect. There's a lot of drugs and calcium channel blockers. that they shift our electricity in the body.

So when he used methylene blue or another antibiotic, he had less regeneration. Interesting. He also omitted vitamin D. A new flap and whole limb appeared after chopping it off.

It had a beautiful limb and it worked. This is in a tadpole, right? This isn't a grown adult frog. Generally they don't regenerate. Yeah. And he used these antibiotics and he didn't, he use vitamin A, retinol, gasset, but no, no vitamin D.

They didn' have a bone and they didn have the full, full functional regeneration. Wow. Yeah. So he fucked the flora and then he also did not have one of the very important nuclear receptor agonists, vitamin Wow.

Well, and that's amazing that the bone… And I think what that speaks to is that these things we call vitamins, like vitamin D3, which most people would say really it's a hormone.

But beyond that, it is a powerful signaling molecule. And some of the things that fall under this, for example, vitamin so much more than just one thing.

Melatonin is another one. People talk about melatonins for sleep, but it's an antioxidant. It's so many different things. Again, we were talking about this before the podcast, that there's many pathways in the human body linked to these molecules that we're just still learning about.

It's so incredibly powerful. Yeah, exactly. It is so powerful, right? Yeah. I'm a data whore scientist, I have like hundreds of clients, we've put on vitamin D and you'll see their thyroid get better, you will see the testosterone go up, for women they get more fertile or fully fertile, their progesterone, whatever goes up.

Vitamin D, unless you're in Antarctica or like way, way south, You know, we get vitamin D all day, every day. Like it's a signal our ancestors and kindred have had since the dawn of time on earth.

Yeah. Yeah. Yeah, so it's immensely powerful. Well, and, you know, we live in indoors, right? So at the end, ultimately, most people are deprived of vitamin D.

And so do you have an opinion on supplementation versus using a light? Like I have a panel upstairs that produces UVB and the specific wavelength of UV that will support my body's ability to produce vitamin d3.

do you have? I'm all into like whatever works. I have one of those too, but it has a timer. So I didn't know I had a time. It goes off every five minutes.

so I can't, I get annoyed to like, well, no, you, so the timer's there because your program is running based on your skin type. And so in order to change the time, you need to, and over time you would increase your exposure and you wouldn't be measuring your labs.

Leaky Gut, Inflammation, and Organ Crosstalk

But I think what's really important, I've heard this from a couple of people, they've overridden somehow the timer and they burnt the daylight. Oh yeah.

You can cause cataracts. Especially if your stress is high or you're on steroids, you are going to be at risk for catarax too and skin issues. Speaking of vitamin D, the microbes have also hijacked vitamin d.

So cryptococcus and mold and a lot of micro bacteria and other bacteria, they create systematic infections. They

increase calcitriol. And normally doctors don't measure it.

Clinicians and coaches like us, we don t measure. But I track it on everybody. The microbes have cracked that code. So they're calcifying our soft tissue, and we dont feel good.

You can t just take a vitamin D supplement or be in the sun all day long. you're adding to it. But if we do weeding, seeding, feeding, we lower the burden of those systemic and subclinical low-grade infections, it all normalizes.

It's called 125-OH2-D2 calcitriol. That's the active vitamin D. Nobody checks it. You really should. Why is that a precursor? Well, in some people's pathway is blocked, right?

Genetically. I don't convert that very efficiently. So if you're measuring my precursors and it's normal, you have no idea what my active is. And then there's another marker, there is another gene that regulates how efficiently you clear the active.

And if you've got a stopgap there, you could be building toxicity by pushing the front end too hard. It's really interesting, all this stuff. And you know, if think about it, coming from a very sunny, like my ancestry coming, from the sun, there's protection mechanisms built into my system that are working against me because now I live in the Northern climate.

Exactly. Right. I have that too. In the summer I'm like black, I am dark. And I checked my viamede. That's when I got diagnosed. Only a level of 19. The second I started supplementing I felt great.

My periodontal disease went away. Asthma and wall went and a couple of other things. Yeah, you're right. We have all these feedback mechanisms because of where our kindred evolved.

Yeah. It's your genetic program. So interesting, right? Okay. Did you want to say anything else about D3? Otherwise, I'm moving this on. Yes. For healing, whenever we turn on all the nuclear receptors and the right healing pathways and hormones, to heal the gut the fastest, we want peak hormones without estrogen dominance or any kind of weird dominance, DHT dominance.

We want low stress, so like low sympathetic burden and high parasympathetic where we rest and digest and regenerate without fibrosis. Without fibrocyst, that's the key.

And then the third is just some basic gardening. I don't have a garden, I live in a condo. Weeding and seeding. Yeah. Modern living has created a lot of problems in the gut because we've over-weeded, not enough fiber and not and fertilizer, and we've used way too much antibiotics, like way, way.

So some of the centenarian studies, if we emulate them, these people, they grew up, there was no sewage because there's no running water. They got a really great gut from their grandmas, moms, that whole lineage, the mitochondrial lineage.

And then they didn't have damage. Yeah, and they may have, you know, a lot of the theories too are that they had really great quality water, so high minerals.

And maybe even deuterium depletion water. Yeah. I'm drinking that these days. You told me. That's amazing. Awesome. When we talk about antibiotics, folks, we're not only talking about the ones you get from the drugstore.

There's the antibiotics that are coming in through your food. And they would not have had, like that, their early years at least would have been very, there'd been no antibiotic really in their food, particularly.

I don't think, I have to look that up. Exactly. And kind of like the Amish, they were probably around a lot of horses and horse stalls and farms and pigs, cows, chickens.

Literally there's poop everywhere. Which is a good thing. Yeah. And these aren't predators. So they're not like

carnivores, not stinky poopy, but like herbivors.

Like you could literally make your house out of bricks of poop. That's what happens. Right. It's called modern living. I can beat your tent any day. They were hungry.

Like they found a lot of treponema in Burkino Faso and Tanzanian hunter-gatherers. They had great guts. I don't know about their longevity, you know, but yeah, yeah.

But a lotta their anti-inflammatory markers are pretty good, right? And if they were probably eating worms and larvae and termites, because treponema is part of the carb-digesting factory of these insects.

And so during wet seasons, they would have a change in diet, eat high protein from worms, and larvae, things like insects, And then when dry season came, their diet kind of changed.

But while they're in wet season, Their diet and their microbes, as a consequence, actually supplied all the good stuff that they and replaced the good stuff and pathways that they would normally have on their own in a dry season.

So fascinating and interesting. Yeah. And then the modern gut, we only have like 200, 300, 400 species, but these healthy people, Amish hunter gatherers and centenarians, they have a very diverse gut.

They sometimes will have like 600, 800,000 species in their gut, so what studies show over and over for longevity is that the lower the diversity, the higher the morbidity mortality.

Not very good, but if we just build diversity with prebiotics, postbiotic and probiotics and mimicking an ancestral lifestyle too and habits and things, and not kill off too many things.

I see in clients, we see their telomeres extend pretty quick, like in two, three, four, five months. And all their inflammatory markers go down. It's just a matter of the protocols.

So what I love to do is we start low dose with probiotics, especially if they can get soil-based with regular multistrain. Avoid all strep and yeast because it's already such a big problem.

Yeah. Some people even have antibodies to yeast and candida and strep and staph. They usually have such a problem, so much permeability. Their body's trying to eradicate it, eliminate it.

So they make antibodies just like it would for gluten. But if someone's gluten allergic, would I give them gluten three times a day or three time a week?

No. I presume we've done testing, people have high yeast and ASCA, which is saccharomyces antibodies, we don't let them touch any yeast flakes, yeast, nothing.

Yeah. So first thing is like probiotics. And then a really great leaky gut protocol is Tributerin 10 a day, Meca-ITG 10 day and SPM 10 today. 10 capsules.

So the funny thing about 10, 10. Like right out of the gate? Yeah, right at the end. But if we're just doing peptide intensive only, then we do lorazotide.

Then depending on where they are in the spectrum of immunity, if they don't have any mast cell issues, we, do a lot of Wolverine or clove or glow. Okay.

Yeah. So Clo is KPV, GHK, TB4, and BPC. I like to add in TA1 as well. And I add an extra TB 4. Right. Bpc is a little problematic, so I don't push the dose on that, but a lot of TB four.

They're built for convenience, not necessarily for function. And I'm sure you sit there and supplement. Yeah. They

don't put TA-1. TA1 is so expensive, but it's so amazing.

Well, and TA 1 is not always… I mean, we can talk a little bit about TA one, which is thymus and alpha one. Which is an immune modulating peptide, it is immune-modulating to a point.

It really does… Yes. support and push the innate immune system. And maybe, Grace, this is a good time for you to talk a little bit about how that might…

It's a bit like acromantia. If it's what you need, it is magic.

Peptides, Bioregulators, and Gut Repair

But if it isn't, then it will turn on you in a hurry. Yeah, you have to look at someone's mass cells and immune functioning. It can be way too much for some people.

Right. So if your innate system is already overactive, then I miss an alpha one could actually really push you the wrong way. And I think that's really important for people to understand.

I think that working with a practitioner, someone who's looking under the hood is a really important point. I Think with lorazotide, you kind of can't go wrong because if you don't have leaky gut and you take lorozotides, I don' imagine it's going to do much harm.

Actually, that's all it can trigger. They're just sensitive to everything. It's their job. It's also not homologous to human bioidentical hormones. We don't make it.

It is from Vibrio. A very toxic bacteria. So it's a small molecule that's been designed to fix a problem. it's not endogenous. So we have to get, you know, a little careful.

And so that's important, right? It's an important fact that people don't necessarily know because for the most part, most of the peptides that of something that's already naturally occurring in the body.

And you were talking about this before we started recording. I think this is another important point to make, is that the further away we get from the source molecules, so for example, you're looking at growth hormone secretogox, which all are a fragment of natural growth hormones in people.

You were saying, and I'd love you to speak to this a little bit, the farther away from that original molecule, the more kind of interesting different types of reactions people are showing up with.

And maybe you want to speak to them? Yeah. Oh, totally. Like a friend was telling me like he can't take any of the tests that I put CJC, he'll get a panic attack.

I'm like, Holy fuck, dude, I feel so bad. Yeah, and I get puffy if I am really insulin resistant at the time, you know, but That's bad. Like, yeah, because it's also super foreign.

It is not homologous to anything we make. And so that… And do you think that's why? It's like breast implants. Yeah. Total knee or hip replacement. I had dental implants, I didn't have it taken out.

Seriously, like I have to get the thing ripped out and pay cash. Oh my God. The doctor could not believe it. You know, the surgeon was like, whatever.

But the second it was taken, out I lost five, 10 pounds of prophyldema and it just got better and better. It also disrupts meridians. But yeah, anything foreign, unless we're in a good immune state, it may backfire.

So it doesn't mean they're bad, but it does mean that you have to proceed with caution. I think that's really important. We're going to run out of time and I do want to touch on peptides and bioregulators.

When you're doing repair work with your patients, Right. Where do peptides fit? Like, do they come at the beginning? Do they Come in the middle? do They come in at end?

Oh, no. Like where, where are you bringing them? Okay. If they're not, yeah, anyone on the mass cell is MCAS, you know, chronic immune reaction syndrome spectrum.

We don't do too much. Everything is like very, very minimal. You know if we do Peptides, it might be topical or on-the-tongue or nothing's jabbed in the beginning.

But if they're generally kind of healthy, we can just run and go. So it'll be Clo or Glo or Wolverine right from the get-go. I know you like the VitaStream company, I think.

Yeah. No, no, No. I'm more of a profound health girl, but- Okay. Okay, yeah, okay. That's where the conference was, Natalie. Well, and I like Nature's Marvels.

Nature Marvel's are great. Because- I love Phil Mickens. And I, think what I liked about Nature' Marvel is you get to build your own stacks. Nobody's doing it.

Yes. Yeah. Right. That's yeah. And then Phil's gonna they're opening something in the US. So access will be a lot. Hopefully good. Good soon. Yeah. So, so Kevin sent a whole bunch of bioregulators.

Stomach is great. Or what's this? What's it called for the stomach one? I can't remember the name. Well, there's StomaCorp. And the other nice thing about, sorry, about Nature's Marvels, it just says stomach.

They don't bother with… Yes. Yeah, right. Which is a bit of a… Yeah so sometimes it's hard to get penetration. It's great to add in either injectable Vestigen or Ventfort the oral bar regulator, the blood vessel.

I find it decalcifies. That means somehow it's doing something with oxalates. Interesting. Yeah, I don't understand the mechanism, but people feel great.

We wanna open things up so we can get more penetration. Because with any kind of chronic inflammation, our chromosomes get, you know, has heterochromatization.

They're condensed and hard to open and translate and transcribe to proteins and enzymes and everything. So we want to like decalcify a bit. we decalsify with oxalate degrading probiotics.

There's six species in both. So we want to get the oxalates down. I sometimes do antifungals because where do oxlets come from outside of oxlet containing foods like kale and spinach?

Well, they come mold and candida. They pump the fuck of Oxolates into our body. And then with the right pH, pKa, like they crystallize. So when oxlates bind with mercury, these never dissolve.

Interesting. The dissolution quotient is like 10,000 compared to oxolate with magnesium. Right. Yeah. Oxalates like crystallize, like women will have cysts and fibroids in their boobs and ovaries.

That's bad. And that's not fun. Not great. Okay. Men will prostate testicular problems. Brain, brain fog, dementia, pre-dementia, whatever, social phobia, anxiety, mood.

without a doubt. So we want to start doing the in parallel brain and biome healing. We want look at the oxalates and weed a little bit. This really gentle berberine based products.

You don't want high doses. Once a day, maybe only five days at a time. If they have pets or had pets somewhere in their life, we do parasites treatments.

Everyone's got parasites. No test picks it up, including ViTrac shotgun. They don t pick it How do we know, like one

of my parasite mentors, you know someone asked him like, oh, who has parasites?

Well, let them put a finger on their pulse. Do they feel a pulse? They got a parasite. Isn't there a narrative that says that some parasites, we are, yeah, right.

We don't want to wipe them all out. Yeah. It's like our car. Like it's always going to get wear and tear and dirt. Clean it. You're not going clean your car immaculately.

Why? You know, like it is going get used. And also they're, they are sometimes good, you know. Some of my colleagues, Yeah, They actually initiate parasites through the skin and they live like, I don't know, 30, 60, 90 days, and then they die off.

And they really shift the immune system in a good way. We're meant to live with some parasites, you know? All right. So back to the peptides. Yeah, so yeah.

Now this company, Vitastream, might want to get to know them. They're great. they're prion free. They take three, four months to extract and it's all very safe and kind of Cabinson protocols and everything.

Cabison probably had peptide he used with his own internal private clients. Putin and others, who knows, right? So one is called gastrogen. It's a small intestine mucin peptide.

And it's not made by Profound. it probably trademarks somewhere, but it is not out in the public domain. So Vitastream has that. I love it. Both the stomach cord and the gastrogens can really help heal the gut.

Even if people don't do the other extreme protocols like weeding, seeding, whatever, and tributer and SPM and everything, sometimes these two… And with a mast cell client, like someone dealing with mold or Lyme or any kind of high degree of inflammation in their body, we do tiny pinhead amounts three times a week to start tiny.

And if they had reflux or hiatal hernia or even barest esophagitis, it'll be symptom-free in five to 10 days. That is the magic of peptides and bioregulators.

I mean, not so much bi oregulator, usually peptide is that they just seem to cut healing time, like results time. Totally. Yeah. And I learned all about the stacking from you, you know, stacking five, eight at a time is great, I find.

Well, most people do three to five. I know Bill Lawrence and his audience. Well he'll cycle through stuff. Like I'll work through eight or nine, but over the course of a month.

Not at the same time. Yeah, me too. It just depends what's on my counter. What I pick up. That's you yourself. But as you know, Bill Laurence, many of us will do 50 boxes a year or 80 boxes.

A year. You know, like I love the combined ones where there's six in one. Yeah. That's me is the key. I can do it easier for sure. So all the peptides help the gut.

Every one of them, GLP-1s help the gut, low dose, micro dose high dose whatever. Every peptide like C-Lanc is my favorite peptides. They jabbed it into animals and they improve bifido.

That's crazy. It's crazy. And pathogens went down, viruses went. So how do you think that is? Do you. Because it impacts the nervous system or do. Okay, so our gut microbiome, 100 trillion bacteria, they make a boatload of antimicrobial peptides.

I think many of these are also regenerative. We just don't know, right? Like I told you the Michael Levine and other labs who did regenerate studies. We don't give enough kudos to our microbiome and the peptides they make and other chemicals they made.

They are regenerating us every time we feed them, you know, offer them food and prebiotics. There regenerate us

everyday, all day. All the centenarians, every person who lives in a blue zone.

We just have to learn how to co-op with them and keep them happy. We're synergistic and it's about reciprocity. You have be grateful for them, say thank you.

Some people don't like the smell of their poop. I'm like, who cares? Make it better. You know, like, we grew up with poop. If you have a dog, you're picking it up every day or whatever, or you've a cat, and you know you are scooping it.

Vitamin D, Mitochondria, and Regeneration

We have to honor our poop! Yeah. Well, it's part of our ecosystem, really. Yeah, so honestly, I don't know the mechanism for peptides, but every study I look at, if they have microbiome study or an in vitro pathogen peptide study, the peptid will crush the fuck out of the pathogens, literally.

Yeah, and GLP-1s too. There's a laryngotide study and then there's one or two semi-glutide studies. Not many, but they improve bifidos and other good species.

And then they lower, there are less pathogens. Also because they're also starving a little, right? But there is a reduction also in the pathogen. Well, I think we're still learning about how these GLPs are really doing because there's a resistance obviously from the companies that created these because they want them to be just one thing.

And I thing what we are seeing clinically from people like you working with these small molecules like the GLP1s and 2s, 3s is that they're impacting so many other systems in the body and we know this obviously.

And you're seeing it with people that are using it, with patients in microdoses to manage autoimmune conditions, to managed inflammation, and then all of a sudden their brain fog lifts or they are functioning better.

And now you are saying, what I'm seeing in these microbiome tests is I am seeing an improvement in the composition of the gut microbiome and how is it doing that?

Because all of a sudden they're not eating as much or they are not using eating much junk or their inflammation is down and it allows different species.

Who knows? We don't know yet. But the point being that you're seeing novel stuff that nobody else is looking at. Yeah. And it's backed by science. If I dig hard enough, there's always a study that speaks to it for the translation, right, from the animal.

I'm so grateful to have these studies to back up all the protocols, like we know there is a mast cell study now, SIRS study. Oh, I just saw that today.

Yeah, yeah. It came out last October, November. They have like 47 people, men and women, they all had SERS, so mold, Lyme, blah, everything, Candida, overgrowth, and some are bed bound.

Well, our mast cells have benzodiazepine receptors on it. This is why people love Allium and Ativan and all those great sleep agents. Because mast cell stirs, it makes you crazy.

And you take that and then you're like calmer, right? It makes sense. There's GLP-1 receptors. Crazy. So this study, they did use kind of hard as they ramp people up fast, but I mean, there was a retrospective series.

Out of these 47 people, 79% had reduction in nearly every mast cell ser sign within one week. That means one dose. And they maintained it. Yeah. If they lost weight, they just continued as they titrated the dose, some many lost like 20, 30, 40 pounds, but a lot of it's water weight.

Yeah, but that's going to make them happier too, right? Right. But we can't be on GLP-1s weekly forever. I get off it

every time I do cycles and I see where I'm at.

If someone's dealt with toxins and biotoxins, it's a great tool and it is going help support healing the gut. There's also a lot of side effects. It will slow motility for some people.

it will absolutely trash your gut if you don't have a good gut biome. And then there's all the other problems. I believe it can contribute to cancer probably somehow, because we've seen it in animals.

Really? Yeah. Peptides, we just don't know. No, no. But I mean, GLPs don' t contribute cancer. Isn't there like almost… There's a contraindication with thyroid medullary cancer in animal.

Yeah, I know it was like, oh, they weren't sure about the stats, but our thyroid are kind of funky. Rat thyroid have a density of GLP receptors that human thyroid don t.

Oh, I didn't know that. Okay. That's really good. Very, very dense in GLP receptors. Whereas the human thyroid is nowhere near as dense. And that makes sense.

Yeah. Cause I think at this point, obviously anybody with a history of thyroid cancer out of an abundance of caution. I mean, yeah, maybe genetically they have more GLp1 receptors for some reason, right?

So we're also genetically uniquely different. But there's a lot of black box warnings like gastroparesis. Like once people stop, it doesn't go away. Yeah, you don't want to mess with that.

You don' want a mess gastro paresis for sure. Okay, so yeah. Um, okay. Was there something else? Or am I going on? That's gut health 101 and peptide 101. So we're going to just do a couple of quick fire questions to to kind of wrap it up for people.

Do you see gut peptides becoming mainstream in longevity medicine? Dr. Grape. Oh, yeah. Absolutely. Yes. Heck, heck, yes. What research excites you most in microbiome aging in that space, like the link between the microbiomes and how we age?

Oh, yeah. Lately, I've been getting into the secondary bile acids. It's so weird. But it's all poop. Never could understand why people love coffee enemas and stuff, but now it makes more sense.

You know, it is all our post-digestion bile-acids and how they hit these nuclear receptors, actually, which is very important for longevity. And do you think that we will one day measure biological age, at least in part, through the gut ecology, like through diversity of the microbiome, or do think you're already doing that?

Um, I mean, all of the studies for longevity do point to diversity and even like gut health and immune health. Like we, we need good diversity, not of pathogens, but diversity of good beneficial symbionts.

So I think so. You're so far ahead of curve now to even talk about this. Yeah, absolutely. No, and maybe we'll get more specific.

Rapid Fire: Biomarkers, Trends, and Daily Habits

You know, I think that there's still a lot of questions about what is the perfect gut microbiome or what would be the, and either we're going to get more specific or we were going finally concede that it depends.

Yeah. Exactly. It's going be unique. But some core. Absolutely. Okay. Here's our rapid fire round. Dr. Grace, here we go. What's the most underrated gut longevity biomarker?

Oh, biomarker. I think amount of bifidos. How much percent in your gut? Because usually people's E. coli or staph or strep or pseudomonas or clostridium or homophilus.

whatever pathogen is outnumbering this guy, which is terrible. I just cringe and cry and it breaks my heart when I'm reading those VITRAX. Love it. What's the most overhyped gut trend that you're seeing right now that makes you crazy?

Oh, gut trends. Probably the Ibu or methylene blue. Yeah. what's a peptide or bioregulator that just makes so excited? What is your favorite? I was sharing with you the SS 31, which is so sad, right?

Cause now we have some restriction here, but it's like without a doubt. Yeah. And centenarians have three times more than average. Come on. I did not know that.

That's why we love it. They have three times more human in three, times, more. It totally makes sense because their mitochondria is working. One gut habit that moves the longevity needle the fastest that people could start doing tomorrow.

Oh, that's harder. What gut protocol? Oh habit. People could started doing it tomorrow that would probably have the greatest impact on their longevity.

Okay, so I struggle with this, but getting in 10,000 steps a day, you know, like when I work a lot, I don't get out. More than diet? Yeah, our body hacks a lots for diet.

I've practiced this Natalie, and I'm an expert. And I can eat crap and still have perfect Bristol 4. But the walking, Like I just start going to shit if I don't do yoga and running, walking 10,000 steps a day.

Yeah. And it raises our body temp. So, you know, we're talking about core body temperatures, like we just don t function well. Like, I used to have low thyroid.

I use to be morbidly overweight. Yeah, great question. That's it. So Dr. Grace, please tell people where they can find you where are they? Can access your products where do they access?

You're testing and even if you have any courses or practitioner, you know, people somebody wants to work with you or another practitioner that you've trained.

Yes. Just come to the gut institute.com. Um, we have headers. You can, or just reach out to us at info at the good institution. And that has a code not 10. I believe you can use it on any products and there's a link in the show notes program.

Yeah. Love it. Yes, thank you. Always a fun time, always wildly educational. and, um, I can't wait till the next time we do it again. Thank you, either.

So much for having me on such so much fun.