Summit Introduction and Guest Backgrounds

Welcome everyone to the Gut Health and Longevity Summit. I am so glad you're here. Today we're going somewhere I don't think most people have ever gone before deep into one single organism that lives in your gut, and maybe one of the biggest players in your metabolic health that you've never heard of, unless you're reading my blog.

We've built this summit because the science connecting your gut to the rest of your body has never been clear, and most people have never heard of it explained in plain language.

Today's conversation introduces you to Akkermansia, a bacterium that you've probably never heard of, that researchers are watching very closely for its role in weight, blood sugar, and the strength of your gut lining.

I have two guests here with me today. My first guest works at the company behind one of the most closely studied ingredients in the microbiome world right now, a single gut bacterium called.

Online represents the company, the organization behind the pasteurized research and formulations we will be discussing today. She is a bioscience engineer with a PhD in biomedical sciences.

Following her doctoral studies, she conducted research at. I'm not even going to say which university because the spelling is very difficult to say. Where she investigated the molecular mechanisms of itself.

And she currently serves as the head of lab and medical affairs manager at the Akkermansia company. Now, my second guest has spent decades treating women's health from every angle, conventional, naturopathy and integrative, and now brings that same lens to gut and metabolic health.

Doctor Felice Gersh is a dual board certified ob gyn and integrative medicine. She founded and directs the Integrative Medical Group of Irvine, taught obstetrics and gynecology at USC School of Medicine for 12 years, and now serves as affiliate faculty at the University of Arizona's Fellowship and Integrative Medicine, which I am a fellow of.

Her practice combines the best evidence based therapies from conventional, natural and holistic medicine to treat the whole patient, not just a single symptom.

And she's also the bestselling author of the PCOS, S. O. S. series and menopause 50 Things You Need to Know. And speaks globally on women's health. So I am so excited to have both of you guys here today.

So welcome. Thank you. Thank you. All right. So my first question is for Anneleen, for anyone who's hearing this for the first time. Can you share with us what is acrimony and why has it become such a big deal and gut health conversations, of course, so I can.

Is a mucus degrading, beneficial bacterium that is a natural member of most of our gut microbiota. It was discovered in 2004 by one of our founders, who is Professor Willem de Vos, in writing, and it was from a healthy Dutch host, and they quickly found that it's associated with health.

If you have a lot of agreements. Yeah, in general you're very healthy. And William, at seeing this, was interested to also see if there was a causal effect.

So he reached out to Professor Patrice Carney, who is one of her other co-founders, and together they started the first interventional trial. And they saw that they could prevent hyper diet induced obesity in mice.

What Akkermansia Is and Why It Matters

And they also discovered that agreements seemed to improve the gut barrier function. So already in this first study, they discovered basically the key mechanism of this bacterium.

And then surprisingly, they found if they pasteurized the cells. So if they heat treated the cells in a mild heat treatment, keeping the cells intact but technically killing them, they found that they were even more functional.

So they had even better health effects. And seeing this, of course, they wanted to prove this in humans. So they were also the first ones to test this bacterium in humans.

So it does this in people with metabolic syndrome. And they could see again that had beneficial effects on insulin resistance. Also small defect on body weight.

And this together with some toxicological studies, lets this to be the first biotic ever to gain approval by the European Food Safety Authority. So I think these are this is a very strong scientific success story, which makes it a very nice story to tell and which makes a unique as well.

Absolutely. So it seems that this bacteria, when people think of bacteria, they think of it in a negative way that, okay, I'm going to get an infection and I need antibiotics.

But since the entire conversation we've been having in this summit is about the gut microbiome and the importance of it for all of our health conditions, what the founder found was acrimony has a strong core levels of has a strong correlation with insulin resistance, obesity and barrier function.

So let's put this into a practical aspect for the audience listening. So Doctor Gersh, as a physician, why does one specific type of gut bacteria matter so much for someone's everyday health, not just their digestion, but their weight and their metabolism?

So is this something that, you know, this bacteria that people could actually feel? Or is it something happening in the background from a clinical perspective?

Well, I think like the primary thing when you talk about women's health is to understand, as you you know, we're referring to the critical importance of the gut microbiome and gut barrier health in essentially every metabolic situation, every health concern that a woman has.

It's all I talk about. Like we talk about metabolism, the creation, utilization, distribution, storage of energy, life itself, essentially, and going back years ago when microbiomes were barely being talked about, I was looking at the microbiome at that time and polycystic ovary syndrome now PMOs.

And it was seen and the first research came out in 2014 from China, that the gut microbiome of women with this really devastating metabolic endocrine disorder, that's why they changed the name to really emphasize that in reproductive aged women had gut dysbiosis and impaired gut barrier.

And that was really fascinating and was actually talked about back then. So going back a lot of years and I thought, well, this is like really interesting.

And it was talking about what I was just really at the beginning of my learning stage about this incredible mucus barrier and that when women don't have the right hormones and that's like the I would call it the missing ingredient when we talk about gut health is the role of hormones as well, and that women with PCOS do not have optimal hormones by a long shot.

So in women who have the wrong hormone balance, they do not make the understanding of was still learning about it. They don't have this critically important like mucus barrier that keeps the lining, the lining cells of the gut protected from the toxic contents in the lumen of the gut.

And then a bit later on, I learned that as every woman transition, it's not if it's how much as every woman transitions into menopause, a universal condition for women, that their gut microbiome changes and they start to lose this critical barrier and everything and anything that we can do to maintain that barrier, because when we lose it and we have what is called impaired gut barrier or leaky gut, it leads to such a host of issues like it's now associated with diabetes, like you mentioned, obesity, but also like cognitive problems, mood problems, bone problems, osteoporosis, you know, so all of these, like there's not any organ system that escapes.

Now we know the gut skin access, you know, everything is linked and the gut heart axis all these things. And so women as they transition into menopause experience a huge number of metabolic transformational practices, functions in their body.

And so much of it is due to the loss of this gut barrier, this incredible mucous lining. And so when I learned that was so critically important, and that's where I want to hear more about the science as well.

I'm still on the learning curve, but it's fascinating.

Gut Barrier Health, Hormones, and Women's Metabolism

I'm, you know, to use something clinically as one thing to really understand the deep science is another. And I always try, as you do, to try to understand like the mechanisms and the science.

And why is this working? How can you have a pasteurized bacterium and yet it still is working. And you know, how does it work that it's a gobbler? It gobbles up the mucus and yet it builds more like, how is it, you know, this is a I think everyone wants to hear about two.

But understanding that these critical issues in women's health and how it links to these hormones, that when you don't have optimal hormones, whether it's PCOS, PMOs, or going into the menopausal transition and menopause thereafter, that women, I mean, really are challenged to maintain health, optimal health of every organ system in their body because it links to this critical state of barrier health.

So this has become one of just like you. One of my huge missions is how can I help everyone to optimize this barrier health. And now this is now a tool of mine that I've been using now for a couple of years, you know, using our product so that I can help all of my women to have optimal health through optimal gut barrier health.

Yes. So, absolutely. I mean, I as you probably do and I do, I do a lot of gut microbiome testing. And, you know, just by understanding the bacterium and seeing, all right, where my patients, commensal bacteria and archaea is one of the commensal bacteria where their levels are.

And what are the symptoms. Because here's the thing I believe and I think inherently if we kind of look at it all, disease and all health can start in the gut.

And this comes back from a 500 year old science Ayurveda. Right. So if we are going to look at the gut, we need to look at all aspects of the gut. And when I'm looking at my patients and I'm doing this testing and they're like, doctor B, why aren't you doing hormone testing?

I'm like, we will get there. Don't worry, we will do it. But we are going to fix the gut first because the gut impacts the hormones downstream so much.

Right? So not only a next question. If Ackerman is considered a keystone species, what does that actually mean? And what makes it different from, say, the dozens of other bacteria we hear about in the microbiome conversation?

So indeed, I mentioned already that degrades mucus. We've been talking about it. And that's quite unique, that it's a beneficial bacterium that can eat mucus, but also can stimulate or go to produce more mucus.

That means it also lives in this mucus layer. And actually there's not that many bacteria that are living so closely to

ourselves. So we think that agreement has we know that it has co-evolved with the host because it's also present in most mammals, and it's actually very well.

Well, the strain is very stable. There's not a lot of mutation. So likely it's very important to us. We think it acts as a sort of we call it the guardian of the gut.

So it's communicating with us in several ways, basically telling us, I'm here, everything is fine. It's strengthening our gut barrier. So it's stimulating mucus production, but also tightening the gaps between ourselves.

So strengthening it on, on on all levels of this gut barrier function and basically communicating to us like everything is fine and the host response.

So we respond basically by producing mucus by feeding it. So it's there, it's very close to us and it's communicating very closely, directly. And that's basically why we use it as a pasteurized product.

We are taking these benefits and using it as a supplement as well. Yeah. So I like can I just jump in for a minute. Of course. Well one of the like really huge issues that women face, whether that's PCOS or perimenopause is of course waking as well as insulin resistance.

It's just like par for the course. It's like once again, it's not if it's how bad. And one of the most amazing things that I learned relating to our commands.

And I know this is an area that's an ongoing research area, is the GLP one connection. And we all, you know, I know you talk about this too. We want to optimize and maintain our own GLP one production.

So we don't have to use a mimic, you know, a drug that binds to the receptor. It's not the real it's not the real hormone or peptide. It's just a mimic that can activate the receptor.

But the idea is to maintain our own long term production for ongoing metabolic health, which we know is really, like I mentioned before, is so impacted by hormonal imbalances in women.

If you don't have adequate amounts of estradiol in particular, and we know, for example, when women go through the menopausal transition, their gut microbiome is becomes more male like.

It's like a it's a fascinating transition. And they have less diversity and it's just more male like, which is not good for females and their GLP one production drops.

And there are these special cells that line the in the gut. The intro enter sites, and they make these magical peptide hormones that are just not made properly when you don't have the right hormones.

So it's so fascinating. I can't wait to see more research coming out that you can have a probiotic that's like signaling. It's more like signaling as opposed to your colonizing.

So that's like another fascinating thing that I learned, because it's not that you're creating more living or by implanting them in when you swallow it, it's through signaling agents that you know that you're activating the through this protein that survives through the pasteurization process, that it acts as is fascinating signaling agent to create more mucus and protect the lining and so on.

So but if we can have a way and there's, you know, preliminary research, which I'd love to hear more about, you know, that I've been learning about, that we can potentially maintain production of our p one, whether it's in PCOS patients, women who have irregular cycles.

We know that menstrual cycles are really connected to this. And of course, loss of our cycles and our hormones with menopause and loss of our GLP one.

And then women complain like I'm getting belly fat, I'm losing my waistline, and then they have increased risk of fat deposits, you know, hepatic steatosis and all these things.

So I'm looking at this as, you know, like huge like to have something that goes beyond like I look at it when I give hormones, I treat women with hormones like constantly, but I can't make women have the same hormones as a 21 year old.

I mean, I'm not turning back the clock. I'm doing the best I can with hormones. So I always say hormones are necessary, but not sufficient because we can't.

And even in younger women it's not sufficient. We have to do all the lifestyle stuff. But when you combine the hormones with the magical tools and I think is going to become a universal magical tool that's going to really help women to maintain optimal metabolic health through maintaining this gut barrier and then avoiding this leaky gut problem, which then leads into, like everything going south, you know, so, you know, I don't want to divert from other parts, but I think everyone should really understand that.

There is now some preliminary research on GLP one, which is like, you know, nonstop, like trendy now. Yeah, absolutely. So to summarize, for the people that are kind of watching what Doctor Gersh was talking about is if this is your intro site.

So imagine this is a colon lining cell. Your enter a site. There's certain receptors on here that GLP one will connect to.

Akkermansia as a Keystone Species and GLP-1 Links

Now our bodies supply of GLP one can be influenced by our lifestyle. But one of the key things they're finding is that acrimony can actually help with this GLP one.

So I would love to hear online that the newer research uses pasteurized, heat treated version of acrimony rather than a live one. So, as Doctor Gersh was saying, it's not the bacteria itself, it's the downstream metabolic biochemical effect that, you know, when people are thinking of that and they're in my community, they know all I talk about is chemistry and communication and the cells communicating.

So this shouldn't be new. But if it is new to them, can you explain why someone assumes probiotics will only work when the bacterium is live? How do you explain that this can still work when it's heat treated the way that you guys do it?

Yeah, this is an excellent question and I need to agree. I think again this is might not be true for other beneficial bacteria. But as I said, agreement is very close to us and has developed a lot of ways to communicate with us.

And one of the things that it produces is a protein that is on the outside of the cell. Well, actually. So the cell has these appendages. If you look up on the image of accounts here, you will see it has these Pillai.

It's called the bacterium. The bacteria. The bacterium itself has as tiny appendages that literally reach out to the host. On top of this Pillai, there's a protein and it's called 1100.

And this protein we have been studying for years and we found so it's a protein that communicates to us. It can activate the like receptor two in the host.

And this activation leads to improved gut barrier function leads to decreased inflammation. We even know if we give this protein by itself it can replicate a lot of these effects.

So it seems that this is really the key mode of action of Akamatsu. And very importantly this protein is heat stable. Specifically, if it's connected to this Pillai like it is in our best right in the live cells as well as the pasteurized cells, it's heat stable and it's still signaling even in its best raised form and probably by best rising it.

We're taking away some of the other interfering compounds. So we are making this protein even more bioavailable. And therefore we see a trend that best dry cells even outperform live cells.

So this protein is very unique. It's only found in in species. And it seems that it's really evolved to, to to signal to us and to improve gut barrier function and probably all the other health benefits we see metabolic health, but even broader than that are related to this key protein.

It makes me think that somebody watching this is experiencing health problems and goes, oh, well, I went and got my colonoscopy and my doctor told me everything was okay and I'm not going to worry about anything, even though they might have symptoms.

And I just want to make it very clear that when a guy doctor, because not all gastroenterologists are doing a deep dive into the microbiome. Right. So this is a very important key is that your purpose is to go find either a mass like a colon cancer or really to find polyps, because if we can catch polyps early to bladder anomalies, hyperplastic and remove them, they won't go down to adenoma, won't go down that path.

So I want people to understand that this is kind of yes, it's all down the gut path, but this is kind of two different fields that yet have to meet somewhere up here, like we're diverging right here.

But at some point, hopefully they everybody gets on the same page that we are looking at the mucus barrier. We are looking at the actual microbiota that exists in the gut because they have just as big as impact.

And I know because I, I'm a pathologist by one of my five trainings, and I've looked at plenty of GI biopsies and a colon biopsies. You're never going to see this bacterium at that level because it's just it's not going to come out.

So people who have gone going and getting colonoscopies every five, ten years, however their designated, they're really missing a big part of what goes on in the gut microbiome.

So let's talk about this. So and I'm sure Doctor Gersh, you may have seen this because it is trending in your office. Patients coming in. So p medications like pick and V are everywhere right now.

So someone on these medications or thinking about coming off what should they know about supporting their gut health during this process. And is there like a patient that comes to mind that maybe you've worked with, that you incorporated the gut microbiome healing for their weight loss with the acronym that comes to mind.

Is there an example you maybe have? Well, in terms of like what you were talking about with colonoscopy and then linking it into gut health and how we can talk about GLP ones.

So like you said, and a lot of people don't realize this, that a gastroenterologist who does a colonoscopy is looking for a structural changes, not things that you can't see, you know, say functional changes.

They cannot see functional changes. So when I talk to my patients and they say, well, they had a colonoscopy and they had a couple of polyps and they were benign.

So like everything's good and they're just going to get another colonoscopy instead of maybe ten years. It'll be 3 to 5 years. And I'll say, well, why do you think they're wanting to do a colonoscopy again sooner in you?

And it's because the environment that created that polyp is a pro inflammatory environment, because inflammation will trigger the creation of polyps. So if you think about people who have nasal polyps and they usually have a lot of allergies or sinus infections and, and so on.

So when you look at the environment, a colon polyp is an example of how the environment can create irritation, inflammation and then polyps. And even though those polyps were benign, the environment is inflammatory and inflammation can cause DNA damage and cause cancer.

So it is really important like to actually look at function, right. Not just like structure.

Why Pasteurized Akkermansia Still Works

So in terms of GLP ones, you know, that's why optimizing gut health for as long as possible, forever as possible to maintain our own natural GOP one production is really essential for optimizing health throughout all the decades of life.

And right now, we don't have a really great method for how to get people off these GLP one drugs. And there's a whole bunch of things that may be at play here, that it may be altering the receptor function of the GLP ones.

It may suppress our own endogenous production because, you know, it's like so powerful these mimics that bind to the receptor for our GLP once. So there's a lot of work in progress.

That's like a big deal to try to figure out how to help people optimize weight loss and then maintain that weighs loss without having to stay on a drug for the rest of their lives.

And we know with women like women with PCOS, I'll just leave that name for now that they have to go off of these drugs to get pregnant because it's not safe at this time.

From the data we have for a woman to be on these drugs while they are pregnant, and there's problems when they go off of the drugs and they have pregnancies, they have very significantly increased rates of pregnancy complications like hypertension, preeclampsia, gestational diabetes.

And the babies themselves seem to be metabolically altered in ways that make them maybe more prone to having metabolic dysfunction as they grow and become children and then adults.

So yes, this is a very big, very big issue. And one of the things that I found really fascinating with our command was that in, you know, these are, you know, beginning studies.

I mean, it's like fascinating, but it's giving signals of where this is going and that it can help prevent weight regain. So, you know, we can talk about that because that is such a huge thing.

And I hope that there'll be more and more data collected. But there's no harm in using this and seeing, you know, for patients who are winding down, they're trying to lower their dose because everything we can do to prevent regain, because we know that when you lose weight with these magical drugs, you know, the GLP one receptor agonists, that a substantial amount of weight that's lost tends to be lean body mass or muscle.

And when the weight is regained, its regained as fat. So if you go yo yoing like yo yo diets, but you're using JLP one receptor agonist, you will end up ultimately with a far worse body composition, less lean body mass, less muscle, and more fat.

So we cannot let our patients get the weight back on as fat. You know, you lose 20 or more percent, up to 40% is muscle, and then you regain 100 as fat.

So I'm really excited about the potential here. And in non-GAAP one related weight loss, that was like women who lost weight from just dieting and lifestyle.

There was a substantial. And Annaliese can talk about more, you know, the substantial reduction in weight regain. So I think this is a really like promising area for the future for everyone who loses weight, whether it's GLP one related or not.

And maybe you could take it from there and talk about that study. Yeah. And I think that's that was actually going to be my next question for you that there's a lot of research connecting to.

Wait, can you share with us what does the research actually show? And is this about losing weight, keeping it off something else entirely? And for the people who are already at a healthy weight, is there a reason for them also to care about this? Yes.

Thank you. So thank you for this, for indeed giving the the nuances there. Because to be very clear, we have not research yet the effect of agreements both be one receptor agonist use.

There's no one that has looked into this yet. But of course we have some clinical data that we can translate. And like we say, we are very hopeful that it will will work.

And there I think a very relevant study is the one that we published this year in Nature Medicine, which was a randomized, placebo controlled, double blind trial in people with overweight or obese.

And they were put on a very low calorie diet for eight weeks. So they lost, on average, 10% of their body weight, which is, I think, very impressive.

Weight Loss, Regain, and Clinical Trial Results

And then they were put on treatment with pasteurized agreements or with placebo for six months. And during this week, maintenance phase, as we said, they were not receiving any other diet.

They were just getting some lifestyle advice, but they could basically eat whatever they wanted. And as you mentioned before, we see the typical yoyo effect in the placebo group and we can prevent this this effect largely statistically significantly with pasteurized agreements.

And I think there. So this is already very nice. We can prevent body weight retain. This was also accompanied with stabilization of insulin sensitivity.

So of course if you go on a diet your insulin sensitivity will increase again. So that's what we see in this first eight weeks. And then if we start the treatment, we can actually stabilize this insulin sensitivity in a clinically meaningful way.

So the difference with the Sibo was again statistically significant. But also cleaning clinically very meaningful clinically very meaningful. So I think there of course.

So after weight loss here it was by a diet possibly also after after one receptor agonist use. I think there's a clear benefit of using pasteurized milk tea.

And again you talk about just in general people maybe wanting to keep their weight stable. We talked about this gut barrier function. And I think there because we improve the gut barrier function, the possibilities are endless.

And we can dream. And there are so many people that at one point in their life will have a compromise, that barrier. And you might not even be aware, because it's also very tricky to test.

And a lot of doctors are not testing it. So I think there there are so many benefits that go beyond metabolic health. And there we again go more in the exploratory phases, but it can go even to mood and other things way beyond metabolic health.

Yeah, actually, it got me thinking because I feel like I saw some recent literature around and cognition and brain health. Have you guys done any research in in that space yet?

So we are we have some preclinical evidence and also other groups have looked into this. We don't have anything concrete yet. We are looking at the effects on mood anxiety.

But there we have nothing that can be published yet. Yes okay. Perfect. So this question can be for either one of

you, but I think it's an important question to ask is that if somebody is in the store right now and they're standing in the aisle where all the probiotics are and they're looking, how would they make the distinction that is different from, say, a general or generic probiotic?

Like, how can they make like, how can we educate them on this? Because I know and probably Doctor Gersh, make sure to tell her patients do not buy any supplements from Amazon because we don't know what's actually in that.

That's the basic. But now okay, if they're not buying from Amazon, they're going to the, you know, the health food store or something like that. They're standing in the aisle and they're looking and people are going to be overwhelmed because they're going to be like, okay, there's also I heard the word, but now I'm seeing probiotics.

What's the difference between a probiotic and a and I'm trying to put this down into like the viewers eyes because this is what I'm imagining they're doing.

They're seeing probiotics. They know it's good for the gut because there's so much around that, like just probiotics. Probiotics. They've heard this talk on Akkerman, Sia.

What should they be looking for to make sure that they're going down that right path. So maybe I can I can speak as specifically a scientist and head of the lab and not a specialist in other probiotics at all.

But as I just explained for academic, we've discovered the mode of action. We know how it works. We know that the 30 billion cells that are in our products, the test right cells are working.

So we have at the moment three clinical trials that have been published. We have several that are still ongoing. So we know it works at that dose. In addition, because I'm head of the lab, I also know a bit about the technical part.

We are sure that we are delivering that those until the end of shelf life, so you can store it at room temperature because it's a best rice cell. We also have an optimized way of counting ourselves.

So we use flow cytometry. So we're counting all the cells. They are inactivated. So we cannot do plate counting. And we are sure that you're getting your daily dose that you need to have these clinically proven effects.

So for me in terms of looking at the the gut microbiome, and once you understand there are like trillions of microbes, there's bacteria. But there are even other titans viruses, Viren there's archaea.

There's like, you know, fungi. So it's a complex ecosystem to say the least. So and there's, you know, thousands of different bacterial species. So I look at it as part of a restoration or maintenance kind of an approach.

So Arca mantia I think and you know, and this is always evolving as I learn more is critical for maintaining. And it's located right at the barrier. You know, it's like a unique, so unique microbe.

And with its effect on the this mucus protective layer. And I so I think of it as very, very special in that regard. And unique. It's like a one off. It's just so unique.

But then there are all these other, you know, trillions of microbes, thousands of species. So I think if you look at, you know, there's the different lactobacilli, the, you know, the all the different ones.

I mean, there's like so many different so the different bacilli that live there. So I look at the other microbes that you can take in a probiotic formula as synergistic, not replacing that you can like if you eat fermented food, which I'm sure you probably are talking about in one of the other, you know, sessions, you know, fermented food, which is a complex kind of a of a food, you know, is going to help to maintain the microbial population as well.

So I think of all these as synergistic and that the ark has its own very unique spot, because if you lose that protective barrier, I mean, you've lost the game.

I mean, that's like not optional, you know, but to maintain the entire ecosystem is also critically important. So I say like get the best micro biome support probiotics that you can.

You looking at Bifidobacterium, lactobacillus, you know and get it from a company that may have hopefully if you have a health care professional that knows about these things and recommends specific products or cell specific products, that you use it as part, and then you eat the fiber foods that you know that they need to ferment to make these critically important short chain fatty acids and so on that you essentially need.

Because, you know, butyrate is also a big part of maintaining gut barrier. So it's like all synergistic and it's all part of the whole approach.

Choosing the Right Probiotic and Supporting the Microbiome

From my clinical perspective, in optimization and maintenance of the whole gut microbiome and barrier health. So I don't see them as conflicting at all.

I see it as synergistic. Okay. So if and once again either one of you, if someone has had their gut microbiome tested and their levels look okay, would there still be benefit for incorporating.

And then my follow up question to that, which like I said either one of you are there certain foods that can help you either create more to make it work better all around?

Because it's always food first, because we know that's going to influence a gut microbiome. So those are my questions right now. I'll start again with the basic science basically.

And then we can continue. So what we see in our two clinical trials that were published this year is indeed that people with low baseline levels benefit even more.

So they really have a huge benefit. Some of them even still lose weight after the weight loss period. But overall the clinical trial was positive. So also people with with high levels, even very high levels of can still benefit by supplementation of pasteurized.

So again then we go more in the hypothetical reasons why we are still definitely exploring this. Again, they might have a compromise gut barrier because of other reasons.

And there might be a reason why their endogenous size is not enough or they have the wrong species of. That's something that is also a very new field that is being explored.

So I think there's plenty of people with high levels of agreement that for sure could benefit of treating or taking a best rest academy. I think that's yeah, that you answered it.

And I think that's where it's important for someone to understand the nuances here because clinicians, many of them, and I know this as a clinical pathologist, are trained to look at labs with an up arrow and a down arrow where that's not exactly how the body works.

Right. So you might be looking at a gut microbiome report and it says, oh, there's adequate acrimony yet, but we're not looking at the full picture of is there still, you know, hyper permeability in the gut.

How is the mucus layer. Is there still an inflammatory response. And I think that's where the interpretation and understanding, like you've been saying, and that Doctor Gersh and I probably do, is just understanding the body on a deeper level of how everything is interconnected and the ecosystem works is a much better way of looking at it than simply a practitioner looking at a report going, you need this because this is missing and you need that because this is missing.

And I think that's really a key, because I know when I get a lot of patients, they're coming from other practitioners

who basically put them on all these different things.

And they got worse because they didn't know how to interpret the labs. So I think that is very important. Last question to Doctor Hirsch. If somebody somebody wants to act on this now and they're listening and they want to support their gut and their metabolic health this week, what is the one thing you would tell them to do?

And I want it to be concrete, like actionable, like they're watching this and then they can go do it. Well, I think if, you know, there's so little data I have on this person, you know, this hypothetical person, but I think the first thing they should do is take a self inventory.

Okay. Like what are my symptoms? Like what are my problems and what am I eating? What are my lifestyle choices? What chemicals are my, you know, is my lifestyle exposing me to what am I consuming?

So before even moving into the treatment realm, do a self inventory of what is affecting you. What are you feeling? And also like what are your long term goals and how much effort?

And I hope you know, this is the whole thing of, you know, motivational interviewing. Like how do you motivate people? So each person should say, what do I care about?

What are my goals in life? How much does my healthy longevity mean to me? And then you start with the very beginnings, you know, start modifying your lifestyle and then going and finding a health care professional that will listen to you and understands how the body works to the best of our status in terms of understanding at this time.

But start with yourself. What do you want and what's happening in your life and in your body? Wonderful. Anything else you want to add that we haven't asked you that that you want to mention, like something that's on the horizon or anything like that?

Either one of you? Well, for me, on the horizon is understanding menopause, which is so trendy now. Okay. And perimenopause is understanding. And finally, you know, it's being recognized as a huge metabolic transformational state which includes the gut microbiome.

So I think, you know, if we look at frontiers of medicine, where's the future going?

Practical Takeaways and the Future of Gut Health

It's the first step in solving a problem is to understand and acknowledge it, which for I've been screaming in the wind now for decades, ever since the Women's Health Initiative 25 years ago, that hormones matter, that, you know, women's menopausal transformation is a big deal.

It's not just a few, you know, people think it's few days. It could be years of, you know, hot flashes and night sweats. But it's the the things that you don't see, you know, that you can't feel your arteries hardening, you can't feel plaque developing, you can't feel amyloid beta, you know, tau proteins coming into your brain.

You can't feel your bones disappearing. You can't. There's so many things that are happening. You cannot feel that this is a huge transformational state for women.

But now we have to finally, now that we're recognizing as a global health care, you know, world, that menopause matters in terms of what happens to women thereafter, which is sometimes half their lives is spent, is a menopausal woman that we have to get good therapeutics.

We can't. Now we have good understanding that what's happening and it's being now accepted. But what do we do about it? And part of that is optimized hormone therapy.

Like we can't just say give hormones. It's like how do we give hormones. It's. And then having the other ancillary I'll call lifestyle approaches including diet and stress and chemicals and sleep and incredible tools like our, you

know, so that we can maintain good barrier health, which I think is going to be tantamount to health itself.

So in terms of the future, you know, when we focus, as I do a lot on menopause nowadays, but this actually applies to PCOS as well, that understanding what the problem is, number one.

And then coming up with really effective therapeutic approaches for optimizing health span is really where it's at. And I have a lot of optimism that we're finally after.

I've been going in circles for like a lot of years trying to get people on board that were really back on track, and that we have a lot of incredible researchers and scientists working to create the therapeutic tools so that we can all, as clinicians, optimize our patients health and life qualities.

Wonderful, wonderful. Anneleen doctor Gersh, this has been such a rich conversation. I don't think most people realize how much one organism in their gut could be doing something behind the scenes.

Doctor Gersh can be found at integrativemgi.com, and I encourage you to look up her books, the PCOS SOS series and the menopause 50 Things You Need to Know.

Anna Lean can be found at the Akkermansia company, which is Akkermansiacompany.com. And here is the key takeaway for today's talk is that your gut is home to trillions of organisms, and some of the smallest ones may be doing some of the biggest work.

So thank you both so much for this interview and everyone else. Stay tuned for another episode. Thank you so much.