Could Your Microbiome Be The Missing Piece? Transcript

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Podcast Introduction

And I think rethinking about how do we use validated testing to understand not just what, you know, blood markers and stool markers, and all these things say, but as well, what else is changing and how are we moving to like a systematic better than we were before?

And, people love numbers, dialysis all the numbers. People love number, everybody loved number. And so it's like, how did we us those to better describe the picture as change is happening?

What if aging isn't about slowing down, but leveling up? I'm Dr. Isaac Jones. This is the Longevity Leaders podcast. Hi, I am Dr Ashley Beckman with the longevity leaders podcast and today I have Shaina from NovelBio.

Yeah. How are you? Good. Enjoying the conference. All right. You guys have a very interesting company. Tell us a little bit about what it is. So we are a manufacturer of FMT or fecal microbiota transplantation products.

Introducing NovelBio and FMT

Um, and so the idea here is we kind of fit in the space of like, what happens if your gut is missing some of the key species or some building blocks? How do you replace this?

So this would be taking a healthy microbiome and transplanting it into someone that has an unhealthy gut. And because it's coming from being human derived, it actually is able to engraft and stay there.

That's where the transplant part comes in. So you're actually taking healthy gut, transplant it in there, and it becomes your new gut and then that will kind of grow and change with you once it engraved it.

So what are some of the screening processes you have for your donors? Yeah. So there are, we kind of subbed this into there, the regulated ones. Like in training, there's nothing pathogenic in blood or stool or urine, but then we go one step further and really want to understand what makes a healthy gut.

All of our donors are under 30 because we know the gut you know, starts to, the wheels fall off as you age. And so we want to ensure that our donors fall within that saginally born and breastfed.

That's what starts the instructions for the gut. You look at physical activity, we look as their diet, you look there and their family health history for any diseases that are tied back to the got autoimmune diseases, metabolic conditions, cancers, GI conditions.

Neurological, neurodevelopmental, and neurodegenerative diseases. All of these things we're looking at and that all of that's taken out of our donor pool.

The potential of that transferring, you just want to avoid that possibility. You look at vaccine history. We also look if they had to have less than five instances of antibiotics in their life.

Yeah. And a year before and none during our while they're in the donor program. Um, and then we're also looking, they can't have any vaccines while in a program and we categorize them based on what vaccines they have.

Donor Screening and Safety

So we have a whole history of their vaccines as well. Nice. So what is something that this generally helps with most that you guys see clinically? Yeah.

So, what it's most widely known for is for treating C. difficile infections. Which is a pathogenic overgrowth from a death. a huge issue, about 30,000 people in the US die a year from CNF infections still.

But the research has expanded. So, I mean, the first areas that we saw it pop up was in GI conditions, so like IBS, SIBO, and ultrafitis. But since then, because of the gut-brain connection, we're seeing things like autism spectrum disorder, MS, Parkinson's, and Alzheimer's disease is the newest area we are seeing more of it, as well as anti-aging properties because really tackling how the guts seems to be that first domino that falls in kind of Some of the immune and inflammation issues and this brain fog, obesity is another area or metabolic conditions as well.

Um, but the area just keeps growing because what we're learning is that so much of immune system is derived from the gut. So now we are seeing autoimmune diseases coming up.

We know that estrogens and testosterone and other hormones are derived out of gut, so now were seeing a real growth in places like PCOS, endometriosis.

Um, fertility, all of these, we're starting to look at like what role is the gut playing here and what happens if we reset that to a healthy version, how much of use other things start to kind of realign and heal.

What's a typical course of treatment or how often would somebody utilize the FMT? I think it's, um, We call it the one and done therapy most of the time.

And in anti-aging, the idea would be that you would have to kinda top up to get us counteract the natural kind decline. Um, but most of it is, is this we categorize it for loading dose.

So this is a bolus dose, this where most to that initial engraftment happens, that big switch out. Um and then maintenance phase, which is daily doses over really depend on how chronic the diseases, what disease.

you're kind of tackling and how many interconnected systems are probably most aligned. Right. So in diseases, we're very gut focused and nothing else is going on.

You see shorter courses where you are looking at interconnected with like the brain or the immune system. The courses get a little bit longer because what we are doing is what will engraft at the beginning.

when the gut is really leaky or the inflammation is high, it's going to shift and all of that turns down. And so you want to support being able to kind of supplement those species as they can or as the environment becomes more hospitable to them.

It's so fascinating.

Clinical Uses of FMT

Yeah. Again, it's something very interesting because most of my clients have, of course, they have leaky gut and they've autoimmune issues or Lyme and mold.

And again, we check the gut of, course on labs, but it is often this whole cleanup period of trying to get these pathogens and viruses under control. But if we can kind of jumpstart that gut process, I think that they would feel better faster.

Yeah, and I think one of the interesting things that's happening in this field and this originally came out in oncology and now we're seeing it in stem cells as well.

And I we are going to continue to see this space grow is the idea that do medications or treatments work better when the gut is healed before you do this.

Right. So in Oncology, a lot of people are non-responsive to immunotherapies. And so one of the really cool things

in the research phase is sometimes someone goes, okay, so if the immune system is derived from the gut, and we know these non-responders have really dysbiotic gut.

What if we fix that? Right. And then you're shifting these, non responders to responders. Then it became, well, sometimes stem cells aren't as effective as we think they're going to be.

Right? What, if, we tackle the guts first, do they become? And, you know, were seeing that. People are starting to hear these things together. And not only are you healing the gut, but everything else you're doing starts to work better.

I think the body is able to process and really detox better and you are putting out more fires and then creating a base that they're able the process.

Even take apart medications better, and use them because the got has those building blocks to do. They're just absorbing nutrients better as well. So it should amplify the effects of what people are doing.

Yeah. For kids, what's the youngest age that someone can take this? Yeah, we always want, well, you know, working with pediatrics in that space, want them to have a diagnosis before you're treating.

And one of the really interesting things, I think when we think of peds, We think like, okay, so everything is really underdeveloped, but the gut actually becomes adult-like between three and five.

So you want to stay in, that you don't want go younger than that, I don't think it's gonna engraft the way that you want it to. It's not gonna be long lasting because there's so much shifting.

But in that three to five space, their gut is really built as it is going to go for it.

Treatment Courses and Gut Healing

If it shifts, it changes all of your life experiences. We would consider it adult life. So it makes sure of really knowing why you're doing it, and the other side would be you wanna hit in the space where now we consider adult-like.

Like anything under three, you would get the benefits that would you be expecting because the gut's still shifting you so. I was thinking of kids with PANS and PANDAS.

And PANAS ISD is a really big space we're seeing a lot. ADHD is kind of growing as well. Yeah. A lot of these things, especially in, I'm a brain person, so I know a little more about that space, but it's interesting in these neurodevelopmental diseases and these developmental diseases.

The everything works through critical windows. So your gut hits critical points that triggers the immune system to go through its critical development, the brain.

And so we're finding that the gut in these neurodevelopmental diseases is underdeveloped and then the new systems under developed and the brains not hitting it's critical milestones the way we were expecting.

and so what we are thinking is like, is this one of the beginning parts of the systems not being given the next set of instructions. And so I always look at it like that is one instruction manual.

You have to finish step one before you can go on to step two. So if you only get halfway through step 1, then the immune system doesn't know everything it's supposed to do.

Then the gut-brain communication doesn t have that flow that it s supposed too. We're seeing in these really kind of pediatric cases that we're really looking that.

It's not meeting the windows it supposed. How is that then tricking all these other long-term responses? Yeah, I've

seen so much neuro-inflammation both in kids and adults.

Yeah. And it's a really big issue because a lot of these pathogens create brain inflammation or they're, they are waste. Mostly, too. So it is a big problem because you're trying to work on detox and healing the gut and what the downstream issues are from the neurotransmitters that really aren't optimal.

And it's just kind of this mess. So this seems like it would be a really good step to help those cases. Yeah. We're seeing this new concept of leaky gut, leakey brain.

When you go from a developmental perspective, in utero, the same cells that make up the gut lining are the cells making up their gut barrier.

Pediatric Use and Neurodevelopment

So we're rethinking what leaky gut means and how much we've seen that has grown. But I think some of the neuroinflammation, some the denises we see in the brain at the rate that we are may be tied to this more leakey nature where things are going where they're not supposed to go, and the system is not set up to deal with it.

Stuff that's supposed be on the inside, that sound the outside. Breaking through. Yeah. And so you have all of these systems love homeostasis. As soon as they can't be in that space, they don't know how to do with that.

I think sometimes we think of the brain as being so independent and separated. We really have to start rethinking that because even I, think every three weeks, there's a known neurotransmitter that is really dictated by the gut.

So when we started it with serotonin, then we heard about dopamine, now we're into GABA, neuroaponephrine. All of the big hitters that we consider the drivers of, the brains, dysbiotic set.

Then now you're not making enough GAB or neuroeponephrine. And like that, long-term impacts of that is. Yeah, concerning. It's nice because we can test for those.

Yeah. And it would be very interesting to kind of see that downstream effects after someone's been on this for a few months. So it ranges from a month to four months, if it's chronic or multiple systems, you're looking at that three to 4 months because you really want to support.

Because not only are you fixing all these issues, but you now had to go back, especially adults that have been chronically ill, at rebuilding the diets.

Because they always say like, we can give you all the microbes you need. If you don't feed them, you will end up right where you are now because they're going to die off.

And the ones that survive are the same ones are currently surviving. So you really do have, there's a systematic change of like now you feed these microbes so they live.

And the broader you feed it, the more they'll live and thrive and become the sustained environment. And so it's more of a holistic approach because you can give this, but then you have to change the diet.

You've got to sleep better, you've gotta exercise so that you're giving your body everything you need to keep them alive because it is its own independent ecosystem that your interacting with.

It's very symbiotic in nature and I think it. It's a shift in thinking because we like to think of like, we are the driving force, but really there's more microbes than there is us.

And so we have to really appreciate that, you know, eating diversely, sleeping well, and how all of those then impact how well the system is able to continue going forward.

I'm always reminding clients that we're a home to the microorganisms in our body, and they're often dictating our choices.

Leaky Gut, Brain Health, and Neurotransmitters

Yeah, like food cravings, all of these things. It's not about lack of willpower. They're very powerful and want food. Their food is usually sugar or different vegetables and things and fibers, but they can be very persistent and loud.

And it's very important to be humbled a little bit, that we are really this magnificent home for many things. Yeah. And I think that's where that the be able to kind of think about like the whole matters.

I mean, that is why FMT is so different because it's taking a whole copy from a person and giving it to somebody else versus picking out strains. Maybe one day we'll get there, we will fully understand the interaction between all of these things and we become very bacterial focused.

Yes. But that's only part of a whole. And so even like understanding what metabolites need to be there for those bacteria to thrive. When you just take out certain strains and say, these ones are the most important.

I think it's that we see that they don't engraft, but we also see it doesn't, it is not the fix that you think. If it really these four bacteria you need, why doesn' everything get better?

And I guess it because you a little bit of everything. Yeah, we've isolated these strains and things like, oh, this is because we do it even for mold.

It's like oh well this one will help ochratoxin A or this helps this. Yeah. And even with all the lab testing, people can get so myopic and focus on these very specifics when it's a quite complex mixture.

Yeah, and I think we like it to be simple. We can tackle it. Yeah. And I mean, the human microbiome project was this idea, like, we're going to know everything.

It literally came out that, well, everyone's a little bit different. Right. Exactly. I can be positive or negative, but you have the ability to make change.

So I say, there are cases where you'll have dysbiosis, you can recover from it, Yes. Changing your diet, you know, taking a probiotic or a post-biotic to help kind of support those species that are there, but just low in number.

Diet, Lifestyle, and Microbiome Support

Right. But when you start missing them, yeah. You kind have to, it's like reseeding a garden versus fertilizing it. And so understanding where do people sit?

What's missing and, or why aren't they responding and could it be the gut? And then looking, I think, at a holistic picture of like fixing the guy and kind of wanting stool tests and things to change.

Right. But as well as looking at symptom measures and quality of life as a whole picture. So like. Yes, you have new bacteria in there and the tests still test for everything, so we don't know what everything is yet.

But also like, do you feel better? Are you moving in the right direction? And I think rethinking about how do we use validated testing to understand not just what, blood markers and stool markers, and all these things say, but as well, what else is changing?

How are we moving to like a systematic better than we were before? People love numbers, doctors love number, people love, everybody loves number. Yeah.

And so it's like, how do we use those to better describe the picture as change is happening? Well, I think this is an

amazing addition to people's practice.

And again, to help their clients exponentially. Where can we find your products? Yeah. So you can reach out to NovelBiome on our website. We've got blogs, we've gotta kind of walk you through what do we know right now?

And, you know, want to chat with practitioners. That's really where we start. How do you educate you? What are you looking at? what is your patient population look like?

How are you currently tackling these things? Um, and what are the patients that are your question marks? Yes. Those are normally the ones you want to want talk to us about that.

Are like what you're doing works for 98% of your cases. What about those other ones? What else could there be? How do we tease that story apart? And then how do you support you invest, you know?

Testing, Outcomes, and Practitioner Education

tackling that from either from our perspective or sometimes it's that maybe this isn't what they need right now. There's something else first. Um, and try to, you know, have those conversations so everybody can kind of, understand what we know.

We can understand, what you, know and then how do we work together to best supply this. Yeah, that's very helpful. Well, I'll have complex cases and some outliers that don't fit the mold.

So yeah, all is good. And especially you guys see so many. cases and things like that. So just to have that education piece and information can be very helpful.

Yeah. Well, thank you so much for joining us today. Thank you. Thanks for listening to the Longevity Leaders podcast. A Lungevity leaders community is on mission to transform a hundred million lives by 2040. If you enjoyed the show, please share this with somebody that you know, especially another doctor or physician, but also click that follow button.

Until next time, stay strong and live long.