Podcast Introduction and Guest Background

Your genes hold the answers to your family's overall health. I'm Dr. Paula Kruppstadt and on the Get to the Root with Hope for Healing podcast, I sit down with experts in genetics, functional medicine, and family care to explore what's really going on beneath the surface so you can stop guessing and start healing.

From personalized insights to practical tools, we bring you whole family wellness that starts at Welcome to the Get to The Root podcast. I'm your host, Dr.

Paula Krebstadt, and joining me today is Dr., Debbie Hamilton. Thanks for joining, Debbie. Well, thanks for inviting me. Looking forward to our discussion today.

Yeah, a little bit about Dr, Hamilton, she is a very amazing provider that has a lot of experience. So, basically, not only is she a board-certified pediatrician with experience in primary care, but she's also certified through integrative and holistic medicine through AIHM in addition to the Institute for Functional Medicine.

and she also has a master's of public health where she did research in nutrition. And she started her own pediatric holistic consulting practice out in Colorado in 2005, and her practice focuses on treating children with chronic diseases such as autism, ADD, and she also provides preconception counseling.

And she's published a book called Preventing Autism and ADB, Controlling Risk Factors Before, During, And After Pregnancy. The other thing about Debbie that I truly appreciate is that she was involved in product development with research nutritionals specifically the liposomal glutathione and worked on different flavors for things and now she has since moved on to nutrimetics and we're going to take a deep dive into mast cell activation in children.

So, woo, with all that introduction. Yeah, it's great introduction, yeah. And Debbie, too, you also focus on vector-borne illness. For our listening audience, that covers Lyme disease, Bartonella, Babesia, tick-bore, and relapsing fever.

There's a lot of that in Colorado. It's everywhere. And then also when people have a condition called chronic inflammatory response syndrome or SIRS or biotoxin illness and then our immune system tends to go crazy.

So I thought I would just ask if you could explain to our listening audience and we were talking about who our audience is and I really like to think about it as moms and dads on their commute, moms folding laundry, everyday people, you're trying to get things done and learn things.

So can you tell everybody what mast cells are? Okay, sure. Mast cells, are part of our immune system. They are type of white blood cells and they release all these different kind of chemicals into the body.

And these chemicals, one of the big one is something called histamine. Histamine causes a lot of allergic responses. think of using Benadryl as an antihistamine.

But it also releases something called the cytokines, which cause inflammation in the body. It releases neurotransmitters, it releases enzymes. We probably don't even know all the things it release.

So that causes a lot of reactions. And no one cell is ever bad, right? Our body wouldn't have something. Some people are like, oh, mast cells. play a role because they help our immune system.

But the problem is with a lot of our chronic diseases, we see this in a lotta children, is the mast cells are in overdrive. So they tend to release too many mediators too often, which means like, too much histamine, to much cytokines, and this basically can impact the immune systems, right?

Because it doesn't turn off. It's literally on kind of that chronic mode in chronic disease. Okay. Thank you for that

basic definition. And you know, you're right.

I mean, I think they think now there are over 300 types of mediators that come out of mouse cells. We just have no idea. So, we have a lot of pharmaceutical agents, like you mentioned, Benadryl, that help to stabilize mass or just lower the histamine.

They may not work upstream to the mast cells not to release all these things.

What Mast Cells Are and Why They Matter

And there are chewable things, there our capsules, and there's all kinds of things but what I really appreciate is that Nutrametix has now developed a liquid mast cell stabilizer called NutraHIST.

Now, before we talk about that, Can we just walk through some of the conditions where mast cells, these immune cells are off the rails causing a lot of inflammation where doing something to stabilize them might be helpful?

So can you go through some common conditions that people might think of when they're considering that mast cells might be involved? Right. So there's, you know, some of the basic things we think in terms of like allergies.

Think of eczema, that itchy kind of red skin, or think asthma in term of constriction in your lungs, food allergies, environmental allergies, like all the common things are because of histamine, so one part of the mast cell.

Even anaphylaxis, right? That's really, really severe, life-threatening reaction you can get. People think about peanuts, and that's when you need an EpiPen, is really a type of a mast-cell.

When we talk about mast cells activation, often called MCAS, these are when the masts cells, as you said, are releasing too many of these You know, these basically, you know chemicals, histamine, cytokines, mediators.

And then the MCAS is often in people who have more chronic conditions and chronic inflammation. Like you mentioned, vector-borne diseases. So people with chronic Lyme disease often have a mast cell component.

People with mold illness is very common to have mast cells. But in our children, you know, children with our autism, maybe a little less on ADHD, but definitely autism or the PANS-PANDAS, that autoimmune response, have the elevated mediators.

So then they have, so you have to think about this in anybody with a chronic disease, even if they don't have a classic allergy symptoms, although a lot of kids will have skin issues.

Kids have more skin issue than adults, and they might be reacting to everything, we call systemic or body symptoms. And almost any body system can be involved.

So you really have to kind of, and in Lyme disease or mold, you can have all the body systems involved also. Sometimes it's hard to know, hey, this is a mast cell symptom versus this kind from chronic Lymen.

A lot of times they overlap, but it is something you have think about. I mean, there are some things that are more kind makes you think of that. Well, let's walk through, you named some conditions.

Now, lets walk though some different symptoms that people may have, say, what's going on with their swallowing, their esophagus, and their stomach and gut.

What are some clues that someone might have excessive release of some of these chemicals from the mast cells? Right. So when histamines released, it binds to histamine receptor.

There's histamin receptors in the gut, the histimine II receptors. A lot of different digestive symptoms, especially that irritable bowel syndrome, can be related to mast cells, but it can affect the esophagus.

People can get something called eosinophilic esophychus, which means they have too many allergic cells in their throat, so they can have constriction, problem swallowing, And a lot of the people with those GI issues will react to foods.

Certain foods actually can create histamine, and certain foods have histamines, or things like leftovers have a lotta histamin. Hopefully our children aren't drinking a little alcohol, right, because alcohol definitely has a lot a histimines.

So you can get a lots of reactions to food, you get stomach pains, difficulty swallowing, diarrhea, constipation, alternating, Errol Bell syndrome is kind of combinations and switching symptoms.

But GI symptoms are very common with MCAS issues. You know, I'm really glad you brought that up because when we think about histamines, one of the things that we start with here at Hope for Healing is we recommend for families who bring their newborns to us and their children to do a precision genetic panel.

And it will tell us if they have an inability to break down histamines. So it can guide the type of probiotic that they use. Avoiding probiotics that contain histamine is really important too.

That's one of the ways that we can target the immune system. So I really like you taking the deep dive into the GI tract and the gut. Then let's talk a little bit more about the systemic type things.

So when we think about allergic reactions, you know, people obviously think flushing with that, and then can you kind of go into what might be happening with the heart rate, their breathing?

You alluded to it with conditions that we see, but what are some of those more global systemic type things that parents or an adult that's listening may be experiencing and they don't know that it's due to potentially these mast cells?

But when I think of the blood pressure and heart rate, there's something called POTS, which is postural orthostatic tachycardia syndrome, you see a lot with Lyme disease and mold, but if you look at the mast cell symptoms, it's often related.

Conditions Linked to Mast Cell Activation

If you think about Pots, we need to think Because mast cells do kind of, they can contribute to that increased heart rate, that flushing, you know, the different kind modeled kind-of skin reactions.

I mean, it can cause any kind skin reaction as hives. like acutely, those red cheeks, the flushing through the neck that happens with foods and histamines.

But again, as I said, it affects your heart rate. You can feel dizzy, and you feel really dizzy with POTS, you can faint. And now your blood pressure is not regulating.

So when I think about Pots, I always want to make sure I Yeah, yeah, really, it's just so many things. Now, also, when I think about someone who's experiencing all these things, they tend to be very, very sensitive.

Yeah. And many times patients are like, why do I react this way? Why do i feel this? We have to back way down and go very, very low and very very slow.

So when you're faced with a patient who is presenting to you with symptoms that are overlapping and you want to pursue stabilizing those mass cells or causing them not to release so many things.

Can we just go through all of the different, well, some of tools in the arsenal that we have available to do that from, you know, we can talk about NutriHist from Nutrimetix.

We can about some the prescription things that might be involved too. So I would love to hear from you, Debbie. I know I'm always telling patients about these things, so it's really refreshing for me.

to have someone unpack it for me. Yeah. So since the mast cells are kind of releasing too many of those mediators, like too much histamine, so one of the ways is, as I said, you mentioned before, is stabilize those mast cell membranes.

Right? So kind of decrease their basically putting out too many of these mediators. So, and when I thought about kind to help develop this, so there are prescriptions that do that.

Chromaline sodium is kind the classic one that you can use it orally. There's actually a nasal one. And the interesting thing about the Chroma sodium.

Is when they studied it versus some of the components of their herbs. is chromosodium will stabilize the histamine release, but it doesn't stabilize as cytokines.

And the cytakines contribute to the inflammation in addition to histamines, right? So then there are certain herbs, and a lot of the herbs that stabilize amassals are something called flavonoids.

Flavonoid, people think of like polyphenols and this ferritol and all those beautiful colors in our fruits and vegetables. Well, flavanoids are a type of polyfeno.

And quercetin is the one that people know most about. Luteolin is another. And so in terms of the nutrihist, a lot of herbs in the NutriHist have a lots of flavonoids.

And one of the issues with flavonoids is if you just take them alone, they're not well absorbed. So you either have to have in kind of a specialized form of quercetin, like people talk about liposomes or phytosome, it gets in an oil or it's a specialised form, or its naturally in the whole herb, so you can absorb it better.

Does that make sense? Yeah, it sure does. So the way that it's provided and the ways that its delivered is really critical for doing any good at all. Right, exactly.

And there are studies that if you have like an herbal tincture, you kind of have to take all those great ingredients out and you do that by alcohol. And nutrients is actually very low, but it's kind of the equivalent of actually some foods in terms of alcohol content.

So I know parents worry about that. We know that the flavonoids are extracted in that method because they're basically a water alcohol, like hydroethanol extraction.

That's one component. The other thing is I mentioned that histamine binds to receptors. It binds H1 receptors, which are more peripheral. And so H1 receptors is, you know, when you take Benadryl or Zyrtec or Claritin, the things like the runny nose and the itchy eyes and kind of itchy skin like with the eczema, right?

Debby, by peripheral, can you break that down a little bit more, what you mean by peripherals? So I think about more kind Because we were talking about the H2 receptor we'll talk about is in the gut.

So when I think of peripheral, it's in like the respiratory tract, the nose, this skin. Does that make sense? So a lot of the classic allergy symptoms are kind of from that receptor.

In terms of actually over the counter now, you can take an antihistamine, which is usually kind the the h1 blockers. But we have things like stinging nettles.

There are herbs that actually work as h-1 receptors. I mean, I basically block the H1 receptors. So in essence, it's kind of like you have your receptor, the histamine binds, and it causes the action.

Then if you had the h1 receptor then you take the herb and the herbs binds in the receptors, so the histogram has nowhere to go. Does that make sense?

Kind of like that lock and key. It's like the key is blocking, so the histamine can't get there to cause the symptoms. Yeah. So central, when you think about like a central histamines receptor, you're thinking more like gut?

The gut, the brain, or the immune system. Okay. There's technically four histamin receptors. We don't know anything about the H3, it's more in the But right now there are no herbs that we know and no prescriptions that work on the H3 receptor.

Okay. So the age two receptor, you think about all like our antacids because age 2 is involved in the acid production and the stomach function.

Symptoms in the Gut and Esophagus

So think of, if you're blocking the H2 receptor, it's like the pepsid, you know, kind of that kind. So some people like options for treating mast cell cells are, oh, an antihistamine peripheral one and an an acid and the chromaline.

Neutrophist, I designed it to have like, the h2 blockers is like black cumin, which is nagella citiba. But turmeric is actually the only herb that they found that actually blocks H4 receptor.

Oh, I interrupted you. I'm so sorry you started to say H-4, where people can find H 4. Yes, so turmeric is the one. And so we did put turmeric in neutral hist, and right now there's no prescription H four blocker.

But it's the H for like, So the receptor is actually on the immune cells. So when histamine released from an immune cell, basically binds another immune cell.

It's like, hey, the immune system needs to act, right? So it's kind of like telling the system, okay, we got an issue. So, it escalates an immune response, like the inflammation and the symptoms and all that.

Does that make sense? Yeah. So we've got the peripheral H1 receptors and we got runny nose and maybe some flushing and then we have the actual immune cells kind of telling each other and the turmeric blocks the H4.

H3 is in the brain and H2 is more of in our GI tract. Yes, exactly. All right. So it sounds just like the synergy of what is in NutriHist will work extremely well.

What is the youngest age that you have used NutrHIST in? One of the people who work in our office had a nine-month-old or nine or 10- month-olds. We used it in him.

And obviously the dose is really important, right? So we literally did like one or two drops. And it helped. So I'm very comfortable using it in terms of dosing.

I do think having a physician or a practitioner who's comfortable working with you, I think is really helpful. But if you're older than two or easier than four, you just kind of And honestly, even with the younger ones, you start really low always with people, because people with mast cells are also really reactive even to herbs.

They're reactive to everything. These are the people who are like, oh, I'm allergic to water. I go in the water and I get hives. Or they go out in the cold and they get hives.

Yes. Or, you know, their ears are itching or they're ringing. You know it's like really every system of the body can be affected by the mast cells. And really strange things.

With the heart rate, there are histone receptors on the hear. That's why when you have anaphylaxis or you that POTS, your heartrate can escalate when your have allergic reaction.

Things like you wouldn't think of would be involved. Yeah, yeah. So when you were going through what's in the herbal protocol, now can you tell our audience a little bit about ketotaphen?

I'm not sure if I, that's how I pronounce it. Yeah. That's what I pronounced it, so when do you use that or what is its role when your talking about mast cells too?

I think of cototifin, and I've usually had to compound it. I don't know if that's your experience. Yeah. yeah. i think if it is kind of helping with like the GI mast cell symptoms.

Okay. So not specifically an H2 blocker, more kind blocking that thing. And cotodifine for me is definitely, in a lot of the prescriptions in my mind, You have to use more than one.

It's like I've never seen just using ketotapin. If you're just dealing with GI symptoms, and I used to do use it, I'd go, oh, do one milligram. And I'm like, well, it doesn't really seem like it's doing much.

You really have two dose it higher. So I feel like its a component, but you have in my mind, kind of target the different areas in order to kind because it affects so many different ways.

Well, if you just decrease the mast cells releasing, well, the histamine there can still bind or, you know, so I feel like a combination approach is really the best.

So I do use ketotifin, but again, I dose it pretty high. Yeah. So do I. I get up to four milligrams twice a day. Oh, I haven't done twice today. But you do have to do a higher.

Yeah, and I've done that in some patients who were really suffering with a lot of symptoms. And Debbie, know that you're a pediatrician and so am I, but with our functional medicine training, we see womb to tomb many times.

Systemic Symptoms and POTS

Trade, you know, babies all the way up to adults. Yeah. And I'm leaning more into complex kids, but I have a few adults here and there too. Just recently had a lady that was really, really suffering and she had been to the gastroenterologist.

They really didn't find anything on her endoscopy other than esophagitis. Uh, they didn' find a cause or an etiology. Right. And I checked her for what we call intrinsic factor antibodies and also antipyretal cell antibodies.

It's just an autoimmune attack on the GI tract, as you know, but we were really pulling out all the stops to try to help her with her discomfort and her pain, throwing in pepsid and then a product that I'm sure that you have used through Alganot that has some of the things you mentioned with quercetin and luteol and it's called NeuroProtect and also has fruten, which is very, very clean and some pepcid AC and, also just using, of course, a non-histamine-releasing probiotic for her GI tract and then looking for any pathogens that might be growing in her gut.

But at first, it's just all about calming everything down. I mean, she wasn't sleeping. And it was interesting using an H2 blocker for a short period of time, a little hydroxyzine to try to help her with sleep too.

But, you know, we just don't want to use a lot of those things because of the central nervous system effects also. So, new tramedics, there's a principle called Clark's Law.

And I'm aware of what it is, but you mentioned this, it's like when we have infants to adults. Can you just explain to the listening audience just the principles behind Clark's Law?

Yeah, I always have to look up the specific numbers, but basically it is by, it's basically getting the dose based on the child's weight. Okay. So there's a calculation, you know, because sometimes a 10-year-old's 100 pounds, sometimes they're 50 pounds.

Right? There's big range. Some set of based in on age, based it on size. Yeah, yeah. And that's just exactly what I was looking for. You don't have to look up the amount.

I know that we have the NutriMedics form in our patient portal, so we'll pull it up and we will go, wow, by your weight, you should be getting this and that kind of a thing.

Now, for someone who is highly reactive to everything, let's say you've ruled in or ruled out, they have this chronic inflammatory response syndrome. You've looked at vector-borne illness.

Excuse me, I got plenty of sleep. It's Monday morning, it's okay. Yeah, yeah. Also too, we have this rain coming and going and coming, and I'm glad we haven't had an interruption in power.

But when we've identified those things, when you have someone that is really, really sensitive to everything, what are some of the things? How do you slowly ramp things up for someone?

And I will say, we have in all of our exam rooms these little glass shot glasses that we use. Yeah, so we show people or anchor-hawking or just, you know, we talk about mixing things in glass and not putting them in plastic or stainless steel or anything like that.

And mixing the herbs. So when we mix some of the herb with water, what are some principles when you do that?

Ways to Stabilize Mast Cells

It really has to do with absorption and kind of, I mean there's energetics, there are a lot of different things, but it's really about absorption. You kind put the herbs in and diffuse them in water and they are extracted in the water, so it is really being able to absorb it better in your body.

Okay. So we recommend typically, you know, one to four ounces, just depending how much we put in there. Let it sit about a minute, swirl it and drink it.

And I like what you brought up about the alcohol and extraction. Yeah. I think that really came from our practice because I had a mom argue with me. She said, there's some alcohol in this.

And I said well, it's actually equivalent to basically eating a ripe banana and was still almost offended that we said that. I'm like, no, that's the truth.

So I think, you briefly talked about this, but when you make the tinctures, just the safety of it for children to adults, can you just talk a little bit about that, especially when we compare it to, say, prescription medications?

Right, right. If you think about kind of herbal traditions for, I mean, centuries, you know, they use herbs a lot together because they have synergy and different functions.

But we know that a law of these action ingredients, just like the flavonoids, the quercetin, If you take alcohol and we do alcohol in water, it pulls the active ingredients, right?

So you're extracting all the ingredients into the herbs. So that's kind of partly how you kind get them more active. Sometimes people use glycerin, which is a kind sugar, but it doesn't pull the I mean, you're not extracting all the active ingredients.

You're just taking the basic herb and adding a sugar. If that makes sense. So the herbs, if they're in kind of an alcohol extraction and a water and alcohol combination, they get more of the act of ingredients, so it's going to work better.

I think that you have to think about. And I said, I've had young kids, some people put it, you don't want to put in hot water, right, because you didn't wanna kind of hurt the herbs in some way.

But some, people putting a little warm water kind and let it sit in terms of evaporation if they're really concerned. And obviously there's no, that's an easy thing to do if you're concerned, but there are, in percentages, there are different combinations, and I've seen herbs that were in even like 50% or 60% alcohol, right?

And I wouldn't be comfortable giving those, especially if you're giving more than one to a child. But in terms of, you know, the 20%, then I am comfortable.

So I think that that's, I think important to know in terms of how effective it is. And we also think with kids, they're getting like two, three, four, maybe five, 10 drops at the most.

So really the quantity is very, very low. Yeah and you know the beautiful thing too about the new traumatic herbs if you're treating say vector-borne illness or let's just say mycoplasma pneumoniae and your doing cemento and comanda and working your way up to a certain number of drops and then you flip over to banderol and stevia and if we just let it sit there a few minutes and we always throw in our favorite which is berberponella which just Yeah, Berber Panela is just a beautiful combination.

Would you just tell the listening audience a little bit about Berger Panella, what it is and what is does? Yeah. So I think of, and I don't know if this is kind of a drainage remedy, but I've think about berber, it's two different herbs.

Like, when your body, you know, and you're trying to detox, or you are trying process even an infection, think about the organs that help you do that.

It's like your liver going into your GI tract, your kidneys, even kind of the lymph system, right? It is kind like part of your immune system. And there is even a lymph in your head, in the G-lymph system!

So, Berber Panela to me is helping all of those systems work better. So, if you're fighting infection and if kind of treat it quickly, you know, the infection's killed, but then it releases all these particles into the body that triggers immune system.

It can make you actually feel worse before you feel better. And berber panela kind helps your body drain those and get rid of those. So you basically, feel you better quickly if your feeling sick or it helps prevent it.

Does that make sense? So it's kind you know, detoxification, but kind of processing, kind making some of those systems work better. I don't know if that's a good way to explain it or if you had any other…

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That's the premier and proprietary genetic panel that Fagran has allowed us to create. Yeah. Comments or ways to… Yeah, I love that explanation. We use it for what we call Herxheimer reactions because that's how you clear those things out of your body.

And the beauty of Berber is that you can take it every 10 to 15 minutes if you're feeling really horrible. And the beauty of all the drops from nutrometics is that you can just go down by one drop, especially if you went up by 1 drop and you got a reaction, go back down 1 by drop.

Stay there at that amount until you feel back to baseline and then slowly begin ramping up again. You also mentioned G-Lymph, I go ahead and say the glymphatic system of the brain.

And one of things I recommend for parents is to buy those little furniture movers from Lowe's or Home Depot to where they can raise the head of their bed so that when they sleep at night, the glimphatics system is just pulling, those think gravity kind of pulls that out.

That's the beauty of Berber. And stacking the Nutrimetix products are absolutely phenomenal in that you can stack

and add so many, and they cover so much things.

I think that's just the beautiful of herbs in general, that they've been around for thousands of years, God made them, they work together synergistically in just a beautiful way.

You know, Debbie, while I have you here, I would love you I just happen to have, just because I've got it on my desk, I use it. Yeah, it's by Research Nutritionals.

This is the watermelon liposomal glutathione.

Dosing, Sensitivity, and Herbal Delivery

There's also an orange flavor. But would you tell us a little bit about what a lipasome is? Yes. So I talked a little bit about, you know, those flavonoids and herbs, because if you kind of isolate them and you basically your body doesn't absorb them well.

And so liposomes is literally taking a fat and wrapping it around And so the glutathione, say, the glutathionin you take in your stomach, it switches forms really, really easily.

So what you do is you literally wrap it in a fat, like things like phosphatidylcholine, which are part of our cell membranes and actually really good for us.

And, so, in the stomach it's basically absorbed intact, essentially. Yeah. That helps us absorb things that are easily kind of broken down or digested in So one of the questions we get all the time is that there is, it's not on here.

It's when you read the label about the, is it tocotrienols derived from soy? But parents look at this and then they say, oh, its from soya. And we're like, no, there's no soy in it.

Its just a substance. it says ingredients partially derived form soy and tree nuts, coconut. But it's an ingredient that's in there, not actually a soy molecule.

It's a soy fat, it's lecithin, which is basically phosphatidylcholine. So it is not the soy protein which causes the allergies and that's what our concern is, usually the soya.

And so soy leccithine, as I said, that is a source of phosphatocholine which actually good for us. That's why people are allergic to soy and I'm like, well, there's no salt protein in it.

That's how I think about it. When we tested that, in terms of stability, we could not get stability with any other type of phosphocoline, which is why that was the one that we used.

I just wanted you to speak that. You're the ones who helped develop it, and so understanding the difference between protein versus how it's delivered.

So, that's great. Now, a question I had was about the orange flavor. Would the Orange flavor for someone who might potentially, or maybe this has nothing to do with it, have any issue with someone that might be a little sensitive to histamines?

Would they choose the watermelon instead of the oranges? Is an orange a little bit higher in histones? I haven't ever worried about that specifically in terms of the orange, honestly.

I will say the Orange is not as sweet, so the watermelon tastes like a Jolly Rancher candy for those of us who grow that. So I think for some adults, or maybe even kids, it can be too sweet.

But most kids are, the Watermelon is a great choice. I hadn't worried about the histamine with the orange. I did want to say in terms of just some of the nutrimetics, herbs, and it's probably true for herbs is there's a difference

between one drop, which is literally one dropper versus a droper full.

So I always make sure, especially if you're starting something to treat an infection, that you don't go, oh, one drop, and I just a whole dropper full, because that could cause a reaction.

So that's why I would one-drop, literally one, drop. I think that I like to explain that to parents specifically. A child doesn't get a really large dose right away, essentially.

I'm really grateful you brought that up. We do the same thing when we talk about our vitamin D, we tend to use a liquid D3 plus K2 that's a thousand international units per drop.

And we write in all caps, one drop, not drop or full. Yes, I do that all the time. Yeah, because that's important in terms of dose, doing the correct dose.

Yes. Yeah. Absolutely. And mixing and putting them all together. All right. Now, let me see. I think you really did an excellent job covering everything with the Masselle degranulation or how to stabilize those and then the NutriHist bringing that on.

Thank you so much for helping to break down for our listening audience what mast cells are. They're part of our immune system everywhere in our body, and they don't just release histamine, but all the other immune modulators, cytokines.

We talk about cytOKines all of the time here, just causing big bad yucky brain inflammation. So yeah. I like big, bad, yucky. That's a good like for kids to understand, right?

That right. Big bad Yucky Brain Inflammation. Yeah. You can't unzip your brain and say, look mommy and daddy, my brain is hot, red, swollen, and painful.

But the temper tantrums that we observe. Using something to stabilize mast cells, as far as when, let's talk just very briefly about kiddos on the autism spectrum, pans, pandas, say they meet the clinical criteria from Aspire.care for pans-pandas.

Do you work on stabilizing those mast-cells pretty much out the gate for a lot of those kiddo? I do. Because as you said, if the brain's kind of on fire, you have to put out that fire.

And so mast cells are kind, and you're basically helping that.

Glutathione, Liposomes, and Final Takeaways

There are other things that are anti-inflammatory. I think glutathione kind-of helps. It's anti inflammatory, it actually impacts the… And it kind helps your body process things, is how I thought about it.

Really great antioxidant, so it's actually protecting the brains from some of the mediators and inflammation. Things like turmeric, which is an arravella, and that can be used pretty frequently.

It even helps mood, but people don't always think about. So that's kind of a great anti-inflammatory. But again, you have to put out the fire, calm the system down.

And as you're calming the mast cells down, less reactive to whatever you are doing to treat the infection or what else is going on. Treat the mold, you know, treat that stomach bugs, help the digestion.

So that's how I think about it. Yeah, that's great. Yes, we use a lot of the same tools in the arsenal to just calm these little brains and bodies and just try to get them feeling better.

So Debbie, where can people find you? Well, I mean, usually my website is Holistic Pediatric, or you can email me

at DrDebbie, and that's Debbie with a Y, at holisticpediatric.com.

I'm also at drdebbieatneutrometics. com, depending on what kind of questions you have. But those are two ways to get in touch with me. Yeah. And are you currently accepting new patients?

I am. Great. All right. Well, thank you so much for being on today. I'm so grateful and just helping our moms and dads and family members understand what mast cells are and different tools in the arsenal.

And so if you're a patient here at Hope for Healing, reach out to us. We use NutriHist. we have some other tools and the Arsenal that are very, very similar.

Like we mentioned, the NeuroProtect to calm those mast cell. It's just contingent upon the uniqueness of you or your child. For example, I mentioned earlier, and I'll just talk about it, it's our proprietary wellness blueprint that vagran genomics has allowed us to use.

And we identify, for example nerve growth factor, if that is abnormal and if it is polymorphed or changed. then we know that luteolin is incredibly effective.

So we love using that. And the polyphenols you were mentioning, flavonoids, poly phenols, as Dr. Debbie said, just these beautiful bright colored fruits and vegetables that we can derive all these amazing herbal teasters from and put them all together.

So I want to thank you again for being on the Get to the Root podcast, Debbie, and maybe we can have you, again, on, the podcast at another time, talking potentially about, I think, pregnancy, pre-pregnancy, how to prepare for a healthy pregnancy and then how be in the proactive preventative mode for your beautiful unborn baby.

That might be an option. Okay, that would be wonderful. Thank you so much for inviting me today. I always like to educate and the more people, the things you understand, and more you can recognize your kids and help your kid.

So that's always wonderful, right? That's what we do. That's right. Thanks for being on, and I appreciate your everyday people speak, being a fellow pediatrician, because that's so critical for families.

All right, well, thank you so much. You take care. Bye-bye. Thanks for joining us at Get to the Root with Hope for Healing. If this episode helped you, follow and share it with someone who needs it and leave a review.

It helps others find us too. For a free consultation, visit our website at gettotheroot.com with a number two and schedule a welcome call. We'll see you soon.