Introduction and Brendan's Background

– Everyone, welcome back to this episode of the Microbes and Mental Health Summit, I'm your co host, Dr. Tom Moorcroft, and I am as you know, super pumped to be talking about all this information, getting all this really critical information out to you and today I'm joined by a really awesome guy, Brendan Vermeire, who I think you're really gonna dig what we're talking about today, because we're gonna be chatting about kind of like that brain on fire thing and examining the root causes of microglia activation and actually what micro glia are and what the heck micro glial activation is. And this is just a critical thing and I was so excited when when Brendan accepted our invitation and really came up with this topic for our conversation because this is something that affects my personal health, the health of my family and every patient I work with every single day, so I think this is gonna be really cool. So, a couple of things about Brendan he's like this world renowned guy on, you know, looking at changing the way we look at mental health, through advancing the science um of mental health dysfunction, and really looking at labs to help guide some of this.

And the thing that I'm really excited about is back in the day, as you know, so many of the things I talk about is like figure out what you really love in life and go for it, and in Brendan's story, and I and I hope he'll tell us a little bit more about this, you know, he was pursuing a career and becoming a navy seal, which is something as a kid growing up, I was always about.

So I would actually love to just say hi Brendan and maybe we could start there because this is really just, I think where people come from and where people go to and how life changes their path is just so inspiring, So welcome.
– Absolutely thanks for having me Tom.

And as we were saying off camera there, it's really great to finally meet you because I've known of you for quite some time. And so I knew it was inevitable that we crossed paths eventually and when Miles invited me onto the summit and I heard the theme of microbes and mental health, which is really the main focal point of my career anymore, is that gut brain axis and brain on fire as I'm sure we'll get into.

So it's really a pleasure to get to have the opportunity to speak with like minded professional that I have a lot of respect for and I appreciate what you said because my career path has been anything but predictable. You know, there's this whole like long, painful version of my story and obviously I do, people want to know that story for the, I think there's a lot of healing and affirmation and relatability, right? And of course, you know, that is my core wife, you know, why did I get into this?

Why what drives my passion and my, you know, even obsession, It's to the point that my work, it is my own medicine, you know, my work is my daily dose of medicine for my own healing and my own continued growth and evolution. So by paying it forward through channels like this, it really just, you know, brings me a lot of purpose and you demonic fulfillment and self actualization. But to your point, the Navy seal thing, I mean, growing up, I, I don't know, I think I was a high functioning depressed young man and trying to figure out life and where do I belong in this crazy world?

And you know, I grew up with martial arts and wrestling and tough guy stuff. So I had that very nose to the grindstone and I took myself maybe a little too seriously, took life too seriously and just had that, like, the only thing that I could imagine made life worth living was kind of that ultimate sacrifice.

That, you know, I've got the samurai art piece over here and that's a big part of my sort of, you know, moral compass and everything. So as a kid, I literally wanted to be like a samurai or a ninja when I grew up and then it was in high school when I read a lone survivor that it was like, okay, well that's the modern day American, you know, samurais, the navy seals.

So you, you know, I did intensely pursue that. And I was actually about halfway through basic training up in Great

Lakes, you know, Chicago or outside Chicago in Illinois.

And they found out a preexisting injury. So I was medically discharged and sent home. And it's this huge long story. But it was, you know, my identified sense of purpose taken away from me.

And it was during that aftermath that my own mental health issues that were probably chronic in nature really became much more obvious. And so then there was actually a eventually a diagnosis with major depressive disorder in A. D. H.

D. There was intentional overdose and suicide attempts. I went through the modern psychiatric system uh and experienced firsthand how dysfunctional it was.

And at that point in time I was a personal trainer and nutritionist. So exercise physiology, metabolic biochemistry, nutritional biochemistry, that was my, you know, science background. But having gone through my own mental health struggles and then finding myself in a toxic relationship that was codependent or statistic, living in a water damaged home, it was trying to save her that, you know, then kind of got me like I steered from fitness and nutrition and helping people with metabolic illness get metabolically fit and then steering into, okay, how do you unravel mysterious chronic chronic complex illness.

And that's how I kind of segue into the functional medicine space. And I've just been kind of obsessively pursuing it ever since. And, you know, here we are. So it's been a crazy journey that you could never make up. You just have to live it.

– Yeah. You know, and that's the thing, I mean, it's like for me, like we were talking earlier, one of the things I love to do is ski right? And everybody's always like, why are you doing these things?

I'm like, because I'm in the flow. Like, the only way to do it well and and actually safe is to actually let go of the need for control and embrace being in flow with life.

And the thing, a couple of things that really stand out from what you were just sharing Brendan is one of them is I didn't have the guts to go for that.

I just thought being a ninja was the baddest thing ever and I dressed up and I practice and everything, but when I learned about the seals, I like, I wanted to do that, but I never got, I never took that next step, right. And so I just think that everyone here listening is like, it's so inspirational, even though it, it led you in a circuitous path to where you're at here, just having, like that motivation to go for your dreams because what will I know we'll end up talking about later, That's a key part of healing is to say yes to yourself and go for the dreams. And one of the things that personally sticks out to me is that when I was sick with Lyme disease babesiosis and heavy metal toxicity that I didn't know about. I also, I had initial diagnosis of major depression. I didn't think life was worth living, but I never kind of got to that that you know, despair moment.

But then it was like, oh you're bipolar, like all the good doctors and lawyers and like that's a scary thought.

Metabolic Health as the Foundation

And then the other part was just like that when we remove some of these medicines that through the typical conveyor belt I had, I was sicker coming off the medicines than on them or before them. And so in your in sort of your path because this sort of metabolic approach to mental health is really, I think one that's critical for this community of people to learn about.

It's not just that you're born deficient in the medicine. So where are you coming at it? What have you discovered? And like sort of like wired, all these health things on the rise and how can we really get to the root cause so that we don't have to just like rely on Zoloft and Paxil and then all the side effects that we love on the way out. – You know, you're very perceptive and I appreciate that I admire that because you know, I always make that point of of my background with the metabolic fitness and and component because you know, whereas growing up as an athlete

and, and even like before I signed the dotted line to sign my life away to the United States Navy Seal program, I was already like very this nutrition so that that was kind of what saved me was my career with fitness nutrition because when I was, you know, devastated by the Navy seal aspiration taken away, you know, my depression, I'm the kind of guy I have to like hit rock bottom or give my all before I'm gonna pivot, you know, it's, it's an integrity thing.

Like I have to see things through. So it wasn't really until I hit kind of my breaking point that was like, all right, I need to find a new purpose and, and move on. And when I poured myself into the fitness and nutrition career, I mean, I just fell in love with it.

And so that's my background and so, you know, even 14 years ago as a health and fitness professional, just metabolic health was intuitive, it made sense. And you know, this idea of movement as medicine, nutrition as medicine, which has gotten way trendier now.

But even back then, like it was just common sense and it's been crazy, you know, Tom it really hit me actually, I was in Georgia last august speaking at the integrative medicine for mental health conference and that was a big deal for me, You know, I'm on stage in front of like 500 MG psychiatrists lecturing to all of them and even, you know, it's an integrative medicine for mental health event.

So I would have thought that there's already a little bit more common sense and intuition around this. And it became very clear to me that even in the functional medicine space, this idea of metabolic health for mental health is still not well known or common sense. And so my background with nutrition and fitness and coaching, psychology has served me extremely well and helped me stand out in the functional medicine space, which I still a little bit too reductionist IQ and telepathic at times where it's like all the lab testing all big supplement protocols and it's like, well we're dealing with a population that's 88% metabolically ill and 70% overweight or obese and 43% diabetic, 30% with a fatty liver. So without those big rocks of metabolic health, I always like to say, the three big rocks are kind of metabolism mindset and microbiome, right? I'm very much of the mindset that if we can get your metabolic health on point, your mindset on point and your microbiome and terrain on point.

A lot of these other kind of mysterious root cause things tend to improve and fix themselves and I think a little bit all too often people cling to that one root cause whether it's life's a heavy metal stealth infections. But without that foundation, we're not gonna make progress, we're not gonna get anywhere – When you see people like get better and then they get worse, right? And they get better and they get worse and sometimes it's like they're just putting more and more to your point.

Like more and more protocol supplements and things and gadgets and ship and they don't have the foundation. I mean, like, you know, I I'd love to dive a little deeper because like the mindset thing, I mean, I could talk about like for years, it's the whole thing, but what's what's going on?

I mean, what like can we break down this metabolic piece for every because I mean, I think we hear metabolic and oh, diabetes and obesity and then people feel, oh, we're fat shaming and we can't know, it's like we're really, we're talking about science and we want to talk to you about how your body actually functions.

But but what does that mean in English, you know, and what's practical for our for everybody watching us to so they can understand what that really means.

– Yeah, for sure, you know, it's crazy cause whereas for me, metabolic is just ingrained into into my psyche for a lot of people, they still don't understand like what is the metabolism or what is metabolic health even really mean? Because that study that was published in like early 2020 that said 88% of, you know, only 12% of Americans are metabolically healthy.

And if you look at that study, they're using extremely crude measurements of health. Things like waist circumference and triglycerides and glucose and you know, B. M. I. Whereas like even in the beginning of my personal training, nutrition coaching career at the age of 18, you know, we laughed at that kind of stuff right?

Like we were already doing comprehensive blood work you know, very sensitive body composition testing with the $10,000 you know in body scanner as well as you know, caliper testing to see how your fat is deposited around the body and what hormone systems influence that Vo two testing, right?

So measuring the volume of oxygen you can consume and utilized for the sake of your resting metabolic rate. So like historically in metabolic science has come a long way because it used to really just be simplistically thought of your metabolism is your engine the engine that is the life force of your body.

And you have a fast engine, a slow engine right? Like are you burning fuel? Like and what fuel are you burning? Are you burning sugar all day? Are you burning fat all day? Whereas now metabolic science has has come so much further now, you know, people are talking about things like a Ta Fiji and you know hp a autonomic Alice static harmony and balance. So even just metabolic science has expanded much more. But at the end of the day, I would primarily say that metabolic health is how well can you produce the life force the key the A.

T. P. That drives all chemical reactions in your body and makes life possible. So especially like when people get into subjects such as you know how mold drives mitochondrial dysfunction.

And so then it's like what's the bio hacker the supplement for mitochondria and it's like you know, the way to boost mitochondrial health is to stimulate mitra genesis through exercise and movement in sunlight. So what I love about, yeah right, what I love about metabolic health is that is earned.

Like it's work, you know, it's lifestyle decisions more than anything. You can't supplement your way to metabolic health. – Well you know, it's interesting too because like I I keep trying to you know you always when when we're talking I'm always like hold off on this piece.

But like literally it's like this is your health. You are personally responsible for it. You and I are not responsible for anybody else's health. Now. We can help guide them.

But so many people like my goal, one of my missions is to help people bring, realize how amazing this life force in them and this self healing mechanism is and to also allow them to take responsibility for it. But also you know to to understand that they are worthy to receive that because so many of these little everybody's like oh how do I detoxify my brain? I'm like I don't know why don't you start with going to bed on time and having sleep hygiene so that your lymphatic system can drain and all this. It's not about giving it to someone else, It's about taking the responsibility and like, yeah, sometimes it's harder work.

But you, I love the way you just said you earn it. I mean, so what happens like when you were not earning it or when someone hasn't given us this gift of understanding that that we have this ability to to drive our health?

Because I don't think we can, you know, obviously if you're, if you're walking down the road and you know, you somebody, I don't know, you step on a rock and twist your ankle, You know, you can't help some of these things, but there are a lot of things.

It's not everything is in our control, but so many things are so, what happens when we don't, you know, take the responsibility. We should and we're in the 80 you know, whatever that 88% is rather than the 12% and like how does that lack of, you know, that lack of metabolic health lead to things like mental health disorders? – You know, what's crazy about it?

Inflammation, Microglia, and Brain Health

Tom is the obesity crisis is this young new modern plague of unconscious consumerism and like this was written on the wall 30 years ago when when I was a child, the movie wally came out, right? And you know, like that movie very perfectly depicted like okay Earth went to shed and it's just this wasteland of garbage because of consumerism and the You know, overly fat load, muscle density, low bone density humans are being escorted in their electronic chairs on the spaceship that wally is trying to get on right? Like you know that was what like when did wally come out like 20 years ago and it's funny how we all like laughed at it.

We all consumed that movie and that media and it didn't do a damn thing in preventing that from manifesting. – It's so interesting when you look at a lot of these movies, I even look at like Star Wars and you know, you look at the Matrix and you look at Wally like all these things that people are trying to tell us something.

It's like people pay attention here. – We'll see you know Tom I like the past few years of pandemic. It was like V for vendetta had a ready player one Wally Star Wars like all got together had a baby and that was our reality, right? And I was mind blown where you know like in not, I have no interest in the whole polarizing topic of you know, vaccines and whatever. But what frustrated me most through the past few years was how it wasn't until like two years in that our government admitted that there was a link between like high body fat and increased risk of more severe infection, right? And obviously you – We all got our videos pulled off of the internet because we were saying it from the beginning because there was a science was there. They just weren't.

– Yeah. like as you know, follow the science and it's like uh you mean the science of how you know, lowered metabolic health lowers immunity? Like that's an irrefutable truth.

But then they're using Krispy Kreme to incentivize boosters, right? So I don't feel like – We just stepped back for one second. Let's think about this for one second.

– Yeah, Yeah. – Hey guys, if you show up to get your vaccine, we're gonna give you the sugar that's gonna get You addicted more so than cocaine and it's going to make you fatter, it's gonna make you eat more sugar so you get more fat, you're gonna feel like crap and your brain is going to go to ship so that we can sell you 75 more drugs. And again, like I agree with you.

I'm not about getting polar polarized on vaccine or no vaccine or med or no med. My feeling is like these things are here and every tool that the human brain can conceive of because of the divine inspiration, we get whatever you just fine life or divinity divinity as really do have to do with like they have a potential for good, but it's a potential and it's how do we use it? I'm not saying sugar is bad.

I'm just saying that like maybe you don't need a crispy cream and maybe if you think a vaccine is good and there were science behind it, maybe you should just go get it and take responsibility. Not that I'm saying one way or the other.

You guys can all argue your vaccine all day long. I have my own personal opinion that will leave out for right now. But anyway. – Yeah, I mean it's just what I've been saying the past few years is like if that isn't insulting right?

The idea of being incentivized with Krispy Kreme to go get a booster. If that doesn't insult you on a deep moral level. Like I literally can't help you because we're not living in the same reality.

We're not speaking the same language, right? And it's just it's so troublesome. So you know, I could go on and on about it. But part of it too. And I've been preaching this a lot. Like, you know, monoclonal antibodies are all of a sudden all the rage and who in America has not heard the phrase monoclonal antibodies and monoclonal antibodies.

First off super cool technology. Like I could have been a great pharmaceutical scientist in another life. I like what I do better now. You know, trying to teach people how not to need drugs, but you know, teach their own but one of the things that people don't realize is like with the monoclonal antibody designer antibodies, you know how great we can create a designer antibody to block whatever we want in the body. That's cool and it has some some degree of efficacy. So like right now, you know, Humira is a big drug for irritable bowel disease and it's a tumor necrosis factor alpha blocking drug, right? But if you listen closely, like, what's the major side effects is immuno suppression if you're blocking your body's ability to communicate with its own immune system, which is what pro inflammatory cytokines are doing.

Sure you're decreasing the damage and the side effects of inflammation, but now your body can't use that cleansing fire of inflammation to protect you from something bad, which is why risk of infection goes up – So narrow minded, right? You've got those blinders on and you're like, it's like hammer nail, hammer nail. I'm like, well what

are you nailing the, what are you hammering the nail into?

And this is one of the things that's just like we see so much in this chronic infection and it's like part of the issue is like when we look at like the mental health, at least from my perspective dealing a lot with chronic tick borne infections and mold and even mass cell activation, but with our kids who have toxin induced autoimmune encephalitis and like it's the thing that I think that's really a disservice or or a lack of understanding, even like you were saying, some of the functional medicine doctors don't even understand what you're teaching them. I'm like that's kind of scary because I thought this was their field. Is that immune suppressed?

Natural immune suppression is not usually just pure if you have immune deficiency because I have a congenital one that I do just fine with. But it's more about this regulation and I'm I'm really concerned when somebody gives you Humira. Now if it's life saving and joint saving and there you've tried all the rest or you're doing both at the same time to mitigate, you know, you gotta do, you gotta make the right choice.

But what else are we doing that we don't know about? Whereas when we give the body the right fuel and the right mindset and and that support that you were talking about. I mean that to me is like now we let the body actually do all the things that's supposed to do rather than just say we're gonna help you with one thing at the expense of every other organ system, every other like, you know, normal path pathway that it has.

– Exactly. It's just this I mean, I think that's where the big pharma conventional model has painted itself in that corner so all they can do is just keep doubling down, doubling down and you know with the monoclonal antibodies to there's just a Phase Two clinical trial that just wrapped up where they were looking at using an interleukin six blocking monoclonal antibody in phase two clinical trials for treatment resistant depression. You know, the idea being like, alright, we've already tried SSR eyes, they're still depressed, they're not responding well.

So let's use the drug that blocks interleukin six. So then, you know, as as root cause practitioners, we would logically look at that and go, well, instead of using a drug to block interleukin six, like what's driving up Interleukin six? Right?

Like what's increasing that inflammation, which I would say the two biggest drivers of aisle six excess body fat, low and low muscle mass the other side of that coin.

And a toxin ian and leaky gut, right? And it's the same side effect profile of increase immunosuppression. So, what I've been arguing is like, they're literally trying to combat a mental health crisis using an immunosuppressive drug during an infectious disease crisis. – It sounds brilliant, right? – It is brilliant from like from their from their, you know, business model. It's brilliant.

– Well, but the thing is so this interleukin six is letting us know the body's turned on inflammation and there isn't a pro inflammatory state in the body.

So, if we were to kind of leave aside for a moment our our need to just suppress single markers in or order to that are maybe driving a single disease state.

And we wanted to look at a broader perspective, like what really is I mean, because interleukin six is going to cause inflammation throughout the body.

A lot of the work that I'm doing. And it sounds like you are two deals with the expression of this or the manifestation of this within the brain. This could also just we could just talk about your joints or your gut in the whole nine yards.

But but what are really is that root cause cause factors? I mean that drive brain inflammation, I mean because I know we've talked about food and obesity, but really like what is the thing in your experience that's driving depression, driving bipolar, driving anxiety. From that metabolic perspective.

– Yeah, I mean it's huge. So much. So like I'm in the midst of building out this 200 plus our curriculum that teaches this through my – So we're not going to get over in five minutes now.

– Yeah. Yeah. Well I'm a little more, you know? Yeah, it's a little bit more dense but you know, I try to boil it down to like the big factors which I always kind of start with environment, right?

The increasingly toxic environment in the just toxic burden of the toxins, toxicants, heavy metals, the glyphosate, the E. M. F. There's that environmental component, the sociological, high speed, very stimulating sympathetic tone inducing lifestyle that we're all living.

Right? So there's that stress factor, the behavioral aspect, but the lifestyle factor with sedentary, lifestyle processed food diet. Not enough time in nature, right? All those basic lifestyle factors to sleep and everything, nutrient deficiencies. So it's all of these environmental and lifestyle factors that are driving inflammation and causing a leaking got a leaky brain micro glial activation in activating the self perpetuating neuro inflammatory cascade.

Which one of the major, I mean we see this reflected in the epidemiology with Alzheimer's is the sixth leading cause of death in the United States. And suicide was number 10 for a long time. It just got knocked out of the top 10 by by covid in the past couple of years. But suicide is a is a huge issue obviously.

But it really comes down to what I argue and this is sort of my you know theory based on the work that I do, but I always say that mental illness is largely an epigenetic phenomenon driven by oxidative stress and inflammation. And so when we're looking at the American lifestyle, culture, environment, so on and so forth.

It's a very oxidizing and inflammatory environment and lifestyle. So it's just driving this oxidative inflammatory response in the brain that's causing this slow cooking effect, which is part of why no degeneration and mental illness.

So really I would argue that a lot of the mental health disorders, a foot right now is really more like pre dementia, you know, these people are on the road to their brains melting and degenerating over time.

So I always joke like rule, you know, reason, number 5987 of why you shouldn't take things personally. Everybody's struggling with neuro inflammation and their brains are melting. So don't take it too personally.

– It's an interesting way to look at it cause I'm just going, you know, when I was sick and I was trying to share this with people like my back was against the wall, I saw my life going down the schiphol, like literally like, it was like just everything hurt muscles joints. Like I literally couldn't do two plus three in my head, which is really cool when you're in medical school that you actually write it on paper. I mean it was kind of tough, but I saw that like, I had a future that I really dreamed of and I, and I, I grabbed onto that and then somebody gave me a yoga DVD and I took action.

But what was interesting was as I started to take this action that was based upon like everything hurt. I was not successful at yoga. I could touch my kneecaps when I was standing up that was the farthest I could bend down with all my fibromyalgia symptoms.

But it was like, then I started to listen and I started to change the food I ate and when I changed the food I ate because like no one told me coca cola wasn't a food group back then.

I mean my grandmother drank it all day long. I was like, cool. And but it was like all of a sudden I started to sleep a little bit more. And it's funny because it's like I tell this story all the time, but as you were talking, I was like, wait a second. The mental health changes weren't just from the squeaking the stuff out and eventually getting sleep, but it was literally like the food choices were part of what was the gut help healing, which was part of the sleep.

And the more you sleep, the more you detoxify your brain and the more you sleep, the more growth hormone you have, the more you can restore yourself and and we can go on this positive feedback loop. But it's like every little choice I made for myself compounded. And that's the beauty of, I feel like Humira is as an example is like this downward, it's like one thing works and everything else is negative compound interest, whereas when you invest in yourself and you make that one effort today and that one effort tomorrow to do some of the things you're talking about Brendan, like they're the things that you move forward and you get positive compound interest and it may not

actually feel like it's doing anything for a week or two or a month or two or maybe a year or two. But, but these are the things that like you said, like forever have been truth irrefutable that when you invest in this mess in taking care of your own metabolism and your own metabolic mindset?

Root Causes, Tracking Physiology, and Healing

Like if that's a thing like it's really, it's like that's where you start to supercharge healing and you get away from requiring ongoing use of these other drugs.

– Absolutely. I love that. And you know, to your point, it's like path of physiology is self perpetuating, but so is healing, right? You know, it's which which way do you get the boulder rolling and it'll pick up momentum no matter which way.

So I think the hardest part for people that are really far down that, you know, dysfunction path a physiological hill if you will is, you know, you literally have to like push the boulder back up the hill and get it going down the other side of the hill towards healing. But once you do that, that's the hardest part. But it will pick up its own momentum in the healing cascade as well.

– So what are these microglia, because like, you know, they're one of my favorite favorite things in the whole world I like and so much of it has to do with so many of the things that we're talking about with microbes and mental health and everything, like between pans and pandas and triggering this, but you know, and mold maybe even triggering it and bart nella loving to get inside of them.

But like from your perspective, what are micro glee and why do we even give a crap? – Yeah, I mean that's the thing like my that's like almost my claim to fame anymore is everything I do. Centers around microgilliam, the branding of my businesses, all around micro glee.

I developed a lab panel called the micro glial activation profile or mental map. And so it's like how on earth especially with my background that I get so caught up on this microbial thing. But the thing is it's literally impossible to say that you're up to date with the scientific literature around disorders and degeneration of mental health without being very familiar with what micro glial cells are which are the innate white blood cell of the central nervous system. They are the innate sentinel white blood cell that's there to protect your brain from foreign invaders and pathogens and help remodel it.

So I always like to more simplistically referred to the microglia as both the guardians and architects of the central nervous system. So they are the cells that help your brain developed to create new neural networks. They co regulate neural plasticity, neurogenesis and synaptic trimming and pruning. So obviously if we have some sort of damage or infection or inflammatory insult, they are the guardians that are gonna you know combat the pathogen gobble up the toxin detoxify whatever it's got to do but it also helps to break down old neural networks create new neural networks. So something I always like to link because you know we're really talking about like neuro immunology but then you can loop in the psychological behavioral component to because healing is all about behavior modification.

And in order to modify behaviors, we have to modify belief systems. In order to modify belief systems. We have to change your neural networks in order to change your neural networks. We have to decrease neuro inflammation and promote neural plasticity.

So even at sort of a psycho neuro immunological level these micro glial cells really are kind of the stars of that show. And so most people are skewed in this M1 phenotype for their micro glial cells that is excessive, excessively neurotoxic neuron, inflammatory neurodegenerative.

But even all the neurodegenerative research currently is looking at you know using old drugs like repurposing old drugs or creating new drugs that essentially work by shifting the microbial phenotype from its you know side a toxic M1 to its neuro protective regenerative M2 phenotype. So sometimes I hear people talk in terms of like micro glial dysfunction and I always argue no no like micro glial cells are not dysfunctional. They are simply responding to the

milieu the environment that they're marinating and so in order to change the functionality of these micro glial cells you have to change the environment the milieu that they're hanging out in by removing the toxins removing the pathogens and giving them the nutrients and everything it needs to be able to help rebuild your brain.

So it's huge. And it's very nice to talk to somebody who can share the enthusiasm of why these things are so cool. – Well you know I like I literally don't know anybody else who nerds out more in micro glee than me. So I'm like this is like I'm like this is amazing, right?

– Yeah. – in the world that I live in, it's like the first thing I remember I was at a eyelids lime conference and I'm and I'm about on a on a Thursday we're doing the fundamentals of tick borne illness and I'm talking about bart nella and then on Sunday I'm doing this you know talk about autoimmune encephalitis and you know and all these ways that pan like that strep may cause congregation of these you know th 17 T helper cells, you know these parts of our immune system that are prime for group A strep. So when the more we get strapped it's ready for it but it sits there and it goes up the you know the nasal emphatic and it goes in the brain and it breaks down the blood brain barrier but it causes like inflammation in the microglia because the micro glitter responding.

And I remember just standing there going oh my God! Bart nella loves to go intracellular here right? So Bart nella loves to go into the cells that are supposed to be gobbling it up and then also if we have all this recurrent stuff and potentially even mycotoxins colonizing our our knows this might be causing auto immunity that are now breaking down. And so the micro glare they're trying to defend us. It's almost like mass cell activation in the rest of the body where the white cells are. You know these are just like oh my God the sentinels are always working and they never get a rest.

But the thing that you told me that just like I love it. So many people in lyme and mold and cast are like oh you gotta do limbic retraining. I'm like alright and limbic retraining is often for a lot of people hard because we in order to heal we need to feel safe but our cognitive brain knows we're safe.

But the reptilian protective mechanism that's trying to keep us alive is like no you're not because it's more about familiarity. But the one of the key things I think everybody here, if you want to go from a place of not where you want to be to where you want to be, understand that your body is in a state of familiarity and it's a comfort zone so whether or not you believe that you're safe or not, your nervous system loves where you're at right now and it's trying to keep you safe. So when you go to move we need to do a thing that Brandon you just said is this synaptic pruning.

This is one of the most important things. There's like it's interesting because people use ketamine to give themselves some space but ketamine also leads to synaptic pruning and by the way there is some research that it might actually have an anti borrelia or Lyme disease component which I blew my mind. But it's just so interesting that these micro glia that we need that we have control over the inputs into them metabolically actually are helping us do the thing we want to do.

So you're eating not only, I'm sure we can talk about gut all day long but not only that, but just like the direct impact on these immune cells in our brain could help you heal quicker.

Not just from the immune system but from the nervous system, the emotional system healing that they participate in. Which just blows my mind. Man, I love it.

Thank you for highlighting that – Career that I'm talking to somebody that is speaking the same language and were able to you know, ping pong the you know neuroma enology back and forth because to me it's like why is this not being talked about more, why is this not more commonly known even within our own industry right?

Which is pretty progressive and pretty, you know up to date with most things. And so this is where like the way I got into all of this was you know I got really hunkered down in the mold space, and cause that's what I think, you know, ultimately cost my ex fiance her life was she came down with this mysterious illness that I later felt that had to have been mold, but it wasn't until years down the road after we had separated, and she had taken her life that I got turned onto the mold thing.

So, you know, I got super hunkered down and mold, and and I was trying to, you know, best navigate like this mold brain thing, you know, I was dealing with, like, lying to, but more more so mold.

And so I was deep into that whole world, in the eye lads and the I C I and all those groups, and it was through, kind of the mold brain pursuit that I got really caught up on the microbial stuff, but then it became this beautiful full circle because then I was able to pull, you know, my background with the metabolic health into it, because, for example, you know, in like Neil Nathan, who's obviously well known in respecting the space in in his book, you know, he has that section where he's talking about, like, weight loss and it's, you know, it's a little, like crudely done, it's pretty basic from, you know, my yeah, from a metabolic specialty perspective, it's a little, you know, dry, but, you know, he's not wrong, right? He talks about the importance of exercise and losing weight. So, one of the things I like to bring to that because I very quickly saw with like mold and lime, you know, there there's almost like two phenotype. So there's the people that they were already metabolically ill and then they got the mold exposure and the tick bite and whatever else.

But then there's people like my ex fiance that were very metabolically fit and healthy but they were maybe that genetically susceptible canary that they couldn't handle.

They couldn't have that resilience. And so in my practice I saw this split of the people that were metabolically healthy but the self infection or the mycotoxin them.

But the majority were these people that they were already metabolically ill. They didn't have a foundation of resilience, metabolic resilience, immunological resilience to be able to handle any amount of, you know, mycotoxin exposure, self infection activity.

And so that's where it's like I I bring to that conversation where one of the biggest sort of like mechanistic therapeutic things with neuropsychiatric conditions these days is increasing BDNF neurotrophic signaling in decreasing pro inflammatory side kinds.

And one of the most well studied ratios in the literature is the L six BDNF ratio. Right? We we know that BDNF and I L six have this inverse relationship. But from that metabolic perspective, okay, excess body fat directly drives up aisle six.

And we know that muscle tissue, your skeletal muscle releases BDNF and it's called metabolic in it has a secondary name Joaquin because it functions as a my aachen.

And they're looking at using exogenous Bt enough to treat Type one diabetes because it can regenerate the beta cells of the pancreas. They're looking at using it to, you know, treat neuro degeneration because it's neural protective.

So even at a foundational level, even just by increasing lean mass and decreasing body fat, that is the single best way to decrease aisle six and increase BDNF.

So my point with that is like even somebody that's you know, fighting for their life and has the they're bedridden and they've got the fibromyalgia and the pots and you know, all of the cluster symptoms of chronic Lyme and you know, the sickle around biotoxin illness. But again, my argument is like if they're metabolically compromised, we have to literally like up level the foundation of their metabolism because otherwise we're just trying to like spot treat the severe illness on a broken foundation. – Right?

So we've got the L SIX is that pro inflammatory cytokines, but also, I mean it's like for in the English version it says that means there's a lot of inflammation in your body. But what can you dive into BDNF a little bit more and just define that for everybody who may not know.

– Yeah, so brain drive neurotrophic factor which you know, they named it that originally because they thought it was exclusive to the party kIM of the central nervous system. So they're like brain derived neurotrophic factors. So it's the neurotrophic in to regulate our ability to remodel neural networks and create new neurons through

neurogenesis as this kind of ultimate neuro protective neuro regenerative molecule.

But then they later found like, wait, this is not exclusive to the central nerve system. It's it's a my aachen, it's produced by muscles itself. And so there's this direct correlation with the more muscle mass you have, the more neurotrophic factors that which the thing is this isn't like, it's new understanding of detailed mechanisms that explains things we've known for a long time, like why have we always encouraged, you know, geriatric patients with Alzheimer's neuro degeneration to do puzzles in, to do physical therapy into exercise and stay active.

It slows down the neuro degeneration. Now, we know why is the exercise and the muscle use promotes BDNF the to slow down that neuro inflammatory neurodegenerative process.

– To say, I just I just think about like the runner's high or like I'll go out skinning, you know, so I'll go like you're like why do you like, you know, throw skins on your skis and go climb up the mountain and then ski down and not take the lift, like, but this is like getting the whole body to work in synergy and and it's really interesting because and and and it's interesting that the exercise can drive you feeling better mentally, but if you're mentally sharp and you're working on that you physically feel like that you're like more motivated to do more physical.

It's like all these little those deposits that we've talked about in the investment in yourself does get that compound. I mean, you know, and it's just, it's amazing to me because it's just like you think about like, I love the fact that we have so much control over this.

Like what you just said is like, hey, if you bring down your muscle, your body mass and you increase your muscle up, sorry, your, your body fat levels, your adipose levels and you bump up your muscle mass.

You can actually be healthier. You can live longer. And then we, I was just saying like we talked about Sarko pina, like the loss of muscle mass and stuff as we get older.

Well I don't, I love to say active now because it helps me feel awesome now. But it's also I'm putting, I'm investing putting money in the bank for later so that I have good balance. If I do happen to trip and I fall, maybe I won't, I'll actually have bones that won't just fall apart.

But also it like so many people I talk to don't want Alzheimer's, I'm like, first of all, I would definitely not make that my goal I would make what I want, which is like clear cognitive function and a great functioning mind be the thing I focus on.

But if you want your brain to focus function well later on focus on it now, you know and do those things. So are there particular things that you look at and go hey if if I had maybe like a top two or three things that that someone listening could start to think about for decreasing neural inflammation, you know, where would you start? – Yeah. You know, I always try to encourage people to, you know, stop chasing root causes and start tracking their physiology. I think people get – Can you just repeat that? Because I think you're gonna I think a couple of people are going to take exception to it and I love that you just said that it's so badass and I want to, we need to highlight that. – Yeah. You know when I first started I was like you know that might be a good tagline Brennan because you know when you throw in there they throw their you know $70 binders and life is almost blew defining at me very quickly. I'm like duck.

But I just, I do, I think there's too much like chasing these root causes and this idea of well I just, the reason I'm not getting better is I haven't found the root cause of the root cause of the root cause and they just keep kind of doubling down and spiraling spiraling down these rabbit holes and all the while it's like what are you spiritually bypassing in that pursuit? Like what are you avoiding doing through that?

Like you're not X Exercising, you're not stepping outside in nature, you're not putting good food in your body. So look I mean I'm not gonna sit here and say that you know good nutrition and fitness fixes everything but I would argue that well done nutritional habits and exercise habits and lifestyle habits would fix about at least 80% of what we deal with in functional medicine every single day.

Right? You know I was talking to Jill Krista about that and she was right on board with me, that's the foundation, right? Because I look at like the fancy protocols that which hey I love you know like yeah I mean you know I take like 30 supplements a day to supplement the impeccable lifestyle that I live. But as I alluded to before, the metabolism, the mindset of microbiome, right?

Those are my priorities. I don't I'm not going to get caught up on your urinary life state levels or micro toxins or heavy metals or you know you have antibodies against this bug from that side of the world. I care about your current state of physiology.

I'm not gonna chase through causes I'm going to track your physiology. I actually have this beautiful case study that I use for a lot of presentations and it's a cold case, you know er me score 45 just for like context.

– Okay so just so everybody knows that er me of 45 in your house means that you have more wet mold in your house and like 99.9% of the entire country, you're living in a cave that's likes mattered with mold everywhere, I mean anyway, – Yeah, it's bad, right? And we didn't we didn't do that for me for like a year into her program, but you know, there's this kind of sensationalized chatter on the internet about like, you can't heal on the environment that made you sick, and I'm like, okay, that's catchy. And you know, you beat me to the punch line, – We're on the same page here, brother, – And like, while I get that, and that's that's so cute, it's catchy, it's trendy, right? And like, oh, because your body doesn't feel safe, – I'm sorry to interrupt, but like, you're not dysfunctional Brendan, how dysfunctional and and how al empathic and pharmaceutical mindset, is that right? That is literally going don't believe them, because they're telling you you need a medicine or three medicines to get better, Believe me, because I am the only person who is the source of your healing, Both of those things to me are just so just disingenuous and immoral, like, just personally, like, I mean literally you can heal anywhere in any time now, you might not be to get it done, but holy God man, you're hitting the nail, like you're totally speaking my language here, Why a friend of mine goes, I'm like a hope dealer, right? And that's really like what you're doing is like highlighting the fact that like all the I just look at protocols and I look at supplement things. I like I use everybody's protocol, but I never follow any of them. I don't even follow my own protocol.

I'm like, all right, we got tools, let's put them on the floor and have them around me. We can reach for them when we need them and let's talk to the person in front of us because man, how shitty is it? If you're in a house that you can't afford to get out of and you just told me you can never get better.

Resources and Closing Remarks

What a dick move. – Yeah, no, that's exactly it. I can't stand it. Like some of the like bigotry and false truths and that float around and and there there, you know, these sound bites. They're catchy, right? But they're fearmongering there sensationalized.

They're not accurate. And so I always use that case study to elucidate exactly that because it's like I have her lab testing specifically her mental map, blood work and there's all these core biomarkers I like to track to just tell me like are we moving in the right direction physiologically right? Regardless because that way.

Like if you're tracking the physiology and I don't see enough people doing this, tracking it objectively right? Using clay clinically established biomarkers to objectively prove like is what we're doing working.

Are we moving the needle regardless of like whatever intervention resonates with the client or the patient, whether that's drugs, supplements lifestyle limbic, you know, ayahuasca and the rainforest, I don't care, I don't care what intervention you want to do, but it's working. Yes, exactly.

And so this beautiful case study, we progressively saw all the biomarkers moving in the right directions, the symptoms And then we found the score, you know, 45 in the mold and it's like her environment didn't change the entire time.

Her mindset, her metabolism and her microbiome did right? – Dude, I think we could talk about this for like the next 50 years and like you know, I just really appreciate this conversation. And one of the things I love doing is

disrupting the common way of thinking because there's so much hope that's being removed from people when we're not speaking truth. And I just want to say thank you from the bottom of my heart for having a conversation where you're just like, hey this is the way it is right and you and to everybody listening, I don't I think that when we tell you that you have this great control over your own health, it can feel overwhelming, right? And I think that like, you know, the the idea of taking back this personal responsibility for your health can be totally daunting and definitely overwhelming. But people like Brandon and myself and and so many people talking at the summit are here to help you.

But you know, and it was interesting, Brendan, like I have a I have a patient commitment agreement and I literally had somebody call me up one time after they read it, they've been with me a couple of years and I decided to just say, hey this this agreement is to help my team and myself not deal with B.

S. But mostly it's for the patients to declare to themselves and to the universe and God or whatever it is for them that they're ready to heal and that they're taking responsibility. And she said, look I can't achieve this, so I don't think I can still be your patient.

I was like, oh my God, I'm so thankful that you reached out to say that the agreement is not that you're going to succeed by yourself. The agreement is that you are going to commit to yourself, that you're going to every day, take a step in that direction.

And then when they work with someone like yourself or some of the other wonderful speakers we have, we can make that progress. So if someone's interested in kind of learning more about the work you do, and then also I hear you have a totally awesome bonus for folks who want to dive into it a little deeper, where can you know what bonus are you sharing with everybody and where can they reach out and learn more about you.

– Absolutely first and foremost, thanks again for having me it's beyond refreshing and, and and really a pleasure to get to have this amazing conversation with a kindred spirit.

I feel like we just became best friends and karate in the garage or something. You know, I look forward to staying connected for sure because we're obviously both fighting the good fight. So thank you for having me and yeah, yeah, I know this many conversations to come.

But I'm not, I'm not hard to find. My main platform is Instagram. That's where I put everything else. So that's at the holistic savage, which is where I just put out a lot of free content.

People can find whatever resource resonates, but the giveaway is I've got a free neuro inflammation guide And honestly it's really good. It's like 9, 10 pages of and honestly if people actually like used not just download it and read it, but if they actually integrated and apply that information consistently, I don't think they'd ever, you know, need some of us, but you know, it's a good guide. I hope it helps people.

– Well I just, I know it will and guys like this is like the thing like don't just keep downloading all the cool stuff we have. I mean download it, put it in the folder, pick, I always tell people Brendan like pick one thing that resonates with you and if in this conversation you one little bit of it resonated, download you know, Brendan's gift dive into it and then you pick one piece of it and just take action on it daily. It's amazing if you take action for seven days now, all of a sudden it's 21 days and you're still taking action and if you commit to yourself for 66 or 75 days, whatever number you want, you're going to continue to make that a habit and then maybe one because so many people spent so much money we're giving you away free our best stuff. So take Brendan's information and utilize it and then if you get to the end of utilizing it and you need a little help, little accountability or a little deeper dive than reach out to him because as you can tell his stuff is incredible. So everyone, I just want to say thank you so much for joining us for this episode of the Microbes and Mental Health Summit.

I'm Dr. Tom Moorcroft and Brendan Vermeire even asked at the beginning so I don't screw it up, but Brendan Vermeire such an honor to have you here. Thanks very much and everyone will see you next time around