PANS, PANDAS, And Basal Ganglia Encephalitis: What Every Parent Must Know Transcript

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Introduction and Guest Background

Hi, and welcome to another episode of the Healing Lime 2.0 summit. I'm your host, Doctor Maria Hinchey, and today we have Doctor Nancy O'Hara joining us.

We are going to talk about pans, pandas and basal ganglia encephalitis and how many vector borne diseases can actually be the underlying trigger for this disorder, including Lyme disease.

Doctor Nancy O'Hara is a board certified pediatrician who specializes in treating pans, pandas, and basal ganglia encephalitis, as well as other neurodevelopmental disorders.

She's the leading trainer and mentor of clinicians in the United States and globally, and she educates medical professionals to recognize, diagnose, and treat pans, pandas and basal ganglia encephalitis.

She has a comprehensive mentorship and membership program. For more information on those, you can reach out to her at. Doctor O'Hara dot com. That's Woodrow Farrakhan.

Doctor O'Hara has also written a comprehensive guidebook called Demystifying Pans and Pandas of Functional Medicine. Desktop reference on Basal Ganglia in South Flight US, which is available on Amazon in both e-book and softcover form.

And recently, she just released her audio book that has five additional chapters on Bartonella, the BRCA Covid mold, and cerebral folate deficiency. You can find this audiobook anywhere that you can get audiobooks, including Amazon.

So welcome, doctor O'Hara. It's such an honor to have you here. And, tell our listeners a little bit more about yourself and, share anything you'd like to share.

Okay. Thanks, Mariah. It's always good to join you. And thanks for doing this. You know, I got into pans and pandas, as you know, because my own son devolved into seizure like ticks after getting a Borrelia positive tick bite.

Strep throat. Antivirus. So I became very passionate about that, this disease almost 17 years ago now. And I'm also very passionate about other tick borne diseases because I have seen, you know, in my own son, I miss Bartonella back then.

And it wasn't until he got the stretch marks that I saw it. And so it became much harder to treat many years later, and then mold and then Covid. And so it's very important to me that we educate practitioners on how to understand and assess this disease appropriately and leave no stone unturned.

And that's why when I was asked three years ago when I wrote the book to do an audiobook, and I couldn't stand to hear my own voice, so I was not ready to do that and was didn't getting lots of other people to try to to record it for me and finally succumbed and recorded it myself.

But what was important to me is so much I have learned, even over the last few years, since writing it on, the increased incidence of Bartonella babesiosis.

So I wanted to be even more specific on those, really be specific on the assessment and treatment of mold and mold, mycotoxins, disease, and then Covid.

When I started writing the book wasn't even a problem. And that is reactivated so many other dormant diseases. And then, as you know, Doctor Wells and I wrote the article this summer on Foley receptor alpha antibodies and, in pans in pandas, not just in children with autism. So, that's why I did the audio book and, happy for people to listen to it.

Immune Dysfunction and PANS/PANDAS Basics

Quick story. My husband, downloaded it the other day, and I went in to take a shower, and I came back out and he was snoring, profusely. And I thought, well, that that's one board and book for you.

And, and he, of course, turned around to say, no, no, no, your voice just soothes me. And I was just going to say that lacks it. I'm like, yeah, yeah, yeah.

Anyway, hopefully it won't put any of your listeners to sleep if they try to get it. And, yeah, it's available on Amazon, audible, Spotify everywhere.

You know, it's so funny. Now, I can say in the past it's I guess it's been 17 years that I've known you. And you were you were one of my very first mentors.

I don't think I've ever seen you put anyone to sleep, so we're going to have to go with your voice. Your soothing voice on that one. Exactly. So, you know, it's interesting to me, and I'm glad that you added all of those things into your book, because I think the one.

Com and denominator with all of it is immune dysfunction. And I remember when I first learned about pandas, not even pans, but pandas. I was like, there's got to be like, it doesn't make sense that the body can't get rid of this strap, you know, especially after using antibiotics.

And then fast forward through my whole career and my moment where I was like, oh my God. Like, once you have Lyme, you always have Lyme because no one's addressing the immune dysfunction and restoring immune resilience or immune competency, like whatever you want to call it.

It's like all these antibiotics are doing, like even with pens, you're shrinking the load of the infection. Therefore the symptoms get better. But then as soon as you stop, because the immune system isn't functioning properly, to stop it from regrowing, it just surges, you know, over whatever the course of time is for that patient really dependent on how messed up their immune system is. So, you know, today we're going to talk about the intricacies of the immune system and what these infections do to the immune system and etc.

and I'm just so excited to talk to you about it all. But, you know, important for the listeners to really just keep in mind, like this is immune system dysfunction, not just an infection.

Yeah. And and that's such a key point. And and I think when we think about it as immune dysregulation that may be triggered by an infection or a metabolic cause, like mold, like anesthesia, like pesticides, it's really about the immune system.

So I think parents get overwhelmed when we talk about the big three BS of tick borne disease, Bartonella and the bees and mold and viruses, you know, and all of that.

But if you instead think about it as an immune system disorder and really helping the immune system, and as you and I both know, as many of your listeners know, the immune system, like everything else starts in the gut.

And so if we're not taking care of the gut, in so many ways that that you, among many others have taught me, as well as, you know, the brain and the body in general.

But if we're not taking care of the gut, we're not taking care of the immune system well enough. 70% minimum of the immune system starts in the gut. Our neurotransmitters start in the gut.

So, yeah, the idea of putting an antibiotic on this disease and calling it a day, even if they get better, is just a recipe for disaster. Because the second, third, fourth iteration of this, the tick borne disease that goes more dormant because you just put it in a one antibiotic on it, rather than using herbals and modified citrus pectin and so many other things to treat it, you're you're going to end up with a child that's worse later on.

Yeah, I couldn't agree more. So let's start out by talking basics. So pansies is sort of like the umbrella right. And then we have pandas as a more specific, illness caused by strep.

So kind of walk us through the difference between pans and pandas. And then we'll talk about how a lot of these vector borne diseases could be the underlying trigger.

Right. So pandas was the one that was first given the the acronym standing for pediatric autoimmune Neuropsychiatric Disorders associated with strep. So when you think about that in particular, let's say a child gets a strep throat.

Most children you put them on the antibiotic or an antimicrobial herb and they get better. But in a small group of children, they instead have a misdirected immune response, molecular mimicry, where the antibodies or the proteins, instead of just attacking the strep in the throat or wherever else it may be, instead attack the brain and specifically the basal ganglia, which leads to the symptoms of particularly OCD or restrictive eating disorder.

So, you know, an OCD type eating disorder where they're afraid of contamination or choking or only want to eat green foods or whatever. And then two other symptoms, and I'll go over those when I talk about pans.

But pandas was very controversial and people were finding, oh, are these other infections that do the same thing. So they had initial label that pits pediatric infection triggered autoimmune neuropsychiatric disorders.

And that included Michael Plasma Lyme viruses and other diseases. And then there were a group of of children that also got worse, like when we were spraying pesticides for West Nile virus.

There was a large group in a community. And so in 2012, 30 clinicians, researchers together with Sue Speedo, got together and tried to make it less controversial and put everything under the umbrella of pans.

And that was pediatric abrupt onset neuropsychiatric syndrome. And by definition, it should still be abrupt onset. But we'll get to that later. And, you know, it's OCD of an abrupt or dramatic onset or recurrence.

So a big change in OCD, even if you've had it before or 20% in in our practice, it's over 30% with a restrictive eating disorder. And two of the following separation anxiety emotional lability.

You know that 0 to 60 they're fine one when it enraging or depressed crying the next. The abrupt onset of school performance issues like you could have an abrupt onset of A. D. D., you know, all of a sudden they were getting A's, and now they're getting D's, and they're in la la land.

Brain fog processing issues, especially then motor problems. And one of the path pneumonic signs is an abrupt change in handwriting. So all of a sudden, their handwriting changes.

They're reversing things.

Vector-Borne Triggers and Symptom Clues

They're they're much, messier. They neglect if they're right handed, they neglect the left hand side of the paper. And with those motor abnormalities come tics.

And that can be one of the, the the things. And then if you have one of those together with the somatic symptoms, you have an abrupt onset of bedwetting in a child that was previously dry or other urinary changes, frequency, urgency, pain or a sleep problem.

Like what is called REM disinhibition. That's really restless sleep. They never get into that deep, restorative sleep. And so they're, they're, having trouble sleeping, waking at night, night terrors, etc.. So OCD, abrupt, dramatic onset of recurrence together with two of those others.

That's this diagnosis. Now where it gets tricky is the acute part. And I would say, particularly as we're talking in this Lyme summit, when we talk about tick borne disease, as we both know that can be much more indolent, that can be much more subacute.

Also, mold certainly can be. So I think in the pans in pandas community, unfortunately, because both tick borne disease and pans pandas have become controversial for lots of reasons, we can discuss, the the Lyme piece of it often gets forgotten by many, especially allopathic conventional physicians, and not tested appropriately because, as we both know, very little can be done with conventional lab testing.

And then the other subacute that I just want to mention is often that acute occurrence is the first one. And it can happen when they're 2 or 3. And if it gets treated easily with one course of his, if remission, when they have a strep throat and they look at the behavioral changes as, that was just the terrible twos for a little bit and it's over, then the second and third iteration later can be much more subacute.

So what's important is to find that acute onset somewhere in the history and and and then treat appropriately with treating the symptoms, treating the underlying trigger or triggers, but most importantly treating the immune dysregulation.

Right. And that's the three pronged approach that is necessary to heal someone from pans or pandas. Yeah okay. So what is the sort of laundry list of vector borne diseases that you see in addition to mold and environmental toxins?

That can be triggers. Yeah, I think it depends on what area of the country you're in as to what will be the most prevalent in the northeast, where we are certainly Borrelia, Bartonella and the Bza.

We know now that more than 41% of the ticks carry bibs here. And we're seeing more reports of a busier coli, which may just come up and testing is the A species because we have no direct test for it.

And then 42% when we last measured it in our practice of children who have autoimmune encephalitis also have Bartonella, in other areas of the country, like I just took care of a child with, in Arkansas that got tick bites there.

Then it may be Rocky Mountain Spotted fever. It may still be, and Borrelia. In other areas it may be relapsing fevers. So it really depends on where you are.

I find, at least for me, the large majority of kids with pans with neuropsychiatric issues. Have you usually Bartonella Berbizier, together with one of the others, or more than one like Borrelia or relapsing fever, etc.?

Okay. And then what about mycoplasma? Oh, absolutely. Okay. Thank you for the reminder. Yes, I often don't think about mycoplasma as a tick borne disease, but as we both know it is, and we've had a run on it, all over the country, actually all over the world.

I have parents in Australia and, and, England where they've, they've had, a, a big increase in mycoplasma this summer. Even so, mycoplasma asthma traditionally is the second most common cause after strep.

I just think especially where we live, and maybe because of the the length of time it takes people to see me, I don't see as much strep. I see much more mycoplasma.

But, and Bartonella. Yeah. So what are the big differences between basal ganglia encephalitis like that's triggered by a vector borne disease or a tick borne disease versus a different infection?

I think one the the presentation can be different. As I said, it could be more subacute or indolent. As opposed to

just, an abrupt onset. The second is the majority of those children will have some form of anger, pain, meaning migratory, pains, joint pains, headaches, some form of of, arthropod thigh meaning not necessarily arthritis.

And there was an interesting paper, by more looking at pandas and the children with strep, that had these type of pains. And I think they my opinion is that they were really missing vector borne diseases.

And although they were looking for mycoplasma and not finding that and looking for BR alia, which in some of our conventional labs, if you're doing an immuno blot as opposed to a Western blot, could certainly be found.

But in 30 years of practice, I've had one conventional lab positivity of a bbca and zero of Bartonella. And so you have to look at the symptoms. And so I do see different symptoms also with Bartonella in the BCA.

So when I look at symptoms with Bartonella, one of the things we see was strep or mycoplasma induced, let's call it pans or basal ganglia. And this is we will often see an episodic nature, a waxing and waning with Bartonella that can be much more of a daily flare.

The second thing is rage and aggression can be part of this. And when it is, Bartonella needs to be thought about. The third thing is the heels and the soles of the feet.

I often will hear that from children with Bartonella or their roll up their socks. If they can't verbalize what they're feeling. That is almost always Bartonella.

And then, as we both know, certainly the blanching stretch marks that don't follow dermal lines. And if you've had a pediatrician or other allopathic physician who has said to you, oh, that's just weight changes or adrenal stress, they are different.

Those stretch marks follow dermal lines, meaning they'll they'll be sort of, in a, not horizontal or vertical pattern, more of a sideways pattern. They'll traditionally be on the hips or the trunk or the back and they will not blanch.

So when you press on them, you they won't change color. Bartonella will stretch marks if. They're stretch marks from weight or adrenal. But with Bartonella they do not follow dermal lines.

So they're usually either vertical or horizontal. And they blanch. So when you press on them they change color. So those really I look for and ask about all the time.

And then with for Baeza, what I see is the night sweats. And I recently had a child that hadn't even told his parents about the night sweats. He would actually get up every morning because he was so embarrassed by it and change his own sheets and never told them.

So you really got to probe about that and and the disordered know Mia in general, meaning those are the kids that are more pots like they have more dizziness, nausea, GI symptoms, they may or may not faint or have heart rate changes in from laying down to standing up.

They may well have that air hunger that that not just with anxiety where they feel they can't get the breath, but all the time in those unrelenting headaches that that pressure headache, among others.

So I'm mentioning all those symptoms very specifically. And I also want to talk about mycoplasma in just a second. But but because it's so hard to know, whether this is there by testing, especially if you don't have a practitioner that can do specialty testing, I have many patients that I've now mentored that we've treated based on symptoms, never getting the tests and gotten them better.

Right. So that's really important. And then the last thing I want to say about mycoplasma thinking about it as a vector borne disease, is that many of our children have no symptoms of pneumonia, bronchitis, sinusitis, but grandpa may be in the hospital with pneumonia, or mom has walking pneumonia, and she got better with a macrolide antibiotic or something like that.

And the child just has a behavioral change overnight. That could well be mycoplasma. Make sure you test for it because there may be no no symptoms of the actual infection in the child.

Remembering again, it's an immune reaction. The child may be exposed to it, but they build up the antibodies. Those antibodies or proteins then are what caused the symptoms, not the infection itself. Right.

And I think it's important to to tell our listeners, because we cover this, you know, in other episodes of this Lyme summit, but, you know, less than 50% of people who are diagnosed with Lyme or a co-infection remember seeing a tick or remember having a bite.

And I think the number is even lower than that. So if you're sitting here thinking, well, my child never had a tick bite, so none of this applies to me.

I'm sorry, but you're wrong. And then if you say, okay, well, we've been to the doctor, like, say, you know, you did remember a tick bite. Or even if you didn't, you've been tested.

These conventional tests that are available through, you know, the local labs and even hospitals, they are not looking for all of the species of Borrelia.

So they're trying to say, okay, you don't have Lyme disease.

Herbal Treatment Strategies

But instead of looking at all 20 species, we've looked at 1 or 2 and are just, you know, extrapolating that information and covering the, you know, the whole spectrum here.

And testing for Lyme definitely does not test for rabies, your Bartonella, Mycoplasma or Lycia and a plasma Rocky Mountain spotted fever. Any of these other, bacteria and or parasites.

And so you really do need to get tested by, a validated conventional, sorry, specialty lab that knows what they're doing. And not only is looking for every different organism, but for every different species of each organism before you can completely rule it out.

And not to go off on a tangent, but there are patients who are seronegative and there's no tests. That's 100% accurate. And all of these things are clinical diagnosis.

So just for anyone who's listening, make sure that you take all of those points into consideration. If your child has basal ganglia, encephalitis pans, pandas, and by the way, it is basal ganglia encephalitis, whether we're talking about pandas or pandas.

So correct me if I'm wrong, but it's all basal ganglia encephalitis. It's just whether strep is involved or a different infectious trigger is an. Absolutely, absolutely.

And I think those were all wonderful points. And I think a couple of others. One, to your point, tics are the size of poppy seeds. And we now know that a tick does not have to be on for 24 hours or more.

It could be on for a very short period of time and still transmit the disease. Second, when you do find a tick and get it tested, put it in a baggie and send it to, in my opinion, tick report.com same and ask for the all of the species.

Because if you take it to your local health department, often, all they're testing for is Borrelia and at least in our area of the northeast, again, it's as much Bartonella in bbca in these ticks as it is Borrelia.

And you'll miss that if you're only measuring in the tick for Borrelia two third, to your point, at least 30% of these children also have immunodeficiency.

So if you're only doing antibody testing, whether it be antibodies in the blood for mycoplasma or antibodies, for any of the tick borne diseases, you may well miss it because they may not be able to mount that immune response.

And so again, why we both like IRBs so much, you know, you can treat these diseases safely, effectively, completely, and treat the immune system without destroying the gut in the process, as you may well do with antibiotics.

And then the last thing I would say is, don't ever tell either one of us. Well, I never had the rash, so it can't be number one. You can have Bartonella without the stretch marks.

Number two, only 20% of children get the rash when they have Borrelia. And number three, there's no rash of a Busia. So, you know, please don't depend on either just conventional lab testing or even some of the specialty testing.

You know, is these diseases also particularly Bartonella bibs. Yeah. Go dormant, go deep within biofilms, parasites, tissues within the body. And if you're just again doing an immuno blot or an antibody test, you may well miss it.

So being a great clinician or even a decent one, is is all about, you know, getting the history being a detective and using the N in front of you, meaning the child or patient in front of you to decide what to do.

And, and how to do it. It's not necessarily about the data in anything that involves pans, pandas, or vector borne diseases. Agreed. Okay, so reiterating what the three pronged treatment approach is, right?

So obviously we want to deal with the acute symptoms that are going on. We need to deal with whatever infection is there. And then we also need to fix the immune dysfunction.

So I know that you as well as I like herbs are my medicine along with lifestyle. I know that you use a lot of herbal medicine in your practice as well.

Can you kind of like walk us through what your favorite herbs are and how they fit into that three pronged approach? Sure. So, I have many herbs that I love, and it's not usually about any one herb.

You need a combination of herbs, and you also need a combination of herbs that that you feel treat those vector borne diseases or other diseases that you think are most likely in this patient.

So and there's a lot of research on it. There are so many articles, you know, the one by Zhang looking at one of my favorites which is crypto Lepus. And crypto Lepus is great for babesiosis, but it's also very good for Borrelia and has some Bartonella coverage also, Japanese knotweed, together with cat's claw, very good for Borrelia and Bartonella.

I also really like Petunia, as an herb that is very good together with Krypto. Lepus for mycoplasma, but also for Bartonella and Banksia. Cordyceps Chinese skullcap, some great immune modulating properties with those Artemisia annua Alcorn.

Very good. In adjunct because, as I said, especially with Berbizier, which is a malaria like infection, you want to use something that works well against those types of infections, like parasites.

And you see a child who has worsening around the full or new moon, adding an herb around those times, you know, when there's a worsening in behaviors around the fuller new moon, may well be a parasitic infection, or Baeza or others adding something like a cornea artemisia on a rotating basis may also be helpful.

And, then there are many others, you know, a towbar caption, you know, I love tumeric as an immune modulating the advantage of herbs are multiple one you have immune modulating, anti-inflammatory and antioxidant properties.

So you're getting although I do add other just anti-inflammatory herbs like the turmeric for instance, or like phospholipid specialized pro resolving meteors for the immune system.

You're getting immune modulating properties in the herbs. So you're you're getting two parts of the three pronged approach. And with some of the herbs, you may also see, symptom improvement, you know, and with, you know, adaptogens and Irvine tinctures, you know, those are also excellent in, in putting in their second advantage of the herbs is that you can start very low.

You know, a lot of our kids are very sensitive. They really, will hurts or have a healing crisis, a worsening of their symptoms upon starting treatment.

That means you're on the right track. That means you're doing the right thing, but you want to minimize that type of healing crisis as much as possible.

So you can dose up. You can start at a small volume of drops and increase to the maximum amount, which, oh, by the way, is not once a day. My friend Doctor Mariah Hinchey will try to do three times a day that.

But in children I. I will suffice it with two. If I could get three, that's great. But she's better than I am. And getting getting them to take it more.

But anyway. But but you can dose it up appropriately by weight and avoid the severe Horkheimer reaction. And then I think the third is, as I was saying in the research, there is good research that they're effective, but there's great research that they're safe.

And as doctors, we don't want to do any harm with our treatment. And so if something's effective as well as safe, it's going to be very high on my list.

So I'm probably thinking forgetting about several other words you'll remind me of now and then I'll say, oh yeah, that would too. But anyway. Yeah, I, I think you were pretty thorough on the one thing too, though, that I want to point out.

And you brought up this point in the beginning of our discussion is that, you know, over 70% of our immune system is in our gut and relies on our microbiome, and that it's balanced and diversified.

That is a big, big part of how we regulate inflammation in the body and also how our immune system functions. So, you know, if we can use herbal antimicrobials that are much less detrimental to the gut and cause dysbiosis, much, much, much less, it's just another benefit to using these herbs.

So I wanted to make that point. Now, as a clinician, do you find these herbs because we know what the studies say. And by the way, if you don't know what the studies say, if you're listening, there are a few studies that say that the herbs, whereas the effective as doxy and sufferer seem I think those were the two that they looked at as effective.

But additionally, these herbs were effective against the per sister cells which those antibiotics are not effective against. But as a clinician, what do you see in practice?

Do you see these herbal antimicrobials being effective? Oh, absolutely. Absolutely. And and I can name dozens if not hundreds, probably hundreds at this point.

Who got better with herbs. Yeah.

Clinical Experience, Resources, and Closing

And and I can also probably give you dozens that got worse with antibiotics. Yeah. And, you know, as, as an MD, I certainly have the ability to prescribe both.

And so I've seen both ends of the spectrum. And certainly there are children and I am a pediatrician. I don't like any of you adults out there. So that about you. But anyway, you know, as a pediatrician, I have used both.

And there are times, especially when it's an acute, you know, tick bite and worsening. I will do antibiotics, no question about it. And in the short term they can be very effective and nip it in the bud.

But I never stop with the antibiotics. It's another mistake I think conventional allopathic physicians may make is the kid gets better and well, we're done.

No, you know, this is a marathon. And in treating these children. So even if you started with antibiotics, it may well be very helpful. If not, you know, almost mandatory to add the herbs after that to, to clean up, to finish the process and to, as you said, get to the persistent, cells.

Because often if we're not using multiple antibiotics, we won't get there and we're only treating the surface with the antibiotics. So yes, with the mainly I've treated Borrelia, bobbsey and Bartonella, but I've also treated, relapsing fever or leukemia and a plasma all with or and certainly mycoplasma, all with herbs.

So my go to is often usually when people come to see me, as opposed to a natural path. They may be looking for that medication. Yeah. So I may start with something like as if for myself.

Why I like is it through my son is a medication is because it has it it it has some coverage of Borelli. It's a second line for Borrelia after Doxy cycling or any of the site claims it has some coverage against Bartonella.

It is good against Mycoplasma and good against strep. In our area. And it has some coverage of, of of obesity. So and then I'm building up on the IRBs and waiting for the test to come back.

When the test comes back, then I'll wean off the is it through mice and and just leave them on the herbs in in the large majority of children. And you can get these in the other I think I hear all the time is, oh, they taste terrible. We'll never be.

They don't taste that bad. They taste really do. Every single one of them. Yeah. And you know, as I often say, bribery is a great point in part of parenting.

You know, bribe your kid, you know, put it in a little shot glass, give them something else they want afterwards, mix it in with something that tastes better sometimes stevia.

You know, there's a good biofilm buster that also has good taste. It can make the rest of your herbs taste better and also potentiate the rest of your ears.

But you could add something else that tastes good. And then they do it successfully seven days in a row. Go get them a Lego set or an outing with dad or something like that.

But they don't taste that bad. They really don't. And you know, pomegranate juice actually has a lot of medicinal benefits to it. And it is such a strong taste.

You know, if the child likes that, that's a good place to hide the herbs. And then you get some synergistic benefits. Yeah. Yeah. There's so many things that you can do.

And it's funny, I have parents, you know, that are sucking it up in a syringe and squirting it down the throat, which is a technique I learned from you, you know, decades ago, which is very effective.

But I've also had the same parents when I've said, did you let them even try to take it first, come back in and be like, oh, my God, I should have listened to you.

Like I just gave it to them and they drank it. And I'm like, like it's fine. It's not a big deal. But you want to know? It's

funny, I'm sitting here listening to you talk, and I just had kind of like this moment in my brain.

So, you know, all of these studies that we're looking at, most of them have happened in a petri dish, right? Like we're looking at the antimicrobial effects of these herbs, which is only like in a petri dish, going to look at the antimicrobial effects of the herbs because the petri dish doesn't have an immune system.

But like if we could actually really do a big enough study where we're looking at like we're missing the whole, like anti-inflammatory, immune, modulatory like effects of a lot of these antimicrobial herbs, because almost every single one of these antimicrobial herbs are also anti-inflammatory and, positively affect the immune system.

So, I don't know, I just had this thought listening to you and wanted to share. Yeah, yeah. And and I think we all need to do a better job of putting together case studies.

You know, I'm going to present one at our upcoming Maps conference, the Medical Academy of Pediatrics and Special Needs. On Alice in Wonderland syndrome.

Yeah. Because that's something I've seen six times now with Bobby's year, three of those children could not even afford specialty testing. So we agreed to just start treating effectively.

And they have all gotten better. And there's your proof. And we all need to be writing that up and sharing it and talking and and teaching about this.

I think that's something else you and I have discussed for, for lots of training for our practitioners to really have a course on IRBs so that the more practitioners can feel comfortable.

And, you know, you asked me, my IRBs, you know, there are many different protocols, whether it be that by Doctor Bruner, which I know you were very familiar with, Byron White, new to medics, you know, and and any of us can take pieces of any of those protocols and find what works individually for us.

But it's about treating the whole system right. And that's why they're so powerful and so effective. Yeah. So before we end, what would you like parents who are listening to know about vector borne diseases triggering basal ganglia encephalitis?

First of all, don't give up. Second of all, find a practitioner that knows what they're doing. Both Doctor Hinchey and I are very busy. Will be glad to to help you if we can, but we'll also be glad to give you lots of other resources because you need to look at these diseases, understand them from a clinical perspective.

What are the symptoms that you could be seeing that could be these diseases? And then get a practitioner that's listening to you, listening to your child and looking at the IRBs that could be effective for your child and then looking again three months later.

Nothing's changing. You're at full dose. Okay, let's try some different herbs. Let's swap this one out and try this one. You know. But don't give up. This can get better.

And we need to make sure that this is part of what we're looking at when we're treating kids with pans, pandas, basal ganglia, encephalitis. Thank you.

So share with our listeners any upcoming events that you have. And once again, remind, people how they can find you and how they can participate in your mentoring program, or your membership program.

Yeah. So if you go to d r O'Hara dot com, everything will be there. A phone number if you have questions in email, if you have questions and all the details of first the membership, which I'd love people to join, it's open to parents as well as practitioners.

There there's two different levels and it includes about 62 to 5 minute videos. Includes about six lectures on tick

borne disease, mold pans, pandas, neuro therapy, which includes cognitive behavioral therapy and others, and a whole lecture on on case studies.

And then we also do monthly live and recorded teachings where we talk about each one of these different issues in detail and have live questions that you can ask me and others.

And it's a community, you know, we get together once a month and we just share and talk and ask questions and hopefully provide some answers. And then the mentoring is if you are a practitioner or even if you're a parent, we have another practitioner that I can mentor and I do a one hour mentoring session to look at.

What could you be missing? What else could you consider helping your practitioner to feel comfortable with? Some of the herbals? And then the other things that are coming up.

Certainly the audio book just came out with the five new chapters on Bartonella, Busia, mold, Covid, and folate receptor antibodies. So please feel free to get that if you'd like to listen to my voice.

I will be starting a podcast in 2025 on demystifying Pans Pandas. So look for that. And then finally, I'm starting a CME course, in April of 2025, on Pans Pandas.

So all of that information as it is ready will be on the website. And join me in any way you can. So awesome. Thank you so much. Thank you. Thank you for being here. It means a lot.

Any time. I thank you for doing it. Absolutely. All right. And for all of our listeners, thank you for being here. And I hope that this information is helpful for you on your journey.

Healing from Lyme disease. Take care. We'll see you next time.