A Mold Free Home for Brain Health Transcript

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Introduction to Dr. Matt Hiatt

Welcome to this episode of the Reverse Alzheimer's Summit. I'm your host, Dr. Heather Sanderson. I'm excited to introduce you to my friend Dr. Matt Hiatt.

He received his Ph. D. in cellular and molecular biology from the University of Michigan, and he's focused on assisting with diagnosis and treatment of mitochondrial disorders, neurological diseases, chronic immune diseases and more.

He specializes in developing tools that examine factors at the interface between genetics and toxicology. His work is bringing new insight into how genetics and toxicants interact and how that interaction can lead to mental health disorders, chronic health issues and metabolism disorders, including Alzheimer's.

Thanks so much for joining us, Matt. Well, I'm going to be here really excited. So you and I know each other because you have you worked at some of you work at some of the labs that I use regularly with my patients.

And I really want our audience understand kind of these pieces that are really confusing for a lot of people around what's a mold, what's a micro toxin, and what does it matter if I'm worried about my cognition?

So would you just start by defining a mold versus a micro toxin? Yeah, that's a great quote. I hear that one a lot. And nobody should be, like, worried about whether or not they are confused because even some of the smartest people I know are like, okay, what's the difference?

Okay, so mold are the living organisms, like the cells that are most of our, you know, like present out in the environment or present in our homes or present in our bodies at times.

So they are living organisms. They are they are. But all of them need some type of emit a certain amount of humidity to live off of. And they need a food source to live off of.

Mold vs. Mycotoxins Explained

It's something that's going to be like sugary, some type of like like was the term of like carbohydrates in it. And then they produce drywall. Drywall.

Having drywall has lots of carbs in it, very starchy. So then they're like when they're like living through this, they, they give off bypass products.

And these byproducts are mostly to attack bacteria that are attacking them. But it also attacks like other like bigger organisms such as ourselves that could be like messing with them.

So these are the micro toxins. These are like kind of like biological warfare between the mold and us. Okay. And these are small molecules. These are like a thousand times smaller than the molds themselves.

So they can move around our home a lot more freely than the molds do. And and they're not visible either. And they don't have a smell, typically where mold has a smell.

Mycotoxins. So there's also some confusion in this word. It's myc0 so micro refers to molds or fungus. S And micro am I see are. O They are also very small and yes they are.

Micro might go toxins. That is correct. Yeah. So I mean, people that study like mold and bacteria or like micro microbiologist, but somebody that could just study mold of funguses themselves, that could be a microbiologist.

So it's, um, very similar but slightly different, different things. Okay, so these are toxins that are inert. They're not alive. They don't replicate.

They're very, very small. And when they get into our bodies, they like you said, it's like warfare. These are the toxins that the microbes mold is what we're talking about here in particular that they use to basically fight back when we try to kill them.

And so how how does this work in our bodies? What does it cause? What does it do? So sort of partly depends on like which my co toxin you have in your body.

Some of them do different things. A large majority of them do something that we're like talking about today of like affecting the nervous system and affecting the myelin sheaths and the nerves.

And in the brain, it's decreasing white matter. In the brain, it's causing inflammation. It's attacking a lot of them like to attack the powerhouses of our cells to mitochondria.

So they're causing like mitochondrial damage and mitochondrial inflammation. When a cell gets attacked, it's mitochondria starts becoming unhealthy. It releases a lot of like cytokines into the system.

And these cytokines can have like other effects throughout the body that causes further inflammation. But then besides that, they attack so many other things, attack the the thalamus, they attack the thyroid.

They attack on the gut. They attack the immune system. My message. Basically, if you've got it, they attack it. I mean, they are. But that's the problem, is that like they're attacking as different from one person to another because of genetics and which particular mycotoxins are being affected by.

So the symptoms can be somewhat different from person to person. So sometimes it's hard for people to, like, realize that they're being being attacked.

So this speaks to why a lot of conventional doctors are not familiar with this. Right. This is part of what's going on when you go in to your conventional doctor and say, hey, I have brain fog or I have this or that going on, I've got diarrhea.

And they don't think of mycotoxins or mold toxicity being part of the problem. Most conventional doctors are looking for an allergy to mold. And yet, because these toxins can affect so many different organ systems, they can manifest, right?

They interact like as as you're an expert in with our genetics and manifest in very different ways. And so identifying this as the cause is a bit challenging.

And you're exactly right and they like mimic so many other things like are saying like they're having like gut pains, diarrhea, they're having.

How Mycotoxins Affect the Body

Yeah, they're like brain fog or like motor motor skill issues, which is kind of like, okay, well, they like the doctor because like all you're an early stage Parkinson's or you're having gut issues from like Candida are clostridia and those some of those things might be true, but it's really like the molds that are like the mold toxins that really like at the base of everything cause they're knocking down the immune system, allowing candida and Clostridia to occur or causing cellular damage that's causing like Parkinson's like symptoms to occur.

So unfortunately, a lot of times when I'm talking to a practitioner, they're talking to me like a client they've been trying to treat for like a year or two and have really like problems.

Like the things I normally do to try to that work are working on this patient. So I have to admit, I made the mistake

for a while of asking patients if they'd been exposed to a water damage building, either at work or at school or at home.

If they knew that there was a leak or if they had been, it knew they were exposed to mold. And if they said, no, I wouldn't run the test. And then a year later, exactly what you're describing, they're not getting better.

The things they usually do aren't working. And so I go back to my my drawing board and go, okay, let's just test for my good toxins and see if maybe you didn't know you were exposed.

And sure enough, they pop up and sometimes egregiously so. So there's kind of this classic I know do somebody is toilet above me in the apartment above me flooded and there is a bunch of mold in my house and I can see it or there was a storm that came through and there was either a flood in the basement or through the leak.

And it's very clear there's mushrooms growing. And so there was mold. And then there's kind of the more insidious, like a small leak behind the refrigerator or the dryer isn't venting correctly and you never notice the moisture or the mold.

But there's a significant amount growing either on the back of the drywall or in another spot that isn't totally apparent to everyone. And so it's really challenging to find.

How would you recommend that patients navigate that? It's a great question and really like comes to like trying to identify the symptoms. Like, are you not like are you like getting fatigued or you're like brain fog occurring?

That's like trying to like say like, well, were first identify like, okay, maybe I should do this urine micro toxin test. Okay, that comes back positive.

Well, where can I begin exposed from? I mean, so that's reason why we have our environmental micro toxin test, which looks for like mold or mold and micro toxins in the home that could come up positive.

Because is that, like you said, it's not always like water damage in a lot of homes. The AC just isn't quite working properly. So it's it's keeping the house cool enough, but it's not lowering the humidity.

So when it gets above 55 and you can start getting like more like mold, everybody has mold in their homes, but it's like one spore here, two spores there.

It's forming like hundreds of spores. But I during my SpaghettiOs sabbatical of working in the environment, like the moving out of the clinical and into the environmental for a year and a half, I did dozens of inspections of homes.

I can't tell you how many times that we like come into our home and you realize it's like you find it in the like the rafters of either the attic or in the basement, as it's like rolling along this like some like boards that you really wouldn't like even like notice.

But then it gets like then that that mold that produces micro toxins that get pulled into the AC unit and then this could spread throughout the whole house.

Why Mold Toxicity Is Often Missed

So I mean, that's the bigger issue here, but it could just be like one one, one issue it in a small part of the House that's it's getting disseminated throughout the whole house.

Yeah. This is a really scary thing and often sort of they're these impossible decisions to make. I saw a patient yesterday as a couple, in fact, and they have I mean, here in San Diego, they have this beautiful home right near the ocean.

And they are in an apartment. And so that was actually who I was just referring to. They had a neighbor above

them who had a toilet leak and it dripped into their apartment and, you know, it was repaired.

But his I think his MOCA score has remained stable, but they both don't feel like they're doing as well, kind of generally speaking. And his wife, who's caring for him, she's more irritable, she's less patient, she's not sleeping as well. Her gut's upset.

Her mood is dysregulated. And this is all kind of happened in the last six months. And she's chalking it up to caring for her husband, who has, you know, moderate dementia and which is stressful in and of itself.

But when I saw his tests, his mycotoxins had been cruising or all along, they were elevated, but his okra toxin was about 1.8, maybe hit to ones and now it's at 17.

Oh, my. This was a radical jump. And so I, I said to them, you know, your options are like weird. This is a miracle that he's doing as well as he is. And your options are to get out of that house and get it remediated or just sell it.

You know, this is not probably worth from my medical perspective, you know, a real estate agent might tell you something different. But from my medical perspective, for their brain and for their bodies, the best thing to do is to get out of that environment.

Definitely. I mean. Yeah, and if you care. Yes. People like that they heartbreak for them because sometimes they can't afford to move out of those situations.

And it can be I mean, you're like looking at like somewhere between like a 5000 and $20,000 remediation for something like that because probably there's a in that space between the apartment above theirs and theirs is probably like thousands of mold spores and that in that space between the two apartments and they're got that like whole like ceiling pathway needs to come down or it's hard to say.

I mean, that's what inspectors are for and they have like good tools for deciphering those things. But yeah, I mean, that's rough. It's so hard. And when you are caring for someone dementia, the thought of moving, even if it's just for a couple weeks to an Airbnb or a motel or a hotel or whatever it is that can be so disorienting for people and so stressful.

Yeah. And negatively the questions come up of, well, what about my couch that's in that room that had the leak in the ceiling? And what about my clothes that have been in that room?

And do I have to have the artifact cleaned or do I have to have it replaced? Like, how far did this spread and how vigilant do I need to be? Yeah, those are all great questions and there's several different mold remediate areas out there that have really have proven like techniques to get rid of not just the mold but the mycotoxins as well.

So it's really important when you talk to your inspector or remediate or like get their game, like get the whole game planned out to say like, okay, how are you going to treat the mold?

What are you going to do for the Mycotoxins? Because that's why we produce test for both of them, not just measuring the mold, but the mycotoxins as well.

Because one thing that I worry about is when I'm working with a practitioner that has a client that they like, okay, well, we ripped out all the mole, like all the mold out of the bathroom, but then we like do the micro-targeting test later.

They're still like a whole bunch of mycotoxins on the like the furniture and the air ducts, wherever it's at.

Finding Hidden Mold and Remediation

So you've got like make sure that whoever you are working with is willing to, like, okay, well, we're going to do our post test with the mycotoxins, not just the mold spores because some will do like, okay, ah, we'll do the

remediation, but when the air tests are blow this number of spores, we're going to consider you good.

And you got to like you can't just be you can't like hire your expectations for them. Got it. And so there is there's quite a spectrum of mediators. And I want to also say you are in real time labs.

So for anybody who's interested in getting these tests done for their homes or for themselves, you can get the testing done through real time. And I have learned to trust real time over the past eight or nine years that I've been working with them.

They have been very consistent and that the results reflect my patients experience, which I feel like is the most telling thing. When those mycotoxins are up, people have symptoms and when they come down their urinary mycotoxins I often see people getting much, much, much better.

And so getting that testing done, I think is very, very helpful. Now, when you go to work with a mediator, there's a spectrum, right? You have your mediators and your your construction contractors that maybe are working more for like a landlord type situation where they just want to fix it or for insurance and they just want to get it fixed, kind of doing the minimum.

And then on the other end of the spectrum, there's maybe the person that's going to charge you as much as they possibly can and do as much work as possible so that they can just rack up that bill.

Yeah, and what we're really looking for is that contractor, a mediator who enters, stands this link between the health of your home and the health of your body and is going to be thorough but not do things that aren't necessary.

So how do we find that type of person? But we do have a finder on our on our website to try to like help. Now, we don't we don't completely vet that that finder.

So adult like view like everybody on there as somebody that we like are like encouraging you to use. Your own due diligence, you're going to. Do your due diligence.

But these are people that are least are like looking at mycotoxins. So they really start like have taken that next step. They're not just like, okay, I'm going to look at spores and I'm not going to like worry about Mycotoxins at all.

So they have some familiarity with this concept that it's not just about the mold and the spores, but it's also about the toxins they produced while they were there.

Yeah. So that we have done that, my due diligence now I can't like say like whether or not they are, their inspections are like as thorough as they should be or are they charging what we would consider are an appropriate amount?

I can't say any of that. But I mean, if somebody is really like egregious, we will like I mean, if anybody's like comes across one of these, please send us a note and we will try to we will work on removing.

But what a phenomenal service. I mean, just having a place to start is sometimes the hardest part because it can feel so overwhelming. And when people are living in these environments, that's part of it, right, is brain fog and fatigue.

And so every the thought of going through this process can feel really overwhelming. And just having a bit of guidance on the first steps is really, really helpful.

So thank you for making that available. As I would just do all we can. Better. So then tell me a little bit more about how the testing is done. So what do you recommend?

There's this whole question around provocation. What do you guys recommend to practitioners for offering these

tests? So this is my this is my personal belief.

This is about speaking for real times on this. But so like Neal, Nathan and I did a study probably about four years ago where we like had like a group that was propagated and another one as on propagated and we like say like, okay, well what kind of provocation works best that we, we found was like 250 milligrams of glutathione for five days.

And I do it like a Sara a hot bath exercise on their fifth day and then collecting on the morning of the six seem to like work the best now there are some patients when they start taking Lewis I own a source mobilized the toxins and they start being like really symptomatic.

We usually like tell those patients to like just like drop out a study this collector their urine at the next morning because usually that will work I mean we get enough mobilization from those patients and that excretion that we can get good values from those patients.

So that's what Dr. Nathan and I have like worked on. And it seems like the I think that talking to lots of practitioners, it seems like work well for them.

So that's, that's generally until I have more data, what I recommend. Is, okay, great, that's really helpful and that can be oral liposomal good again.

Yeah. No. Yeah. And I don't have a lot people will ask all what brand and I don't really have like a particular brand that I like recommend. But yeah, I mean, an oral glutathione often seems to work pretty well.

Okay. Yeah.

Testing, Provocation, and Binders

And we've I've just been doing I've glutathione pushes or oral if somebody and can't make it to my clinic I've been doing I've got it they own patches of two grams for years and so that that's a bigger dose quicker we have people collect for 6 hours after that purge typically and I think I'm just so used to looking at those results and that I haven't changed my ways yet.

I mean, if it works for you, I don't I wouldn't like I said, I wouldn't say like because then like that's you are like used to seeing those results. So if you change that, then you might get like a different like result pattern and I don't know, it'll take you a while to.

To adjust and especially for patients that I've had, you know, I've been having them do them every 12 weeks for months on end, that it would definitely shift to what I would expect to see.

So that's another point I think that's really good to make. And I do tell patients that particularly if they can't make it or they can't tolerate glutathione, I just tell them, do what you did last time so that we can understand if as long as you tolerate it, like let's find a consistent way that we can provoke you.

That's not going to trigger you too much. Or as soon as you get triggered, as soon as you feel that increase in symptoms, go ahead and stop, like you said, and then collect that first morning more concentrated urine to send off to the lab.

Does that feel like reasonable? The only caveat I would put to that is like if there are on a binder, I generally recommend that going after binder for 72 hours prior to collection because those binders they're like made to like drive the micro toxins into the stool.

So if they're going to if it's getting driven to the stool, it's getting driven away from the urine. So we want to like make sure that that mobilized toxins are going through the urine pathway and that's the stool pathway.

Got it. That's a really great caveat and really, really important to understand. So basically we can get rid of Mycotoxins to the urine and through stool.

And this is part of why we often binders are part of this as Corella Clear Colostomy and Zola Charcoal. These types of binders are there. I think of them like a catcher's mitt to grab that bile where the mycotoxins are being excreted by the liver into the stool.

Now if we push them all that way through the binding, then in the gut, then they're not going to be coming out in the urine where we're testing the micro toxin levels and we got it.

Want to get a correct accurate reflection of the body burden of Mycotoxins. So we would have you stop for three days before collecting urine? Stop the binders.

Exactly. Yeah. I mean, that's what seems like the work well for us. I mean, 72 hours seems to work generally for most patients well enough that we can get a good value from them.

Got it. That's really helpful. And then there's this blue line on their real time results. And I love looking at the graphs. And as I mentioned, I tend to test my patients every 12 weeks until they normalize, until all of them are below that blue line.

So tell me how you came up with that blue line and why it's really thick sometimes and why it's really thin other times? I think it depends on how zoomed in it is to the bigger graph.

So you have like a lot of variation, like where you like like let's say you write your patient is 18 and now they're down to like point seven. Their blue line is going to be smaller because you're on the graph too.

Zoomed out a lot more when you're like have like less variation. You're like kind of like bouncing back and forth right above and below the blue line.

It could be a lot thicker. So that's really the only difference between the thickness of it. And so that blue line represents kind of that equivocal zone rate where people below that typically don't have symptoms and people above that typically do have symptoms.

And if you're in that blue line or right on that blue line, you are kind of in that equivocal spot where this may be significant and it might not be. Is that right?

That's exactly right. And I mean, so this was before my time at real time. But yeah, this was developed about ten years ago of like yeah. Looking at like healthy individual sales people that have more toxins.

What is kind of like where is like the, the baseline for that and kind of like looking at us testing of like I've looked at like the last like 8000 patients we've had and those blue lives really like kind of like match up what we consider as like the 50th percentile of that.

We didn't plan this, but this like systematically kind of like falls along the, what I consider the fifth percentile of all of our patients. So got it.

I see. So this is based on lots and lots and lots of data. Yes. On on all the labs that are coming in to you and getting Brennan. Got it. This is really helpful.

Okay, so what should a patient do if they're listening? If they haven't seen me as a doctor, maybe they don't even have access to a functional medicine or a bredeson trained doctor.

How can they learn more about getting real time labs done and maybe even finding a doctor who understands how to interpret it and order it for them? Yeah, so two things.

In a 26 states, you don't need a doctor to order the test. You could order at what's called a direct access testing so you can go straight to our website and order the test.

If you're in one of those 26 states. If not, then you can like go to our also go to our website and go to under the patient tab and find a practitioner.

And a lot of our practitioners are working ever since COVID. I mean, one of the, one of the few good things about COVID is it's kind of like gave like a more motivation for a lot of practitioners to really open up their practices for doing telemedicine.

So we have a lot of practitioners definitely like moved into doing telemedicine into as a part of their practice. So it really increased access. Yes. Got it.

And so if somebody orders this directly, well, also I want to mention that this is often covered by Medicare and is from. Yeah. Which makes it much more accessible as well.

So does this need to be ordered through a provider to be covered by Medicare?

Interpreting Results and Blue Line Thresholds

That is true, yes. If if you're trying to get it covered by Medicare, it has to be ordered by a Pecos patient or a practitioner who has a Pecos number.

So somebody that has been vetted through Medicare. Got it. Got it. So they need to be able to they might not necessarily take Medicare for the visits, but it's possible to find doctors often functional medicine, Dios and MDs will have a Pecos number and be able to order labs, get them covered by Medicare, even though they don't accept Medicare for their visits.

So finding that type of doctor can make this really accessible and affordable for you. And then also you can get those repeat labs done, which is so important to track your progress and to know when you're finished, you get to this is one of my favorite things about environmental medicine is that we figure it out.

We do the detective work, we get you the right treatment, and then we come to a finish line. And as long as you're not re-exposed, we don't have to worry about that toxin causing wreaking havoc in your brain anymore.

Exactly. And I love those times. I just love talking that they're like patients or practitioners, that themselves are patients at conferences and they're like, okay, well, yeah, I was like sick.

I was like homebound. I couldn't like get out of my bed. And now they're like this so active and so, like, full of life. It is. I love hearing those stories.

Yeah. Back to feeling like themselves again. Yes. I had a patient a not that long ago who had a very, very high micro toxin level and he had the highest levels I'd ever seen.

Is Oka toxin. Was it over 20? His glial toxin was in the teens. I mean, they were all very, very high as Aflatoxins were like 12 or something. I mean, every single one of them was essentially the highest I'd ever seen.

The good news with him was he was willing to do all the work. He was willing to do the right thing on IVs. He was willing to get out of the moldy environment.

He was willing to take the binders and the liver support and sweat and do the breath work. He was willing to do it all and those numbers came down really quickly.

So he started at a MOCA score of 20 and he got up to a 26 and just six months. So that was an incredible turnaround. His daughter was moving to help him out and she moved anyways and he didn't need the help and he

ended up helping her out with her kids.

And so it really just changed the trajectory of the relationships and this family to have him get those mycotoxins out of his system and get healthy again.

Accessing Real Time Labs and Medicare Coverage

That's great. Now I love those type of stories. That's how and why I do what I do. It's so inspiring and so much fun. So Matt, tell us again, where can we get more information about real time where you give them the Web address and more information about your work?

Well, yeah. So, I mean, our website is Real Time Wired.com. You can come in and you can like sign up to be part of our on our mail mailing list. So we send out a monthly newsletter that talks about all of our upcoming webinars that are occurring, which we generally do like a webinar every month.

And then the talk that you can like find out like early about like our new test, we have like several new tests. They're coming out throughout the year.

Would you remind me what those are? Because those are exciting. Oh, well, I mean, I can guess so. We just came out with glyphosate this month and now we have an organic acid profile and environmental pollutant profile that's going to be coming out.

So very excited about our new test. Then we've got several other ones that'll be coming out in the second half of the year. Fantastic. So glyphosate is a roundup that's the active ingredient in Roundup.

And if you're curious about that and how it might affect you, jump on over to Dr. Isaac. Elias is talk because we talk there about his specific binder for glyphosate.

And so this is a really great kind of marriage. The complement of being able to have the test that shows you your glyphosate number and then again being able to watch that number drop as you identify your exposures and eliminate them and then take those binders that are specific to the toxin to quicken that process.

And then you get to do that happy dance when the labs show that you are no longer in that highly elevated range. Glyphosate is another one of these toxins that is directly neurotoxic.

And I often will see patients, you know, the more severe Alzheimer's patients, ALS, Parkinson's patients who have very elevated glyphosate levels. And we don't always know where they're coming from.

Sometimes it's an indication that maybe they're not genetically, again, your expertize, but genetically, maybe they're predisposed to hanging on to that glyphosate.

So they're not necessarily exposed more than most people are more than normal, but they just don't do a very good job getting rid of it. Can you speak at all to that really?

I mean, that's a great question. And if you look in the lecture, really not a lot there to speak of it. So I wish I could get I wish I could provide more information.

I love I mean, that's my favorite thing to do about this job is providing information.

Recovery Stories and New Lab Tests

But yeah, there's really not much there that we don't know of how the body really interacts with glyphosate. Yeah, it's a challenging when and quite sad, right?

We've seen people who are exposed to high amounts of it how it can really change their their health. But great to

know that you guys are offering that testing.

And actually, Stephanie CnF also has a talk on this on the summit and she speaks at length about glyphosate and kind of the mechanisms and biochemistry of that.

So you can head on over to that one as well. I'm glad that more and more people are coming out and speaking out about the importance of monitoring not just our environment but our own bodies for these type of things.

And exactly. Yeah, it really gives us a lot of and my hope of this talk is that it's empowering, right? It gives us that power to take back our how to make the decisions it to have the information so that we can make good, well informed decisions about how to optimize cell function and then our health generally.

Yeah. The other thing that you said is like all what about my job is like, well, my job is I work with practitioners to try to like set up research studies to try to figure out how can our test help educate a practitioner on the best course of treatment.

So we're trying and trying to figure out what the best course of treatment are for each type of patient case. Because there's for like mycotoxins, there's a lot of different like caveats of treatment.

You have patients, they have mass cell activation or they have Hashimoto's or they have gut issues. So we're trying to figure out which protocols work best for different types of patients.

Well, for better or worse, you know, there's lots of patients out there that need this help. So I'm glad you're providing the help. And I wish fewer people had to deal with this.

But at least if they do, they have good direction coming from you guys. I really appreciate all that you do and making these tests available is just really is one of those tools that's so helpful for me and my practice and has changed the lives of many of my patients.

So thank you, Matt. We're so happy to be here to help people. I mean, obviously we would be happy to do something else, but it seems we're we're doing what seems to be needed.

Well, thank you. And thank you also for your time and for joining us today and explaining some of these really confusing concepts and what we can do about more to make a toxin.

Oh, happy to be here. Thank you for having me.