Ep 605: The Real Reason Your Probiotic Isn’t Helping with Dr. Oscar Coetzee & Danielle Arnold Transcript

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Podcast Introduction and Guest Background

Welcome to the Health Fix Podcast where health junkies get their weekly fix of tips, tools, and techniques to have limitless energy, sharp minds, fit physiques, or life.

Hey, health junkies. Welcome to another episode of Health Fix Podcast. On today's podcast, I have Dr. Oscar Koetsia and Daniel Arnold from Designs for Health.

They're part of the clinical education and functional nutrition team for Design for health. Now, what's interesting is Design For Health has been doing a lot of research lately.

on beneficial bacteria and this concept of enhancing the gut ecosystem. So what if I told you that you could restore your entire ecosystem of your gut using key specific commensal, so these are like friendly bacteria that have never heard of before that are not in capsules right now with probiotics?

Well, these guys are finding it to be true in some of the research that they're looking at. Now this is not research, like it wasn't initially started with research that they had done themselves.

This was independent research. Because like most folks in the functional and natural medicine community, gut health is paramount. We want to be able to amplify it and we're kind of frustrated with the fact that probiotics are not living up to their standards.

And the idea of taking a probiotic over and over again and not knowing if it's really doing anything is frustrating. wasting money. So in this podcast, Dr.

Oscar and Danielle are going to dive into some case studies. They're going dive in to what Designs for Health has been researching and what's on the horizon.

And the concept of using a specific species to help signal the ecosystem of your digestive system to promote the production of more beneficial bacteria so that you don't have to take beneficial bacterial over and over again as a supplement and wonder if it's helping.

You know it is. So this is an interesting podcast. We're diving into some research geeky stuff and I love it. Let's introduce you to Dr. Oscar Koetsia and Danielle Arnold.

All right, Dr. Oscar Cutcia and Danielle Arnold, welcome to the Health Fix Podcast. Thanks for having us. Well, I'm excited because Designs for Health has been in my wheelhouse since day one.

We were using you guys at Bastyr when I was a young little naturopath. and starting to get started and then I even went into doing some private label for a little bit and oddly enough it was on probiotics for sure because I had this whole gut program that I created for my patients at the beginning of time and it seems it's been almost 20 years now so it back in the day but it what brought me to Designs for Health was the old problem.

probiotics. So, of course, today it seems fitting that we're going to talk about that as well. Since I have both of you here, I always like to start things off with how are you two affiliated with Designs for Health?

Who's doing what and do you guys have a favorite probiotic? Well, let's see, my affiliation with designs for health has a pretty long history. I actually Was one of the faculty members for Dr David Brady at the University of Bridgeport and about 10 years ago.

So I think he brought me on as one, of these scientific advisory board members because of my expertise and. kind of the mental health, nutritional overlap, as well as sports nutrition is kind the two areas that I really worked with for a while.

And from there, things evolved and we launched our own functional testing, and I kind was the person that launched the functional test in the form of GI Spotlight, GI Metabolomics, Metabolomics and Genomics testing.

Then from their, they hired me into the position of VP of Education because of my academic background to kind run the entire education. program at Designs for Health, and that's my current position.

And then, you know, I'll have Danny to tell you the story, but Danny basically was put in the position now of running the testing and, that whole component of the company, then I will turn it over to her.

Yeah, so I got with Design for health because I was a student of Dr. Kitsia's at Maryland University of Integrative Health. It was his, I begged him to be his intern.

He was one of my favorite teachers. I was like, this guy knows how to approach. Cause, cause my husband had had MS and so it was, like do the things or else like you know, these, you don't get the benefits if you aren't doing the thing.

Right. And I felt like a lot of, my teachers had been like meet your patients where they are and these types of things. That wouldn't have worked for my, husband, and that's why I got into this.

So I really liked Dr. Katsia's approach. He was just like hardball the whole time. So it was like, how do I work with this guy? And I think I harassed him so much that he was finally like okay, fine, like you can work me.

I worked with him for two years at his private office or his clinic. And then I, you know, we did so many functional testing there that I got a pretty good handle on it.

And he got so busy in his new position as VP that he needed someone to come on that. He trusted to be able to do some of the functional testing. So I kind of moved into that position.

And then as he moved, moved upward, I moved to his position overseeing the clinical education team. Nice. It is true. If you are the squeaky wheel, you're going to get some grease some way.

Yeah, definitely. If you're a good quality wheel and squeaky, that's even better. I would have to agree with you on that one. So their perseverance pays off on this one, good deal.

Why Traditional Probiotics Fall Short

Of course, today we are slated to talk about probiotics and of course over the course of this, I'd love to hear from you guys what's your favorite probiotic protocol or whatnot.

One of the biggest questions I would say series of questions I get from folks and of course we don't have to answer them all in one shot, but I'm just gonna set the stage here.

Is that number one, do we actually need a probiotic? Number two, can your body actually get its microbiome set so that the probiotics, you know, we seed it, were good, and we're good for how long?

How long can we be good? And then what's the deal with the various types of probiotcs and what kind of situations do we need these particular probiotics.

That's that's what I get like spores versus the actual different strains and and you know it could go on and on. So of course you I would say a thing we started with, or what I started, with is like there's this concept of why has the just take probiotic message remained so dominant despite limitations that we know of these probiotics?

I think, you know, for me, and I'll start it from the mental health category. So if we go into the Mental Health category, I know several of my students do a lot of research on this when I was implementing quite a bit of the probiotics for mental health.

The data is very strong, you know, on certain strains of probiotic as far as, let's say, anxiety and depression is concerned. If you look at the Lactobacillus species, and Bifidobacterium longum in specific, there's very a strong prevalence of data supporting that it has beneficial outcome in anxiety, in depression evaluations.

However, it's kind of a transient product, right? So if you stop taking it, it doesn't have the effect anymore. So you have to consistently take it to have outcomes.

If we just tie that into the mental health picture, these probiotics produce aromatic amino acids and then these aromatic amine acids in the form of phenylalanine, tryptophan and tyrosine convert to neurotransmitters.

That's where we can kind of get the benefit. And I think the entire industry of probiotics, I don't want to sit here and say that it's not helpful. They certainly have messaging ability and they have the ability to make a difference in the human gut.

But can they really recede the gut in traditional probiotic form? I do not think so. And the literature is not really supporting that. However, if you go into the newer phase of the paradigm shift where we are looking at anaerobic keystone strains with some of the technologies that have come about in order to help people insert those into the distal colon, then we can start possibly talking about permanent seeding and grafting.

and then kind of cross-feeding, you know, to help the individual. So, for the listeners, I just want to kind off delineate here. On the one side, we have the traditional aerobic strains of transient probiotics that do a job.

There's enough clinical evidence, not only in the mental health sphere and other areas, that if you keep taking the probiotic, there is a benefit, right?

But once you stop taking a probiotc, the data is also supporting that it doesn't work. on the other side of the equation, We have now more technology that wasn't available in the last four to five years that can insert bacteria that have a much broader effect on the other ones in form of the keystones.

I'll turn it over to Dani to add to that. Yeah, I think that people adopt probiotics because it's easy. You know, we live in this world where it is like, take a pill for every ill.

And people are used to that paradigm. So I think, you know, they think I need a probiotic. I'm going to go to Walgreens or whatever and grab whatever's on the shelf.

And, I you think yikes, Walgrains for a Probiotic. But a lot of times, your gut isn't like a supplement problem. It's not like lack of this one supplement that you got from Walgreen's.

it's usually an ecosystem problem and I that's what Dr. Kitsie is speaking to is how do we create an environment where the right gut microbes thrive and bringing in those foundational ones, not the ones that just pass on through, but the one that can actually take up residence are what the next generation probiotics are.

So that's what we're really excited about is how do we get some of these bacteria that come from the human gut and take them as a probiotic so that they can seed the gut, and just feed upwards.

I think that's what we've been looking for, right, all along. And I that that the idea that a lot of people think is going on with these. Of course, being in the industry for as long as I have, I've be let down by a lotta different probiotics, you know?

You try and then you're like, okay. You know, do a GI map or you do some type of stool test and you like okay, things are worse. Then patients are like what gives, like do you not know what you are doing?

I'm sure you guys have seen this too. Yeah, and you know, you just brought up stool testing, GI-MAP or GIFX or whatever format of testing you're using.

And here's an anecdotal piece of data for you. There was some research done at Diagnostic Solutions Laboratories and they were looking at the prevalence of low keystones, right?

So about 65% of the tests that they run come in with low aconansia. about 35% of those tests come in with low phycalybacterium prousnice or f-prow. And then rosberia, which is another very important keystone, is maybe at two or three percent.

But those strains of bacteria that we see that are low could actually have a metabolic and immune effect in the body of up to like 85%, right? So those strings cross-feed and communicate with a lot of the other strains.

So clearly taking a standard Lactobacillus and Acidophilus probiotic is not helping this particular strain. The only thing that could potentially do is it does produce lactate and you know those probiotics produce lactate, and that can feed some of these species, but not at the level that is going to reinsert optimization of them.

So we launched an anaerobic strain of probiotica, I don't know, maybe six to eight months ago, journal article on a case report where we basically had the pre and post testing of an individual and we inserted this particular strain of anaerobe and then what we saw was improvement in the symptoms that the patient came to, but what was surprising to us is how it affected all the other keystones.

So, for the first time ever, I was seeing a probiotic, like you were saying, Janine, that actually made a difference in the GI test, right? So I gave this person this anaerobe for food sensitivity or food allergy reasons, because it's a major butyrate producer, so we were trying to improve the tight junctions and the permeability issue.

But on its own, it took this person's low acromansia to normal levels. And we didn't give this this acromancia. So we were just sitting there and trying to figure out now what's going on here and working with some really smart microbiologists and some people obviously at these laboratories who started to figured out, okay well if you have this one, it's activating some gene expression on the L cells that's helping to produce mucin and then you get the cycle that feeds the acrimansias.

For the listeners, It's almost like you're inserting this one particular entity that then almost wakes up the entire ecosystem and it's like, thank goodness you here, we've been waiting for you to get here so that we can all cohesively work together.

So now I think if you were taking another probiotic like a lactobacillus or an acidophilus and those guys are working, you will actually get more benefit.

from those probiotics when that systemic foundational component of the ecosystem is established. I always use the analogy for me, it's almost like earthworms.

Like if you don't have earth worms in soil in the Ecosystem, none of those plants work really well because they feed the garbage, they work on the nitrogen, the pH levels of soil that makes the eco-system work.

So these keystone commensas are literally the earth-worm. And if they don't in the right places, then none of those flowers look good. You can still have flowers, you can have weeds when the earthworms aren't as optimized, but they're just not going to be as good looking as they could be when there is a really balanced ecosystem.

That makes perfect sense. What I'm hearing, and this might be what some folks might also be hearing too, is that it sounds like a layered approach is what needs to happen here.

I'm curious on the layered approach, are you guys taking it as you use something like the commensal species, or keystone species sorry, that would work on themusin and work butyrate, and then after that, then you layer in what we know as traditional commentals.

Correct. And before you hop on this, Danny, we're also looking at exactly what's feeding these individual species. Because theoretically we all think, okay, well polyphenols, inulin, fiber, you know, they all play a role.

Keystone Species and Ecosystem Seeding

We've actually found out that with some strains, Some of those don't really work very well but with others they do. So now we try to get to the specifics of understanding okay exactly which strain of fiber polyphenol is working with this commensal versus this commencement.

Not only can we give you the strain that is the seed, we're also giving you a fertilizer and the water at the same time to make sure that it gets to that point of engraftment.

So this is all very early stage, right? I mean this all paradigm shifting stuff. At this point it will be interesting to see how long it really takes for that engrafment, theoretically you wouldn't need to be on the probiotic forever, because if you feed that ecosystem and you nourish the ecosystem, it should take care of itself.

However, if your diet and lifestyle goes back to the thing that's destroying the ecosystems, then maybe you need the probiotic, but we're trying to get to make this work the way it's supposed to work from the ancestral standpoint.

It's feeding itself and there's enough fiber present for this ecosystem to be in a happy place. Yeah, I think that's a really good point because when you give a probiotics and you don't give the correct food, it is like throwing a Probiotic in the desert and expecting it to survive.

So that is what we definitely want to do. Give that anaerobic bacteria to build up the foundation, but also give it food while it's there. And with these anaeroic bacteria, because they do come from the human body, they have the propensity to engraft, which means become part of the community.

So that means that you probably need to take it for like three months. A lot of people want to talk about maintenance. What do I need do to not get back to that place?

And a lot times it is switching out probiotics. I know you talked about sporebiotics. and lactobacillus and bifidobacterium. And you can, I always like to rotate bacteria.

An interesting thing that I've found out in like deep dives of doing stuff with the gut microbiome is your gut micro biome, is most active at night. So I like have people take their probiotics at nights so that they can kind of feed that environment.

Like spore biotics are really cool when I'm blind, when they don't have like a GI map or something, they have a lot of quorum So basically they can say like, this population is really high and this populations really low.

I'm going to kind of nourish this population over here. So I like spore biotics for those reasons when I don't really have an eye as to what the environment is doing.

I just have symptoms. But yeah, I like to rotate probiotics as maintenance when people ask about maintenance. Nice. One of the other things that is coming to my mind that a lot of folks will wonder about and we've got the mood probiotics like Dr.

Oscar had mentioned and there's a million supplements online that are like, this is for mood and this for is mood. And really, are they? Yeah, there is some research on certain strains.

But if they're not staying around, then I've got a question to go back to, just like Dr. Oscar was mentioning, you know, tryptophan, tyrosine, the neurochemical precursors all often see folks have, and particularly, this is more in the case of folks who are having a rough time with perimenopause.

And I also see a lot with teenagers. Rough time, with the periods, when we do a micronutrient. and they're all like

phenylalaninate like all of the neurochemical precursors are low and you know they swear they are eating enough protein and I you sometimes I do believe them you not all the time so it's like hmm Well, if you look at that, we're in a rather compromised state as a world at the moment from a standpoint on how we are affecting our intestinal microbiome aromatic amino acids.

And again, for the listeners, that would be tryptophan. Tryptophane converts to serotonin, so that's your happy chemical. Tyrosine converts to dopamine and that's another kind of overall field chemical.

So if you lower those precursors, there's a big issue. But for the listeners to also understand, it's not like your body is just producing these aromatic amino acids.

They now still need to get to the brain, right? And in order for them to go to their brain they need proper insulin control. If a person has pre-diabetes or insulin resistance, then the carrying molecule that gets them there is not going to take them there.

And once it's in there, you still need vitamins B6, iron, vitamin C to make all that conversion happen. So if you really dig deep into the whole third leg of the bar stool for me with mental health, which is psychiatry one, psychological, therapeutic, psychologists, psychotherapy kind of intervention, then the nutritional psychology is what I call it.

I think the Nutritional Psychology is the biggest component that nobody's looking at, right? So everything that you're saying, Janine, is Hey, I'm eating enough protein.

Okay, well that doesn't mean that you're absorbing everything that's you eating, you know, it doesn' mean you are extracting all the iron from that particular meat that your eating or the B12 that is required for you to cross it and now you have early stage diabetes and you wonder why you're anxious and depressed.

You know, if you look at the statistical data on anxiety and depression, type 2 diabetics are more prone to depression and anxiety because they can't keep these aromatic amino acids across.

And now to add insult to injury, now we have glyphosate and herbicides. That destroy this pathway in our guts folks. That's called a chica mate pathway And basically what that is is how that bacteria converts that tryptophan, right?

So you destroying all those things inside of your gut now You have the inability to make it in your got your body is not absorbing enough from what you're getting Is it any surprise that we have a level anxiety and depression that?

We have in a world right so what is the what's the solution to that. We can't all move to Mars and and get away from this exposure to all this stuff. But what I will tell you is that we are getting to the point now that, we can literally engraft these things even in a competitive environment.

So, you'll be a lot better off if you're on a fast food diet, on the processed diet exposed to these herbicides as well as low fiber intake, which most Americans are.

and taking this thing to help engraft it. You know, so this is maybe one group of supplements that could not only work on the mental health standpoint but also feed the entire immune system because there's so many associations to these keystone bacteria.

So what am I saying? I'm saying that the reality is that our microbiomes are never going to go back to what they were in an ancestral period, right? We don't have helmets and worms anymore in our guts like we used to have and because those things are out of our gut, We have this niche space, we have a gap that's opened up that the bad guys now come in.

So the only way to facilitate an opposing attack on that is to put more of these anaerobes in there so that they can crowd out the Bad Guys. Because I forgot to tell you, that was the most significant thing that we found in our clinical research.

It's the first time in my life that I've actually ever seen the crowding out of an opportunistic bacteria without using an antimicrobial. So literally inserting this anaerobic strain crowded out a significant overgrowth of a histamine producing opportunistic bacteria without using an antimicrobial.

Now we're doing deeper research on bigger cohorts to see if that is actually a consistency. But that's the hypothesis, you know, and it will make sense if you understand the niche space that we have and providing because the gut wants these things, right?

It wants things to be present. So if we provide it with the substrates to or the food, that's what substrate means, and that would then fill that niche and it'll fill the campaign.

That's kind of the simple analogy of it. Dr. Katia is like the expert in the gut anxiety space there between the two of us, but I've definitely seen intake forms after intake form where they're like half filled out by these teenagers, you know, anxiety and depression are kind their biggest symptoms.

And I can almost guess that like, we're going to run a GI spotlight or we are going run GI map on them and their elastase is going be to the floor. And that's speaking to his point, like doesn't mean you're, or speaking your point as well too, you could be eating all the protein.

You could eating everything that you say that your eating, but we eat because we need nutrients and we because our physiology needs all these things. If we aren't absorbing those things, that means our physiological downstream suffers and that Physiology downstream includes anxiety and depression symptomatically.

100%. 100% I think you guys brought up a couple of things that I thing a lot of people are going to wonder about because when we talk about bugs in the gut, right?

You mentioned like we used to have all these these helmets and parasites, and now it's like everyone's on a parasite cleanse 24-7. Thanks TikTok. Right, if you have not done a parasite cleanse, you are not in the cool kids club.

And the killing is very rampant and people want these kills and I've had to talk people out of like, look, I understand you've got some bloating and you had it over and over again and used every bios blah blah side.

I'm not going to use brands, but you know, every single thing all the way down the line and still have gas and bloated. You know technically you're still asking me, what's wrong with your gut and it's like well, I like the idea of stopping killing and trying to support on that side of things because that is a hot topic right now.

Definitely. And I think when I got TikTok and Instagram, all these influencers are trying To sell their their parasite cleanses and everything like that.

Food, Fiber, and Cross-Feeding Support

GI map and hardly ever do I see a parasite and they've done and a lot of times they go through these parasite cleanse and They feel better and then they feel worse and I feel And they still have this residual bloating and A lot times for me when I See a GI Map like that I will see that they have done so many kill phases that their anaerobes are also to the floor they also have killed off a Lot of their good gut bacteria And you need that bacteria to digest any kind of fiber you put into your system.

So you're going to have residual bloating if you don't have the bacteria break that stuff down. back the bacteria that can break down the fibers that you're trying to introduce it, like the diversity and all the low-hanging fruit that we as clinicians try to push at people, all of the colors and things like that, you need to restore before you can even start feeding those guys.

So you know, what Dani is mentioning, there's obviously some form of deficiency dysbiosis, right? That we see a lot with low fat dissimulation through steatocrit, which is a marker on the test.

and Elastase 1, which for the listeners is a pancreatic enzyme that's indicating if you're producing enough things to help you break down the foods. Let's just quickly get back, if your guys are okay with us, to the discussion on the worms and the parasite thing.

So, interesting data points on that. Again, anecdotal, probably less than 1% of all GI tests run actually have a parasite on them, and I'm not saying that that isn't a possibility, but in the United States of America, the amount of herbicides that we have and antibiotics in our waters Well, there's no chance, you know, that you're going to have a tremendous amount of bacterial overgrowth.

Most people have more sterile guts than the other way around. So, interestingly enough, if you go back to some less developed countries in the middle of Africa, and I'm from Africa so I am pretty familiar with this, If you got to the native people there, like the Kalahari Bushmen, And they look at their guts, yeah, they have worms.

They literally have helmets in them, They have literally got worms living in their gut. And they have protists, you know, and these are not things that we see anymore.

And these protist are also kind of a catalyst in helping you digest and assimilate food. So we've literally lost that. The average American does not have any helmets and they don't have protests.

Again, that creates this gap. What's going to happen in this cap? Well, most people are eating very processed foods, right? So that's gonna feed more the fungal species and more of the opportunistic kind species.

But I also want to make people aware of that the gut is an ecosystem. If you look at nature and you see a bad piece of land where the soil has been kind of affected by sprays and whatever.

The first thing that you in a year are weeds. Weeds start coming up and that's not because they're bad things. That's because, they try to show the environment, hey, we're the stronger, more resilient plant source.

we gonna come in here and we going to start doing the right things to the soil, We're going start attracting the bugs after a while and then we can re-establish this stuff.

But for some reason, as humans we've now decided that weeds and our gut weeds are also a problem. So the first thing that we do when we look at a stool test and we see an opportunistic overgrowth, we immediately want to do an antimicrobial.

Now maybe that's just the weeds in the gut telling us, I got a problem here, i'm going to start growing because some of these weeds also produce substrates that the good guys can use.

Some of them produce acetate, some produce lactate. So, maybe it's just a compensation mechanism, and that's the astonishing hypothesis that I think we're going towards, right?

And so, if you go back in there and you give the soil what it needs, then those weeds will start to diminish. They're not going to be there as much as anymore, that getting us back to what we discussed earlier, which is why did this opportunistic overgrowth go away?

For you, Janine, you'll understand this. So if look at a stool test, there's an indicator and a reference range. and the normalcy of this reference range might be an E2, which will be, for layman's terms, explained, two zeros, okay?

This person was at E9, so that is nine zeros. That's a bazillion-catrillion, right? That is a big, big number, and literally that went to a normal number.

I couldn't move that with an antimicrobial the way you did that, with with anaerobic cross-feeding engrafting kind of experience. And the ways that the mechanism happens with that And that's kind of how they all coexist.

And one plays the security guard. One plays a bully is the anaerobic bacteria. It produces so much butyrate that

when you burn the buterate, it lowers the oxygen level.

Lowers the pH. And the pH, the bad guys, they opportunistic ones that we usually use antimicrobials for, They hate, but they love oxygen and the good guys they hate oxygen.

So when you lower that oxygen, you kind of choke these guys out. It's really fascinating in how the the guys have so much power to crowd out the Bad guys.

And what I forget to mention, I'm sorry to jump in again, Janine, but this is a very exciting topic for me, right? So one thing that the listeners would have to understand is anybody in these African countries that have the worms in their helmets, there's no skin condition.

There's no autoimmune condition. There is no food allergy. So it's almost like their immune systems have a purpose, right? The immune system is like, hey, this helmet, I'm going to keep you in check.

This parasite, i'm gonna keep in you check, you take all that away. And at some point, the immune is just like what am I gonna do today? Oh, well, just gonna attack a gluten molecule or I am gonna take a dairy molecule, or i am going start attacking foods that I just don't feel is kind of a thing that i want here.

You know, and I know this is a very layman's explanation, but we have become so sterile that our immune are completely confused. They really don't know what to do anymore.

So if you give the immune system more particular work to you can, and I'm sure Janine and your work as an ND, you've heard of helmet therapy, right? There's actually some insertion of helmets in certain countries as a therapeutic.

And then the other thing that I'd like to talk about is when we get very sterile, we end up with C. diff overgrowth in hospitals. What is the remedy for that?

putting poop back into the gut to heal the problem. So you become absolutely the opposite of sterile. You're getting a fecal transplant in order to facilitate the competition to crowd out the C.

diff. What is the theory there? It's not antimicrobial. The theory is crowding out. Right? The theories is you're bringing poop in there that's crowing out that thing.

Now there are big issues. with fecal transplantation as far as genetic expression things that have come about and some of the other toxicants. And I'll kind of turn it over to Danny for that because with these anaerobes, I want Danny to kind do an explanation of how they're exactly taken and how that is comparable to a fecally transplant, but it isn't.

Yes, please, because yeah, I am not a fan of those, just seeing what happens to some people that have had it in my practice and come in and I'm like, oh my gosh, that made things so much worse.

Yeah, with the fecal transplant, you get the entire stool, right? So that means that if the stool comes with some bad bacteria that has resistance to antibiotics, then you've now taken that on as well, too.

So there's a lot of complications, which is why we don't really do it a law in America, and you have to go to other countries to get some of these FMTs done.

But there is new technology that's coming out where we can screen a donor just as well as an FMT donor. Screen that donor, screen them higher even than that, than what the FM T requires.

And then, you know, make sure they don, what screening means is like making sure that they do not have any antibiotics within the last 10 years. They do have no central nervous system issues, they have not had any autoimmunity.

their family even deeper doesn't even have any of these things. They don't have cancer history, anything like that. So then we find a healthy donor within a certain younger age range and we can pull from them and isolate the strains that we want and then culture those strains.

Then we're making like a synthetic poop so that you can pool which strains you want from there and you put that back into a supplement and be able to take that so That's kind of like the new next generation probiotics.

That process is known as lyophilization and I'm sure that you've heard of that. It's basically high intensity freeze drying.

Mental Health, Mood, and Nutrient Pathways

that you're extracting these microbes. So what you getting there is you are getting the end product, but not all the associated confusion that comes with fecal transplant issues.

And then also the reason for sometimes going for the younger donors in this is there was pretty good scientific data on if everybody's into this longevity and anti-aging thing, There seems to be definitely positives to younger gut microbes, inserting them in older people and maintaining that younger appearance of the microbiome.

So that's kind of where all this stuff and this is also anaerobic, right? So this now the first time that we'd be able to get the anaerobe in. And Danny hit on the most important thing that everybody should walk away with at the end of this discussion is these anaerobes that are, in my opinion, an accessory organ system, they shouldn't be seen as bacteria.

They should literally be as a lung or a heart or kidney or something in your body. The oxygen level is very low and that is the thing that gets rid of all the bad guys.

So that's literally the same thing as the earthworm. You know, that earth worm that lives on the lower tier likes a more acidic environment. There's not a lot of sunlight going in there.

That's the way they like to live. And that kind of the exact same things that you're creating with this. Literally creating a non-toxic transplant, but it's NOT a transplant.

You know, and I think to add on to that, too, is like the fact that it is coming from a human donor. Originally, all of these strains grew up together as a community.

So that makes them they know how to. It's like living in a neighborhood like you do this. I'll do that or living at a family like this is your chore. This is.

Your chore, this, my chore They know these things because they grew up together, they were developed together. So when you pull those strains and you re-culture them and then you put them back into the body, They still act as this cohesive neighborhood.

You're not pulling faecalibacterium from somewhere and bifido from some where else. Like they came from the same place. They are very cohesive and they can engraft a lot easier.

as well as like an so it's kind of like a FMT but without all the risks. Makes sense, makes sense. Of course, I'm going to be like, all right, is this in the works right now?

Are you guys working on this technology a little bit? And when when are you thinking you might get like round one to come out? Well, we already have round one out and we've been utilizing it in this publication, right?

And this is not just us. I mean, obviously this was not something that was invented by us, this a huge group of scientific experts with much more brains than me, figuring all these things out.

We've just been able to get it to a point now where we're able not only to have one strain but another five strains and in combination These things are really going to be doing a lot of the work.

A lot these clinical trials have been done in the last five to ten years, so this is not something that is just experimental. This is something which has had all the steps that you need to take to facilitate the proper channels of Approval, you know what you would perceive as a biohazardous material and how it is, You know simulated in animal models, etc.

Etc. So all that kind of stuff has been done, but we are already to the point now with the last six months of utilizing this one anero, it's available now.

And then the other ones that I can't get into the specifics, I'll come back in two months and talk to you about the individual components of this for intellectual property reasons.

But we have the major components, of these keystone strains in the second edition that would be in combination with the first one. And the first one is anaerose dippies.

So that one's been out on the market. I often tell my practitioners stock up while you can because it's like one of our fastest selling products since it has been now.

A lot of people have had a lot great results like Oscar and I had published that study where we had used the one strain for a couple weeks and it had taken out the bad guys.

It had re-flourished the other anaerobes. It had knocked Zonulin back down into a good range. So just that one thing was pretty amazing in just one intervention that we could have used like multi-phases kind of trying to fix that woman's gut.

Yeah, and I think that whole story came from a food sensitivity, food intolerance thing. The interesting thing about this is that this person was able to eat the foods that she was intolerant to and without any of the side effects.

So that's what the interesting thing was, right? So, hey, I've started to take this thing. My symptoms for my dairy and my gluten sensitivity have gone, my skin reactions are gone.

my bloating is gone." I'm like, wow, that that is quite amazing. So let's dig deeper into the science of this and try and figure out what went on there because we have pre and post data.

That's how we were able to do that publication because I had clairvoyant scientific information on this person's case for a reasonably long time. But it's absolutely astounding to me how this particular product, and for the listeners, this product is a butyrate producer.

Butyrates are one of the largest butyrate producers of any anaerobic strain in the gut. This particular strain was originally discovered when people were doing research on food allergies and insensitivities.

So anybody that has an issue with food and food intolerances, and I'm not necessarily saying anaphylactic stuff here because that's not where we're going, right?

We're talking about the average person that does an IgG test and they have 35 food sensitivities. This is where it seems to do the game. And I think the way that it's doing that is not only because it is fixing that permeability because of the zonulin, reduction, and the tight junction improvement, the occludin, in the whole association that we know butyrate does.

But butyrate also works directly on our immune system, so it calms down a lot of this antigen presenting cell and immunological overreaction when you have proper communication, you know, improper, let's say, wall layers there that makes nothing get into an overexcitable state.

Now, if you imagine that, And the consequences that that has had now let's add five more strains to the equation that do a million other things. You know now you're really particularly talking about wow is this maybe the foundation And I'm not a person that is necessarily ever going to say that, hey, you know, one particular supplement is better than another.

I've been in this industry, Janine, for 25 years, right? Clinically. This is the most intrigued I have been of anything I ever used clinically. And, I used many things with a lot of success, anti-microbials, binders, supplementation, dietary changes. I have never seen the needle move this quickly on things without having to change people's lives the way we need to do.

clinicians because that's part of the problem. Hey go on a FODMAPS diet, go onto an anti-inflammatory diet go gluten-free diet. 99% people just can't do that right?

It's just really hard for them to do. Is this potentially the next level of giving you more resilience to be able to have a little bit more of a normal life?

I'm saying it's trending in that direction. Yeah I would agree with you on that because I mean having been in the industry almost 20 You get, it's like you get jaded a little bit.

You're like, man, you know, I've tried to get someone to do these different things. I'm trying to support, but there's only so much you can do. Life happens.

And then, we're looking at the gut. The gut is a difficult bugger, literally. And not only that, we didn't even dive into hair loss and gut issues. That's a whole nother like.

But I do think that with the next couple of strangers talking about moving forward, I would be very curious if that can actually move the needle on folks now to the level with hair, because I think the hair is a key microbiome issue that we have not even been able to.

That's interesting.

Parasites, Sterility, and Immune Balance

So what in your assessment that you've looked at as a clinician and what particular species or what is your, obviously, you know, the malabsorption, anemia, all those stress-related factors could play a role with a hair loss.

But what do you feel is the component that would speculate about, Juni, on that hair-loss side? Yeah, it looks like a sterile gut. Most of the time, It's a steril gut and over and again, we're like throwing things at it and it's like nothing's sticking.

And yeah, it's a sterile gut picture. Over and over again. I'm seeing so many of them. You know, I was looking at one yesterday with Danny or the day before looking, at this eight-year-old.

And I am looking in his opportunistic category, right? I look at Pseudomonas, Morganella, some of those species. For people that don't know this value to opportunist bacteria, you just don' want them to be in excess.

But you also don''t want him to completely non-existent. Right, so what I was looking at, his picture was detectably low, low low and his commensals were low.

There's not even a weed growing. So that is indicating to you that, wow, that's, not a good picture. You know, at least if there's some of these opportunities growing, it's almost telling me like, hey, we're still here.

We're trying to mediate this problem. Can you please help? When you have a sterile gut, there is literally no communication. Yeah, and a lot of your your gut microbiome good guys, they create like biotin, which is really good for your hair.

They create B vitamins. So and then if you have like poor digestive function with that elastase marker that we were mentioning earlier, You're not going to get all the nutrients that you need to create some of the hormones that also support, you know, any kind of hair growth or, or any kinda hormones in general, and any kinds of physiology.

Like I was mentioning earlier, You need, to be able to absorb your, your nutrients. You to able create nutrients in the gut. And if you don't have those gut buggers that are gonna do that, then I can see how outwardly it would be expressed.

Yeah. I'm, I am excited to try out the new protocols because I've kind of been like, man, I don't know what else to do at this point. You know, we've tried the, you know the things and I kind believe too that like if you keep supplementing butyrate, You almost choke out things by putting too much butery in as a supplement, not as beneficial bacteria to create it.

Very good point, We work with this very, very sharp microbiologist and He has a completely strong opinion on that. He doesn't feel like traditional forms of butyrate, well, number one, make it to where it's supposed to go.

But number two, when you're putting a bacteria in there that makes butyrate, it is going to make when it needs to. It's not going make a 24-7, right? So you have the intelligence back, you don't have delivery with a non-stop button, so that's the difference.

I will say though, that when we have a very sterile gut, sometimes Danny and I and our teams clinically would use a little butyrate in the beginning just to induce that hypoxic inducible factor to lower the oxygen level so that these guys have a happier medium, but it's a very short-term kind of an intervention.

I don't know, Danny, if you want to go into that a lot more, I know that you're really expert in that area, But I feel that that's where the help is. But the long- term use of butyrate, i would totally agree with you.

It doesn't really do it for two reasons. One, you consistently influxing something that should be kind of on and off, and two, it doesn't really make it there.

Yeah, we usually use it to seed the environment, like you said, the hypoxic inducible factor, lowering that oxygen, because when we burn that butyrate it lowers the oxygen.

But also, butyrate does so many things, you could probably have just a whole podcast on butyl but The butyrate also stimulates the MuC2 genes within the goblet cells to produce new, fresh mucus.

And the mucous layer is actually where a lot of those anaerobes live. Some of them feed off of it, like Acrimentsia mucinophila. Mucinephila means muce and loving.

So that actually feeds off of the mucus and then produces metabolites, acetate, propionate for the other bacteria to then thrive off as well too. So butyrate can be a nice cedar and a stimulator for that entire process.

And for folks who are listening, I am guessing, but I want you guys to let me know your butyrate preference. Are we talking tributrin form to make sure it gets?

Yes, yes. But I would not just jump on the tri butyrin without running a stool test. If you want the safer way to go with butylate, use the anaerostepecate product that is the anerobe that makes buterate.

That would be, if you're not going to test, that's where I'd go. If you are going test and we come back with low levels. I think tributerone is a great product for what it's used for, but we're also moving into an area or an era where, you know, that product is probably a secondary intervention for the gut now when we have something that's naturally producing the butyrate.

Yeah, and if you choose to use buterate, tri buterin is like the best on the market that you can get because what tri-buterin looks like is it kind of looks a triglycerol.

So, trigliserol is, like, has a glyceral backbone with, the fatty acids coming off. Same thing with tri Buterin. It has the backbone with three butyrates coming off of it.

And what that means is it needs your own digestive capacity from your pancreas to digest it at the correct location. So it doesn't break away like sodium butylate, which are also kind of hard for people to take.

They're kind stinky. Yeah, so people don't usually buy into taking that every single day. But with the tributerone, it has no taste and it makes it down to where it should make it, down too, to wear it meets the enzymes coming out of your pancreas.

And then it breaks it apart. Then it can be used in the location, the distal colon. All right. So I want to round this out for folks because they might be thinking now like, Where do I start?

What would you guys recommend? Say someone's a complete newbie to all of this. They have maybe some gut issues. Maybe they're having some gas bloating.

Yeah, I probably should do something. I've played with probiotics but never noticed anything. Where would I Start? Well, I'm going to have to selfishly start with anaerobes, right?

Because that's the whole point of the discussion and the excitement of The Paradigm Shift. But I would say this, if you are on any kind of isolation diet with reasonably low fiber intake, which is 99% of all Americans, If you're eating any kinds of processed foods, you if are drinking alcohol, If you are living the standard American lifestyle, you need to take this period, right?

Like this is literally the probiotic that you want to. And when I say that, it'll be the single strain and then the five strain coming. Those in combination, we've looked at the research on those in combinations, cover about 85% of metabolism and immune function in the body.

Okay, so that's literally covering a lot. So I think if you're going to go down the road of investing your money the best way and you want to get a probiotic that is going have long-term effect, I would go that route.

I will say later on, reintroduce some of your older probiotics because you are probably gonna have more effect from them then. You know, if your taking a probiotic for anxiety, a psychobiotic as they call it, I think you're going to have more benefit from that particular assistance or add-on to the probiotic.

Do I believe in the long term that you might need that? Unless the stool test is indicating low lactobacillus and Bifidobacterium, I'd think these commensals kind of populate.

As long as the person 80% of the time is eating a diet that's not nourishing the flower garden. So, if you're eating colors, fiber, you know, whole foods, I think you are in a good spot.

If you reduce the intake of whole food and 50% percent of your diet is fast food, and processed food. You need to up your intake, of these probiotics, in order to compensate.

Butyrate, Anaerobes, and Next-Gen Probiotics

I literally feel this is the first functional medical supplement that I can provide a person that could be good for the person I cannot control and they don't want to change their lifestyle.

Yeah, I just want echo some of that because I think when people, it is our hardest job as clinicians is to get people to their behavior and if they're not going to you know, an anaerobic bacteria like anaesthetics is a great match for them.

Um, we've even seen in like carnivore diets, which produce a lot of lactate have a of low fiber diversity. And people are doing that because they have autoimmune or whatever, and it's actually helping them, but we still need to get

some diversity or in there.

Anaerobes are a Great source there, But when I hear where does someone start, I think of the person that's like listening to your podcast and they don't have the money to go to a functional doctor.

They don' have money. to go to a naturopath. So like, where can they start from this podcast? And I think, you know, working on digestion is super important.

If we don't digest our food, we're feeding the bad guys. We're not getting all the nutrients that we need to support physiology. diet diversity, just trying to get as much colors as possible, and then not over-restricting your diet.

Like if you're on a restrictive diet, you need to move back towards diversity as comfortably as possibly, because some people are doing it because it is uncomfortable to eat certain foods.

But as comfortable as it's possible just bringing back in that diversity because our microbiome loves colors. It loves diversity. So the more that you can just do diet digestion and making sure diversity is there is the the best you can take away from today, probably.

Makes sense, makes sense. And so now, of course, my clinician brain's like, all right, so, because my big thing was when's the five one coming out? So now I got to think about, okay, how long?

Very soon, very soon. We will, I promise you, if you want us back, once we launch this product, i would love to come on and talk to your audience about the individual strains and what they do and specifically how they work.

But yeah, we're probably going to be conservative here. I'm going say that two months at the most, right, before we launched it, hopefully within the next 45 weeks.

Right now, actively involved with some clinical trials, you know, for more publications on these particular strains. So, yeah, I mean, and the other one's available now, right?

So the baseline of the one strain is available. Now it's called anaerostipes KKCLB1. But if you go to our website and you just type in anaero-stipis, like ana-robic, it will come up as the major probiotic and that's definitely something a person can use if they have like food sensitivities and tolerances.

They kind of bloat when they don't eat. When they eat, they are on these specific elimination diets and nothing seems to work. It only gets worse. I think that is a fantastic starting point for anybody.

And I that that where most of us are, right? I mean, it's not like we're chronically ill, but we have these irritants, you know, like in our lifestyle and quality of life because We cannot digest this or that.

And I just want to leave the listeners on this thought. If you have a healthy gut, folks, you should be able to eat anything without a consequence. You should never be bloated and irritated by eating food, even if it is the temporary not great food.

Your gut should be able to handle anything when it is. So this whole idea that elimination diet solves the problem or I'm going on this diet because it makes me feel better, you're just putting a bandaid on stuff.

You're literally just eliminating the food that might be healing your gut and that's why you bloating because its feeding the bacteria, it's trying to come back.

So sometimes the bloating is part of the body's indication, it's like, hey, you know, I actually need more of this, not less, to fix the problem. I like to hear that because, gosh, finally someone else helps me out with this statement.

Because I'm like I am sorry you're bloated, but it is actually a good thing. Yeah, and self-limiting, sometimes you feel a little bit worse before you get better.

When you feel better, you'll forget how bad you felt for three days. Oh boy. Good times, good times. When I'm excited to be in the clinician, I'll be like, all right, everybody you gotta get on the anaerob right now.

Start there, we'll put it in a podcast notes. And then by the time you get through one bottle, You'll ready for the next round. We'll at least know how that helped with you.

Then we can carry out atleast a good one month exam. I don't know, test, trial. There we go, there's a word. You guys all have that till the We'll let you know, Janine, when we publish the second phase of the research, we've got one trial now on anaerostippes.

We have another trial on these 5-10 commensals in real-life situations, right? That's the important thing for me. It's one thing to do it in like a lab.

It's quite a different thing when you have 30 people with IBS and you're putting them on a protocol and this is the only thing you giving them. And then you looking at the outcomes in biometric pre and post data.

So once we have all that stuff available, I'll be happy to share that with you because that brings some clinical validation to the protocols in real life situations, right?

Where there are a lot of extrapolations and extenuating circumstances that could influence it, where sometimes these really fine-tuned, randomized control trials is like very isolated approaches to…

And the human body just doesn't work like that, right? I mean, the Human Body isn't just like this one-sided, one dimensional study. This is why I'm a really big believer in proper case study publications and case serious publications, because It really gives people a realistic view of the world because Janine eats different than Danielle and Oscar and we all on the same probiotic.

If we have consistent changes in and a nutraceutical that we're taking, that's valuable, right? Because we are not figuring all the other differences that you have.

So if you can see consistencies in changing in the microbiome, regardless of what diet you're on, then that is more powerful for me than when we all are on the same diet and we have a change.

That's the things that I'm starting to see here. It doesn't matter what you want. it seems to move the needle in each one of those categories. I sure like hearing that.

For sure. And I think a lot of folks are probably like, okay, so I can bring back the chocolate and I have all the coffee I want. Hey, you just mentioned too, really, like polyphenols, chocolate, coffee, microphone loves poly phenols.

Yeah, when they are in abundance, right? When they're not in the abundance. Those things just create more issues. No, but it was fantastic to be on your podcast and I really appreciate you taking the time for us to listen.

And one thing that you're never going to find short with me and Danny is passion. Like we literally love what we do and we believe in what do. We see the clinical application on this because not only are we involved with Designs for Health, we still have our own practices.

So I'm literally in the battlefield, right? So, I am not just sitting here as some professor at a university doing research in a lab. I'm literally out there in the combat field with you, Janine, as well as with the patients.

You know, I listen to your patient base on a daily basis. I listened to their stories and this is just great to have something potentially that could could really move the needle.

I love it, I'm looking forward to testing out some folks between now and our next conversation and then adding on to it when we've got the next release out there.

So I can't wait to put this one out and gosh thanks guys for taking the time and you guys have heard it here they're coming back so stay tuned. Yeah we will be back.

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Thanks again for