Introduction and Background

Jocelyn. Thank you. And I'm just so pleased that you agreed to be part of the M. S. and Neuro Immune Summit. Now, what I'd like to have you do, Jocelyn, is to please introduce yourself, explain why you have this expertize, and then we'll get started.

Thanks so much for having me on, Dr. Wahls. It's always exciting, of course, to work with you. And I think I know I've mentioned this to you before, but my husband has M. S.

and so this is a subject matter that's very near and dear to my heart. He's my sweetheart. Still 14 years. So it's it's been remarkable to see, to witness for him what natural therapeutics have done.

He's been in remission for 15 years now. So very exciting. At any rate, I attribute that to his body and its healing power more than anything. You know, a lot of just getting out of the way often does that, does the trick so that in the end it did for him.

Okay. So thank you for having me. I'm as Dr. Weil said, I'm Jocelyn Strand. I'm a natural traffic doctor, and I live in northern Minnesota, in Duluth.

We're just having the tick season up here. So we are. That's another thing that I that I worked with a whole lot. It was one of the areas I ended up specializing in, just out of necessity in this area.

And just like other general practice, naturopathic doctors or functional medicine doctors, I get a lot of gastrointestinal autoimmune and that was my practice.

I did close my practice three coming up on four years ago now to take the director of clinical education and research position at Biocidal Botanicals.

And that really stemmed from my experience using the product in, in my practice. And that's why I'm here today is to talk a little bit about how that might apply under circumstances where we're looking at neurological or brain condition related conditions and the microbiome together.

Yeah. So just a refresh for everyone who's listening.

Supporting the Microbiome with Lifestyle and Botanicals

There's more and more evidence that the microbiome in our mouth that our gut is has a big role to play in forming and training our immune system. So how what can I do to make sure my microbiome in my mouth and my gut is properly aligned?

Oh, so it's a really great question. And there's so there are really a multitude of answers to that question. You know, for me, trained as an anthropomorphic doctor, always I would start with the lowest intervention, effective intervention that was therapeutic, right?

And so I would start diet and lifestyle. There's always room. There's always a time and a place for higher intervention therapeutics that say diet and lifestyle would be first.

And then we move into things like homeopathy and botanicals and nutritional supplements. And so when you ask How can we keep it healthy, the first thing I would say is keep stress slowed down, you know, to to make sure you're managing stress.

And so as part of your lifestyle and that and also, you know, in that lifestyle bucket would be making sure you're getting regular movement as well. So these basic sort of lifestyle, supportive lifestyle, self-care, when I think of self-care, it's not like a Manny Petit and chocolate really.

It's about listening to and taking care of our bodies and creating a space for us to maintain mental, emotional, physical health. So though all of those what those look like will be individual for for, as you know, right, for, for for the person depending on spiritual bent, depending on, you know, what they're capable of doing in their bodies for movement, depending on their lifestyle.

You know, their relationships are their relationships healthy. So all of those things need to be looked at and addressed. And then in addition to that diet, of course, whether people are eating highly processed foods or what is it called now there's a new name or new to me anyway, name it was said super processed is more than five ingredients.

I think I was just listening to Lynn Patrick talk about that. So I mean, that's that's pretty restrictive. But it's also really important that our bodies will recognize and digest what we're eating and be able to use it to build our own as information, to build our own body.

So avoiding highly processed, high, highly refined foods. And those foods will feed the sort of the bad players in the microbiome. So that's how I would think about it.

We have the microbiome is composed of gram negative bacteria, gram positive bacteria, fungal elements, even viruses and parasites. These are all part of the microbial milieu that live in our bodies and primarily our main reservoirs, the gut.

But as you said, we also have a microbiome in the mouth. We have a microbiome in the middle ear. We have microbiome in the lungs, in the bladder, in the vagina.

So all and I was shocked to hear we get that in our brain as well. So we have. Yes, you know, we're not a sterile as I was taught in medical school, maybe you were taught naturopathy school. I was.

That we're all sterile, like, well, we're not. Sterile urine. All right. We were told that sterile blood not not true. That's not true. So everyone who's listening so we have viruses that, in fact, are bacteria and or fungi and our yeast.

And we have bacteria. We have the fungi that are in our mouth, in our blood, in our gut. So in doing the diet and lifestyle stuff, what's the next thing that I could do?

Well, that's part of the reason that I'm I love this company is because I love botanicals. And so for me, to me, plants are I think about them like this.

Plants exist in the same way they are evolved or created, whatever your belief system is to to thrive in the same environmental stressors that under the same environmental stressors that we have.

So they have they have some of the same pathogens. They have many of the same beneficial microorganisms. They need an immune system. They need antimicrobial proteins.

They need all of these things that we can then call upon when our body needs additional support. So if we get everything out of the way in terms of obstacles and we're giving the body good nutrition and good rest, then bringing in this additional support from botanicals can be very, very useful.

And I'll add one other thing or one other thought, which is going to have a number of things in it, which is first, that each of these botanicals has multiple activities.

So you may be going after it in your head thinking, Oh, this is an anti microbial. But the benefit of Botanicals is that they often have multiple activities.

So we would see anti-inflammatory activities, antioxidant activity, maybe breaking up biofilms, maybe harming the neurological system all in a single herb.

Oral Microbiome and Nitric Oxide

Then when you take that and form and layer in a formula, you'll start to see this synergistic effect that you that you don't necessarily see with a pharmaceutical approach more with, you know, without, I guess the use of the botanicals.

And that's what Dr. Fresco found when she developed the bio site and it was in 1989. So it's been a while now, 30, 34 years ago. And everyone who's listening when we design drugs to act on a receptor in a very specific pathway in the body, would remind everyone that we have 2 million chemical reactions in each cell each second.

So life is deeply interconnected, which is why I think food and botanicals and lifestyle medicine is so, so powerful at modulating and correcting and rebalancing our immune system.

So I love to think about it, too. Is that balance piece right? It's that ability to restore balance rather than pushing physiology or forcing physiology.

It comes into, you know, in a sort of gentler and more more well tolerated often. But also the final outcome is balance. Okay. So we're talking about using a variety of herbs to help balance my microbiome in my mouth.

I would do it both at once. So do it. Why don't we start with the mouth? Okay, this is up. Here. Well, so as you already said, right? They're all related.

They're all we're all interconnected. So there is an oral microbiome and even in the mouth there's a different microbiome in the tongue than there is on the teeth and there is on the cheek.

And what's interesting to me, I looking at the literature, we know that oral dysbiosis. So a couple of things. One, periodontal disease, which is gingivitis or periodontal disease like periodontal down into the periodontal pocket.

It's the most common inflammatory condition in the United States. So it's over half of the adult population that has some degree of inflammation going on just in their mouth.

So really important place to pay attention to. And what happens is that the adjacent blood flow in the periodontal pocket is is right next to there's just a single cell layer there.

So if you get damage to that inflammation in that area, then those metabolites and those organisms will cross into the bloodstream. And we don't have the first task clearance from the mouth. Right.

So we what that means is in the gut, we have a very well-designed system to protect the body from absorbing bacterial metabolites. We don't have that in the mouth.

And so and of course, it's proximity to the brain is very important as well in the mouth. So this is a very germane to the conversation that we're having here, which is when you when you're dealing with the oral microbiome, then you want to direct your therapeutic there.

That that's why we have the toothpaste, that biocidal toothpaste. So it's called dental siding. And biocides is the active ingredient in that toothpaste and in addition to that, if you want to get down into the periodontal pockets and any any deeper areas, not making any claims at all.

But we have had reports from practitioners or patients that, you know, resolving pain or cavitation pain as well when using the liposomal solution. So any time just just to orient the audience by light, because it is the same thing as the bio side, but when you put it in a liposomal form, you have direct access from to the blood flow from the mouth rather than having to digest it through the liver.

So you'll get some systemic activity when you swallow the biocidal liquid or any herb or supplement, but you will lose a significant amount of it when it goes through the liver before it gets to the systemic tissue.

When you when you make something into a light basin, you bypass that system. And so you have a direct access to deeper tissues. And that's why we made the oral rinses to get down into all of the nooks and crannies.

Now. Now there's more interest in the oral microbiome and its impact on nitrites and nitric oxide. Do I have to worry about the Liposomal bio side or the dental side and having an impact on those bacteria that I need to make nitric oxide?

Such an excellent question. So we have we are hoping to do actual research on the microorganisms that do nitrate conversion in the in the tongue. That's where they're down deep in the region of the tongue.

We haven't done that research. What we have done as a small pilot study showing that there was no shift in blood pressure when using the dental side and and the dental side and ALS together.

I think that was nine participants.

Gut Health, Dysbiosis, and Binders

So it's small pilot research, but we saw no see, no change at all in blood pressure. In fact, I think a few people had their blood pressure go down. Okay.

I'm going to stop for a moment. So everyone should know that if you use blood, mouthwash or a toothpaste that foams a lot, you are affecting the microbes that do this very important task.

So if you're using that kind of products, stop immediately. And I use dental. So my blood pressure is great. My dentist labs loves it. It's and my primary care person's like, well, you're 67 and you just really have such a great blood pressure.

That's excellent. And what I left out is that nitric oxide, it's effect is vasodilation, which means that that the blood vessels relax. And so blood pressure goes down and if you do something like a chlorhexidine, like Dr.

Walsh said, rinse, then they have noted in the medical literature that it can increase blood pressure because it kills those microorganisms. So just to sort of bring it full circle, are people.

Who do not use mouthwash. Absolutely. Okay. So so we're going to think about dental side and get rid of toothpaste that has a lot of foaming and get rid of the mouthwash.

We've got a healthier mouth. And next next year, you have to tell me about your research. So we'll know for sure that our nitric oxide making bacteria are happy.

So our yeah, yeah, we definitely want to hear about that research. And now let's get into the gut. Okay, so importantly, you've already treated the mouth when we swallow it.

So we have ten to the eighth microorganisms in a milliliter of saliva and we swallow a liter of saliva every day. So, of course, if you ignore the mouth, you're missing an entire potential or source of dysbiosis in the gut.

And so it can go the other way as well. So we can also have microorganisms migrating upwards from the gastrointestinal tract, especially people who have, you know, low stomach acid or not digesting their food.

Well, but that being said, it's very important to pay attention to the gastrointestinal microbiome. It is the main reservoir for microorganisms in the gastrointestinal tract.

And so if you if you start to get dysbiosis or an imbalance in the gut and so just a quick super nutshell of the

microorganisms there is that we have beneficial microorganisms which which are which do good things for our body, right?

Like produce things called short chain fatty acids. They reduce inflammation in the gut and in the body and much more than that, they can protect us. They help us with hydration, with nutrient synthesis.

There is a whole slew of ways that beneficial microorganisms support our health. And then there are commensal, which are, as far as we know, although I'm always a little skeptical when we say we know something fully in medicine because it feels like we're constantly evolving.

But commensal organisms are neither here nor there in terms of helping us, but they're sort of holding existing or co-existing side by side. Commensal organisms can become pathogenic or opportunistic pathogens where they were typically okay.

But if our immune system gets off, or if we say we take a round of antibiotics, or if we have a lot of stress or a stressor that suppresses our immune function, and they can get out of out of balance.

And so really, you know, I think that the easiest way to think about dysbiosis would be like a food poisoning event because it's so readily identifiable.

We take something and something like a pathogenic E coli and we have, you know, maybe nausea, vomiting, diarrhea. It's transient for most people. It can be very dangerous.

But for most people that comes and goes and then we have a reestablish or different microbiome, but we have that would be a dramatic event. Then we have something more or more smoldering.

I would say if we get some imbalances that will create smoldering inflammation. Smoldering, I guess dysbiosis. So that's how that that is the definition of dysbiosis is that balance gets off and it starts to produce sort of systemic local and systemic effects.

And one of those effects is to train the immune system. Like you said. And that can then then we're looking at a potential real problem with with low grade chronic infection, which I know is one of the concerns for neurological conditions as well.

Yeah, because we can then activate our innate immune system, make more cytokines, which lead to more pain, fatigue, malaise, and that can activate my Mike Quigley in my brain, which leads to more fatigue, anxiety, depression and I, I think increase the probability of having a relapse.

So having a happy microbiome and I talk a lot about I poop and rocks logs snakes put in or T and you don't want to have put in your tea and don't want to have rocks and dry logs.

You just want to have smooth comfortably past problems. And so we've got the dental side and toothpaste. Liposomal Is there a dental side in product that helps me balance that microbiome in my in my intestines?

And so the, the liquid bio side in the original product, it would be the main four. So there are different categories in, in the, I guess the the brand that we that we've developed to make it simpler.

So the first is remove and that's where we would put the bio side and category. And this is to remove the any kind of harmful players in the in the microbiome and to restore balance.

And so the bio side and liquid is kind of always the placeholder really. We have right now ten, almost 11 products in the line and seven of them have the bio side and depending on where you're targeting and that will always be the first thing that I reach for to restore balance in the microbiome.

Which sounds strange because we call it an antimicrobial. So what about the good guys? And you already touched

on that with the mouth, but we do have also pilot research, which we're replicating in a human clinical trial right now with Raja Roger Amani that showed that we actually had not only did it not negatively affect beneficiaries, but we're working with Doctor Krista Dolman right now to establish the possibility of increasing beneficial microorganisms with just the bio side and liquid and GI talks in the stool, which means that again, we're not wiping out the beneficial microorganisms, we're actually reestablishing balance in the microbiome instead.

So you start to see the ratios improve and it's just a much gentler and more well-tolerated therapeutic because of that. So I always combine and I think this is important for the population we're talking to today.

If you're going to work with the microbiome, just be aware that you can aggravate before you get better. If the microbiome is an underlying trigger for the disease process.

For example, Klebsiella, we'll just say that is a gram negative bacteria is producing pro-inflammatory mediators, increasing cytokines and systemic, systemic inflammation, but they're also notorious biofilm producers.

So that means that they have their behind a cloak and they're constantly producing those things, but they're also a little bit hidden from the immune system.

So when you start to break down biofilms, when you start to restore balance in microbiome, some of those inflammatory mediators can create aggravation in the immune system as it gets exposed to the breakdown and restoration of the tissue and at the breakdown of the of the microbes and the restoration of the tissue in the area.

And so using a binder is really important.

Microbes, Viral Triggers, and Practitioner Support

And in our line that's the GI detox and that is like a sponge that will soak up that debris, all of that proinflammatory debris and move it out so that when people are ramping up or titrating up on that on the bio side in liquid, that they're less likely to respond.

And some people are still sensitive to it. And will need additional support. And for that, I would have you work with a practitioner who's educated in the use of.

Yeah, yeah. Because it's really important not to in this population especially, I would say not to create any kind of healing crisis is what it was called.

I don't know. Did you hear that phrase? Yeah, I heard that, too. You know, like really support supported detox. That's okay. Yeah. I mean, you just went too fast.

You got to slow down and be be more mindful about binders to clean things up. So, yes, absolutely. I wish I'd known that when I did my first detox, but I didn't know that.

So I learned the hard way and made myself very sick with it. So yeah, yeah. At least I learned on myself and not a patient. I will send up gratitude for that.

Absolutely. So a lot of people with M. S. are aware now or ever have heard about the Epstein-Barr virus and that paper that came out about the military recruits who their author said that Epstein-Barr is an important precursor for many for getting M. S.

is there. And we know that there are 16 different microbes, viruses bacteria's, that are associated with a higher risk of developing MRSA and other neuro immune conditions.

Is there a role for a biocidal product in dealing with some of these microbes? Absolutely. And a couple of things. Well, first, Dr. Crisco had Epstein-Barr chronic, but reactivated Epstein-Barr.

That's when she developed the olive virus, which is the sort of a second anti-microbial on the line. So we have the bio side. And as an antimicrobial, the olive virus is a very potent antiviral, and his main ingredient is olive leaf.

And that has been shown to to have antiviral activity. And so without making any claims, because we have not studied Epstein-Barr and and the Oliveira X, that's what that was the purpose of the product when it was developed.

And it's a nice combination. I would also as a practitioner, I would also include the Liposomal biocides, but you'd be looking at a pretty complex treatment plan under those situations.

And so again, just recommending people really have a practitioner on board who can guide them through the titration, most likely clear the gastrointestinal tract first with the bio side liquid or restore balance there and then you would move to a life as almost solution and go more systemic to address any.

And the way that I think about it is Epstein-Barr is one, it's part of the microbiome. It's one of many viruses, many, many bacteria that that exist and put tick borne illnesses in the same category that many of us are carrying, that we would do fine until we have a stressful event or until our diet falls off the wagon.

We drink too much, whatever alcohol, whatever it is that that changes, that our body's ability to manage stress and to manage that, then we can't mount the same immune response and sort of keep everything under, under wraps.

And so what I love about the bio side is that it is broad acting against harmful players so that we don't necessarily even have to know exactly what we're dealing with, although that's always lovely to know exactly what we're dealing with.

But I even used it just to assess the in my practice, to assess the microbiome and its effect or its contributions to whatever the person was going through.

Because I find myself using it sort of after testing whether it was Klebsiella or E Coli or whether it was Candida, then I'm writing the same prescription and I thought at some point I thought, well, I could I could wait save my patients for $800 in testing and just go directly.

That's how I worked it in my practice. I'm not recommending that we just go out and shoot from the hip for everybody, but that's than a benefit of something like this.

It's broad acting and supportive to restore balance. Is that it doesn't typically do any harm to to work. That level can restore balance and study. I mean, like I said, working with a practitioner is very important because it can be a little bit of a rocky road for getting from point A to point B, but it is and what I mean by that is really that when you're working with the microbes, the biofilms and any kind of oral potential autoimmune trigger, that you just want to be very careful.

Slow. Careful, kind of a winding response. Yeah. So so I think I think what I'm hearing is you want to be slow, you want to be careful, find a integrative functional medicine practitioner who has expertize in using a file side and do they just ask the practitioner like do these by a certain part of your program?

How would we find somebody who has both side and expertize? Well, we do have I think we have a referral program. If you call our customer service by site and they'll tell you a list or they'll give you at least three practitioners that you could use.

Key Takeaways and Where to Learn More

And we do have we do have people we know are really competent and use this product regularly. And so you could even, I guess, ask to talk to the clinical team to find out the other thing is that we do really thorough training.

So if you have a practitioner who's interested and you want to bring this product into your treatment plan, but

they're not currently using the product line, then we have a really robust clinical team that can help to educate the practitioner on how to use it, get them on board, expect.

Yeah. Okay. Well, it sounds like a very portable process now. What do you think is the most important thing that you want people to take from our conversation today?

Well, that's a good question. Let's see what for me, I would say that, you know, that emerging kind of how you started the conversation, the emerging evidence on the importance of managing the microbiome and keeping a healthy balance in the microbiome and its systemic effects.

So knowing that when you when you have a healthy balance of lots of the of the microbiome, what's going on the body that you're supporting full body health from from the brain to the heart to the kidneys to the liver, all of those things.

And the research just keeps compounding on it. I mean, if you there was almost nothing 20 years ago and now if you put microbiome in PubMed, it's over 100,000 articles.

So it's it's up and coming continuous. Very exciting. It's very exciting stuff. Okay. Now, the most important question is, so where do they find where do they find you?

The easiest thing is to go to bio site and dot com, which is bio cdi and dot com. Okay. Well, Jocelyn, thank you. This has just been so wonderful and I always so enjoy our conversations.

Me too. Thanks so much, Dr. Wells.