Introduction to meditation research

Everyone. Dr. Tom Moorcroft, back here with you for this episode of The Healing from Lyme Disease Summit. And today, super pumped. I'm going to be talking and bringing to you Dr.

Hamil Patel, who's a researcher, who we're going to be talking about medication, biochemistry, human health. And one of the things that you all know about is I love talking about how we can reignite the self-healing mechanism within ourselves and how we you can take back charge of your healing and then even optimize how your medications and your supplements and all your other healing modalities work.

And the reason I wanted to talk with Dr. Patel is I don't want to just be saying to you, hey, like meditation works or mindset works, I want to know what the science is like because when you dove into the science, it like for me it just blew my mind.

How much science is out there that actually supports how powerful our healing mechanism is. And I met Dr. Patel at a Joe Dispenser event, and he's been doing a lot of research with him.

And so I wanted to say thank you, Dr. Patel, for joining us. And really what what I mean, Ph. D. researcher. How do you get hooked up with Dr. Joe and what's the the mission behind all this cool stuff you're doing?

Yeah. Know, it's great to be here, Tom. So a little bit of background. So I got my Ph. D. back in 2002 at the medical college, Wisconsin, and the focus was it's not a PhD in meditation, right?

It's a PhD in pharmacology and toxicology. Some a card carrying pharmacologist where we studied the impact of various drugs on living systems. I then came to San Diego to do my post-doc.

So this is advanced trainings that most PhDs do for three to whatever X number of years. Mine lasted about three years. The goal was to move from whole animal systems to more smaller units of life.

And so we started doing learning a lot of cell biology, molecular biology, biochemistry for the last 20 years, my labs focused on a single protein called cabbage and in various diseases.

So we're interested in cardiovascular disease and aging diabetes, neurodegenerative diseases. And we've essentially beat a dead horse to even more death over the years.

And it's taken I mean, it can happen, right? It's taken us 20 years to take this protein from a test tube and hopefully into humans in the next year or so for as a therapy for ALS.

But it's a 20 year path to get that to happen. About two years ago, I was introduced to this idea of looking at meditation as a modality in applying our biological techniques to that.

So about ten years in San Diego, I shared an office with the pain physician Toby Mueller, Bertram and Toby and I.

Defining meditation and its entry point

The goal was he was an M. D., Ph. D. I was a Ph. D. The idea was that we would sit in an office at the end of our long days. I would tell him about all the crazy, amazing research we're doing in the lab.

He would tell me about all the clinical patients he saw in problems he had, and then we would create solutions as a group and an advanced research and clinical medicine.

We became really good friends. We never did research together. It was ten years. And so Toby then went off and started his own series of clinics in Palm Desert.

Opioid Crisis Hits. And so now he's left with this notion of, Well, I can't keep prescribing these pills knowing full well that these patients are going to become addicted and potentially lead to their demise.

And so he started experimenting with alternative ways to manage pain, and meditation was one of them. And there was a Dr. Jo person who was a practitioner in his clinic, and they applied some of these things, saw some amazing effects.

Toby went to a Jo dispenser retreat finally and was blown away. And of course he went up to Dr. Jo and said, We need to study this. And Jo was like, I know.

And Toby's like, I know a guy. And so I'm the guy. So we remembered all the cool things we could do in the lab, and so we started thinking about this.

And meditation is something I did when I was an undergrad, right? You learn to explore different aspects of you. I was raised as a Hindu, and so meditation and contemplation were core aspects of that transition now in my later life to Christianity.

But there's meditative components to two Western faiths as well. Right? And so I, you know, I had a guru in college and I meditated and I thought I float, levitate and do all these things.

And then life happens and you move on and you get busy with stuff. And so now, 25 years later, we're revisiting meditation and some of the things we're uncovering are quite dramatic.

And the goal really is I don't think anyone in the world would argue that meditation has a stress relieving component and increase some health resiliency.

The question and the hesitation for the hard core scientists is, Well, how right is it? You're basically thinking about nothing or thinking about some focused attention.

And that leads to health benefit. Most people can't make sense of that. And so the goal of our project over the last couple of years and hopefully for years to come, is to figure out what happens during the meditative experience in the mind that then alters how the body deals with disease and health as well.

And resiliency. Base. I mean, it's so important because the thing that I think about is one like what is meditation, right? And like maybe we can talk about that a little bit.

And then also kind of like I think a lot of people think of it like me, my daughter, like she's grown up with I've been talking this talk for way longer than I ever even thought about having a family.

So, I mean, it's been a core part of my life and healing, but it's like it's boring, it's hard, there's no good benefit and it's kind of woo woo and stuff so well before we can, because there's so many, I mean, there's all this amazing biological and research information, but how do you define meditation?

And then like what's the access point for people? Because like, you know, a lot of people think of it as just like crap or boring. So, so this is something we've really been thinking about.

And I think one of the things that we're realizing is what Dr. Joe does it. You have to use meditation because people understand what that is. I think if you were to say the word meditation 20 years ago, people would would scowl, right?

I mean, they did it was it was sort of this Eastern thing that no one wanted to touch because it had all this other baggage tied to it. Now it's sort of an accepted part, right?

People are into the karma app and they do all these mindfulness kinds of approaches. And there's lots of evidence that mindfulness meditation where you're fixating and focused on a particular element, allows your mind to then let go of other things that it's attached to.

And there's some stress related reparative aspects to that. The thing that we've noticed in this, in the research that we've done, is that I think we need to elevate our assessment and definition of what meditation is and what where it can grow.

And so I think that that for for a novice and introductory individual that's getting into this space, this is how you typically enter it, right? You learn to close your eyes, which is something we as humans don't do much of unless we're sleeping.

And I find this in my day is is I'm stressed and the thing I do is to to multitask. And sometimes when we're stressed, the thing to do maybe is to just close your eyes and check out for five, 10 minutes and recenter and come back to the problem.

So I think the introductory phase for a lot of people is to be able to close your eyes and focus on something, right? Whether it's this nothing space, whether it's your breath, whether it's the tip of your nose, whether it's a particular body part.

But focus on some things so that your mind then doesn't wander into all of the other things that it has to deal with thought wise, stress wise, all the other things that you're cognitively dealing with.

And that focus then allows you to come up with some resiliency in terms of stress, adaptation and other things. And then you can go back to your normal day routine activity as you would have it.

One of the things we're finding is that in certain meditative experiences where you go deeper, where it's not a vibe, ten minute focus, it's hours. I mean, you've been to these good sums of nerve.

Four or 5 hours and ended up.

Immersive retreats and rapid transformation

Going, I mean, it's it's worth it to get your mind to be quiet, all of that for that amount of time. And I think what you then do is you're evolving the initial phase of this meditative practice where you're focused on nothingness or or a sound or a concept or a thought or an idea, and your brain is evolving to the next level.

And the closest thing I can think of to describe this is, is more of a religious sort of aspect, right? People talk about this contemplative experience where you touch the divine or you have this mystical experience.

People tend to describe this when they're on plant medicine, as well as they see visions and things like that. And I think this is the transition phase that we're looking at is how can a focused, meditative mind then lead to this contemplative phase to then really change the biology downstream?

Mm hmm. The task for for people who are practitioners of meditation is to convince the skeptic world that this is really worth doing. And this is, I think, the hard part where we think we can make an impact in this is if we can define some of the the hard core biology that that we can show happens and changes, then maybe it will change some of the minds of these skeptics to actually close their eyes and go into this deep, meditative, contemplative state.

We'll see. But it's rough. It's hard for people to wrap their heads around it. The other what you mentioned, like your what your daughter says is I think the big barrier for people is that it's going to take me 30 years to become the Zen right then. And I think we don't give ourselves enough credit.

A lot of our evidence that we have so far suggests that in in seven days, in an intensive retreat, you can get to look

like someone who does this day in, day out for years, which is quite phenomenal.

It is pretty incredible, too, because like, you know, I don't know in those seven days, I mean, we're probably doing like 35 hours on some form of meditation.

But one of the things I like to do, I love I've heard Jo say this, I've heard a lot of people say it's it's my favorite definition really, of meditation is to become familiar with know and it's really about becoming.

And for me and for our audience in this summit, really, it's about becoming familiar with the state of health that you want to live in. Do you want to live in this state where we're not really where you're just focused on what you don't want or and receiving more of that or, you know, are we creating those neural networks that allow us to heal?

I mean, we've had some guests speaking about, hey, everything's created twice, first in your mind and then in the physical plane. And I think that the work you guys do just really gives us that access point.

And one of the things that I came out of Jos were a retreat with was the I love the way you just said it. A minute go to because in the retreat, like we learn different.

We're sitting up or lying down. We're walking, walking. Guys, you can walk and meditate, right? And you can walk in that state that you want to be. In fact, for me, the goal is not to be having to sit on a cushion for an hour a day, but it's actually to be at a walk every moment and breathe and sleep in that state.

So I just think it's so powerful. And when you say like, you know, a lot of people are like, yeah, all right. Hummel That's really cool. That like in seven days I can go to a retreat and I'm going to come out.

That's a lofty that's I mean that's a lofty promise that I can now look like I'm an advanced meditator, but like, so how do you know this? Because this of book blows my mind. I mean, I've seen your data.

This is amazing. Yeah. So, you know, it it. Even as a scientist, I was skeptical. I still am about some of the things I see and observe and experience at these events.

So it took me almost a year of Jo nagging me to say, Hey, when are you going to come to an event to finally go? And what ultimately convinced me was this data set that we generated in the lab.

So we looked at three groups of people, right? And you need some controls and other things to look at. So we have controls and our controls we purposely picked and we separated over this for quite a while to figure out who the optimal control would be.

We ended up selecting relaxation controls. So these were people, usually spouses or partners that were attending the events but not participating in the meditation.

So they were joining their their person for that week, but they were doing work and hanging out at the pool, doing light kinds of things, but still at the resort. Right.

So they were eating similar foods on a similar sleep cycle, that sort of thing, but they were relaxed but not meditating. And then we had a group that we recruited that were novice meditators.

So these were me, you, others that are first time attendees that are skeptical, right? We don't know. We've been bugged by someone to come. Won't really know what to expect.

And we have that healthy skepticism of this is not going to do anything to my life. But you know what? Let's see what happens kind of thing. So the criteria for a novice meditator is they would never they haven't attended the live event yet and that they have been meditating or thinking about meditation less than six months.

So it's not really a core part of who or what they are yet. And then we recruited the extreme for the experienced

meditator. So on average, I think our experience group, a ten has attended like three and a half workshops.

So they're they've really committed, right. This is something that they've done consistently and most of them meditate daily from 1 to 2 hours. So this is a core part of what they believe their existence should be and they see a valued benefit of this.

And so one of the things that we're very after in our research is unbiased, untargeted kinds of things. One of the things that scientists do and there's two sorts, right, ones that are just looking for answers.

And and we'll look in a very unbiased way at this or ones that already have a preconceived idea of what to look for. And so we could go down that path.

Right. We know that there's stress, proteins and other things that we could go after. And we probably see differences in those in these events. What we wanted to look was not with that bias I of we expect these things to change.

So let's look at these six things show that they change and show that this work we looked at the unbiased approach. We looked at everything everyone possibly change, right?

And so one so we're applying a multi Olmec kind of approach to this. And one of the Ohmes that we're looking at is the, the metabolome. So when you're happy, when you're stressed, when you're doing normal activity, when you're walking, sleeping, all of your cells in your body are releasing metabolites, factors that are byproducts of of metabolic processes, energy utilization and generation that then get secreted these get captured in your blood.

One of the primary creators of this is your gut microbiome. So they release a lot of this metabolic material into your blood, which then gives your cells and other things, raw material to to create life, essentially energetics and things.

And so we thought that this would be an initial good conduit to look at. It's fast and it's cheap to do. And so we took controls, novice experienced, we took blood from them before the workshop started.

So just coming off the street, whatever their stressful life was, however it was, we captured them at at that static moment. Then we had let them go through the entire week long experience.

The controls, I'm hoping sat at the pool and drank Mai Tais all week. But the novice and experienced individuals were immersed in this workshop where they were meditating for 35 hours and listening to lectures for 24 hours.

The other unique element is that they were eating essentially the same food because breakfast, snack, lunch, all of those things are provided and they were on the same sleep wake cycle.

So this becomes a perfectly controlled environment in which to do these experiences. It's not like you come to the retreat and you go away and do your normal, stressful life at home, and then you come back the next day.

Designing the Quantum meditation study

Everyone is in a locked space for seven days to do this kind of work. So then we measured blood from all of these individuals. At the end of that seven days and we started comparing the two.

Where does a person end up at the end of the week versus where they started? So we looked at the controls. We saw some small changes, kinds of things.

But then when we looked at the novice, there was this explosion of metabolic factors in the blood. And so this was this first suggestion to us that when you subject your mind to this focused week long experience, your blood changes.

And if your blood is what's circulating throughout your entire body, is it a capture of your body experienced by

seeing 2000 things that change? You're like, Holy crap, there's something going on.

The mind is changing the body in this unique way. We've then able to advance this idea to look at various factors in the blood and see what kind of resiliency they have in other living systems that have never seen meditation.

And so as this concept has evolved and as I've gone to my first events about a year and a half, about 18 months ago, I, I sort of just started to realize what this is, right?

I know I have a brain because, you know, Descartes meditation on first philosophy that I think therefore I am and I know my brain can solve problems, it can compute, it can think, it can come up with solutions to things that are I see that are problems that we face.

We have come to realize over the last two and a half, three years is and I never had this concept before, is that the brain can be used to actually heal the body.

And I'd never thought of it as a healing organ. Right. I mean, you think of it as something that deals with external issues and we fight much earlier is now there is a way to focus that that energy, that power, that that whatever it is to an internal environment.

And our early data suggests that when you do this, when you close your eyes and are intently meditating and contemplating, your body changes and we have lots of evidence to suggest this now.

So and it's just it's mind boggling. So seven days of focus. So if we call it 35 hours, hey, that could even be two months of a half an hour to three months of 15, 20 minutes.

So that's not a lot of time in the grand scheme of how long a lot of people are chronically ill, what's the difference if I do? Is there a big difference between if I do like an hour or two a day versus if I just do like a week long and then I just kind of, you know, do a little here and there.

Yeah, I think it's like anything, right? When you're a learner, if you're on your own, I think you can catch it and capture it. But it's going to take you a lot longer to go through this process.

I think what the week long allows you to do is learn the process, right. And so it really gives you a construct and a framework of what you should be thinking about, how you should be thinking about it, and then ultimately how you go about that meditative experience and a big part of meditation is breathing.

And so you learn a lot of different breaths during this. And when I did my, you know, early explorations in college, that was a huge component of that meditative experience as well, is how do you bring oxygen and energy into your body to then transform the mind to do other things?

And so I think that that you can learn it on your own, but I think it accelerates much more when you come to an event and you get focused attention on how to do this and you get practice.

One of the things I have struggles and troubles with is if I try to learn something on my own, there's a thousand other things I have to do, right? And so the only way to really immerse and do this and people have shown this with language is if you force yourself to go into a situation where you have to use that part of your mind that you're not always going to use, then it evolves and adapts very quickly.

So the best way to learn a language is to throw yourself into a situation where you have no other options but to use that language too similar to this right to to really learn how to meditate and get your mind to this elevated state.

I think you have to have that first experience where you're immersed in it for a long enough time, which then when you leave, you have a practice of it.

One of the things we're very interested in looking at is the dosing effect. So whether you come to an event or not or

after you to leave the event, how much do you have to how much do you have to meditate to keep that process going?

And we're starting to ask and answer some of these questions downstream. Well, that's really cool because I think that, like a lot of us can find a week, you know, we can say, hey, in the next three years, I'm going to I'm going to figure out a week where I go hang out with Dr.

Joe in the group, because I think it's so true. The immersive aspect is is incredible. The the pattern interrupt of a completely different state like where it is it's just like the times are different, you know, it's early, it's late.

But also you, like you said, you have the controlled environment where everyone's there for the whole thing. But that community too, that's the one thing that like having been someone who has a lot of experience in this, the part that I love about it is that the community vibration raise is is palpable in the room.

And then one of the other parts too, and I wonder if you have any research on this is I always love like we in the in the, you know, the first course, the retreat.

We're like we sort of get into it and then we really dove deep into it. And then we talk a lot about gratitude and love. But then towards the end of the week, we start getting more into actually, you getting into our meditative state that we're used to for ourselves and then deepening that by actually sharing that love experience with another.

And it may even be a person that we've only just seen before, you know, what's going on there. And like for me like that, that was like, I love doing crazy stuff and like, you know, getting all meditated out and having a great time.

But there's something so grounding about the moment where it's not just about me and I connect to others. I mean, what kind of work have you guys done in that area?

Yeah, so the early studies, they were limited due to resources and other things and there's still limited resources are a huge part of research, I think things that basic science don't understand.

It takes a ton of money to do what we do in terms of the profiling. And so we restricted all the initial studies to healthy subjects. We wanted to see what a healthy person does to their mind at these events to then give us a roadmap of how we can take diseases to this healthy state.

One of the things we noticed, and this is just amazing about this community is we will will design a study and will send out a solicitation to get subjects.

When you do this in academics, you're scrounging to get people to join a study, right? It takes years to fill out a study. We send these things out. We get eight, 900 people responding back saying, I'm interested in your study.

And we could pick initially when we started this, I think our first study in Indian Wells in 2020 was like 35 people. We could pick out a six 700 that said yes.

And it went on like that for a couple of the events. And so the people who got picked were on cloud nine because they got to be guinea pigs and studied and poked and prodded.

And I was amazed that they said nothing over this where we saw a lot of chatter was in the ones that didn't get picked. So they would come up to me at these events and what the hell do I have to do to get into your study?

Get picked? I, I want in. I want in. And so we went back to the drawing board and I designed this study called Quantum and we've done a couple of iterations of this.

So Quantum is the quest to analyze a thousand humans meditating. And so the idea is getting at what you were talking about, right? There's an individual experience that happens at these events and then there's a collective group experience that happens.

And then there's this collective group, group experience where you're so grateful that you turned that energy and love to someone else. And so we're starting to study all these elements.

But what quantum allows us to do a study of them in a biologically relevant kind of way. So the two things that you we launched the first quantum study in Marco Island in January of 2022.

So what was it 11 months ago? Right, right. Yeah. And the two things you had to do to enter Quantum was you had to wear a of a wearable device that allowed us to collect biometric data on you heart rate, heart rate variability, sleep activity, those sorts of things.

And you had to respond to surveys. You'd have to do a survey before the event started, after the event ends, and then multiple time points after you leave the event.

And so we thought that would be an easy buy in. And then for the ones that were more adventuresome, we wanted some biological samples. The hot area right now is microbiome.

So the gut really people think maybe your primary brain and it controls lots of different things that happen in your body. And you know, there's this book, everybody poops and we used to read this to our kids when they were young.

And so we're like, everyone does it right? So just give us a little bit of that sample and we'll see if there's these mega changes that happen in microbiome over time.

UCSD is one of these amazing places where we have one of the leading researchers in microbiome research here. It's amazing opportunity to be involved in that.

And then we got scrapes from cheek cells. We look at epigenetic changes that we're very interested in. This idea that the environment can modulate your genetics, and then that ultimately modulates the expression patterns of proteins in thing.

And so we're very into that idea with this experience as well. And so at the end of the day, we ended up enrolling 978 subjects into Quantum, which is a mega right.

No one came up to me afterwards said, Why am I not in your study? We took everyone and everyone at to be in it right there. The only exclusion criteria was if you were under 21, because our IAB doesn't allow that. Right.

So it was a mega, mega amount of people that were in this study. And what we happily learned through this and I knew we were expecting this right, was that there was this group of healthy individuals.

We had about 120 people that had no disease box that they check, check. But then the rest of them, we have lots of diseases that are represented in quantum.

We have anxiety, depression, PTSD, hypothyroidism, autoimmune disease, diabetes. There's 18 diseases that we have at least 30 subjects or more in quantum.

Biometrics, microbiome, and emotional language

And now we can start looking at real interesting statistical ideas around this. And so then the question became, how do you track these individuals throughout the week?

So we have a device that tracks them 24 seven as long as they're wearing it. And so now we can look at what happens early in the week, what happens on day one, what happens in the middle of the week, what happens at the end, and how this is transitioning.

And we can look to see what's happening when people are just meditating and what happens when they're in these

coherence feelings. And we start seeing these amazing changes during these coherence healings in people's biometrics, their heart rate variability changes, their heart rates change.

We think this is tied to what's going on in the room. There's all this love and energy and positive feeling that's going on. The other crazy thing we see in this is when we look at the microbiome, we've started to to segment out different diseases.

And cancer was our early focus. And it's been the focus of research for 2022 for the year is and this was just this is I still can't wrap my head around this so the cancer subjects in quantum when we compare them to age and sex matched healthy controls have a dramatic change in their gut microbiome before the event starts.

And it looks worse in the cancer subjects as you predict. Right, right, right there. Bacteria that control anti inflammatory responses are reduced and other good bacteria are reduced as well.

In seven days, they report this dramatic shift in their self-reported health criteria. So they feel like they have a better generalized health. They have better ability to do things with their family.

What's even more striking is their biology changes and tracks identically with that. When we look at their gut microbiome, it looks more and more like a healthy subject at the end of the week.

And I was not expecting that. Right. You see this dramatic shift in what people think is the primary brain that's now being controlled by what we think is our primary brain.

Right. Sort of your thoughts and these new circuits that you're wiring is now changing how your gut microbiome is expressing. And so this is early evidence to suggest that mind can change the body in these unique ways, and it can change the body in a disease state to make it look more and more like a healthy individual.

And so the goal now is to really study this in finer detail. We launched Quantum TA in Orlando a couple of weeks ago, and we recruit about 820 people into this study.

So between the two studies, we have a mega population of people over the year and we elevated quantum to. So we still had those four things, the Garmin, the health surveys, the microbiome and the cheek scrape.

But we asked people, we figured, you know, they're going to give us stuff, right? So we want more, get more. So we have your blood. And I thought we get maybe 100 200 people to say yes.

Initially it was 800 people that said they would give us blood. Right. And so now this allows us to look at some really, really cool stuff in a very large population.

We collected blood, urine, tears. One of the things you and I experienced at these events is you cry almost the whole week when she gets a. Lot of her release. Yeah.

And so the idea is what's in those emotional tears are their unique antibodies, hormones and other things that we can track as a progress of how an individual's evolving and changing and then tie that back to everything that's happening.

And then the other thing we captured in Quantum that's unique from what we've ever done before and we've been playing around this with over the year, we've done it in some smaller studies is start to look at language and how you process and utilize language.

And so we're working with a linguist in Oklahoma, and he has this algorithm that he's developed with a collaborator through an NSF funded grant where they can take the words that student use, students use in classes and determine if they're transforming in how they learn and how they perceive and do these things.

And so you can pull out different sort of word fragments and things that people start using. So the idea is could we

then apply this to the quantum sample?

And so what we asked is everyone record a video every day of the week and they'd be prompted. The first was describe what your meditative experience is, blah, blah, blah before the week long started.

And then every day you'd be like, Describe your experience for today. And they would get 5 minutes to record their thoughts. We can extract the text and then this gets sent to our colleague and he can look through these seven videos that we capture on these individuals over hundreds of individuals to see if there's this new use of words that then correlate to changes we see in the blood, changes we see in the tears, changes we see in the urine, in the in the the microbiome and all of these things.

The other unique feature of the video capture is not only do we get text, but we also can get a visual, right? And so there's lots of interest. And one of the things that Joe and others would say to me, once I started going to events and meditating is you look different.

And so your muscle tonality and other things change. And so we're going to do some video analysis to see if we can capture changes in muscle features and how your face expresses.

And then we have the sound files. And so we'll be able to look at sound intonations and things like that and to then be able to correlate hundreds of that captured data to the biological markers that we have.

We think this is a gold mine to figure out how a human evolves and to give them biofeedback. At the end of the day, how easy would it be? Is after meditation, all you do is you speak into your phone for one minute describing what happens and your phone tells you if it was a a good or bad meditation or guides you on the next one to think about what to do.

Yeah. You know, it's interesting, too, because for me, I'm inspired to hear all of these things that are pointing to that the body is like the human being is one interconnected whole.

And I think a lot of people are working on the physical plane to overcome chronic illness. And we're realizing that, you know, like in Lyme disease, we talk a lot about possible theory and fight, fight, freeze.

Well, part of the problem is facial into just, you know, expression and gesture. Intonation are things that sometimes we can't completely understand after we our brain and physically experience the inflammation of an infection.

But now you're saying that maybe by changing our mind and focusing on something different, we're having these early signs that our personal experience that we can change that is scientifically based.

You know, I just I think that for our our group, that it's not just, hey, meditation, you're going to feel better. Literally, you can literally change your entire future.

And it's like, you know, you're like you're talking about changing the microbiome. You don't even need a probiotic it. You can fix it with your mind. It's how powerful.

Yeah, I love it. And that's where we're after. As if we could do these really intensive studies that take a lot of resources, I think what would we be able to come up with?

And we're building the machine learning algorithms to do this is what's the cheapest point that we can calculate along this transformative change, to then come up with a way to give people, a way to track what's happening to their bodies.

Right, right. And we think that if we can tie language changes to biological parameters, then that language becomes the targeted way of looking at the experience over an extended period time.

And this is where we'll get into the dosing effects and all those kinds of things, right? The other aspect of all of this

is the way we think comes out in unique ways in how we express right.

And so that expression is in the words we use, the expression is in our face looks. And then ultimately in in our tonality. For angry, we tend to use a louder, heavier voice.

If we're shy, we tend to have a shyer, quieter, sort of muted kind of voice. And so we think that there may be ways to introduce mimicking kinds of feature into this as well.

So if you could look at let's say we had 100 cancer patients in this event, 50 of them healed, 50 of them don't. And we have ways to track in their their medical records what the end effect is.

The question now then becomes what's unique about those 50 people that healed and what's unique about the 50 people that didn't? And how do we change the experience of the 50 people that didn't and could use them affirmatively, words that the other people were using.

Is there some biometric signal that could be altered in a unique way, like the Holy Grail? It's endless. How you could go. Yeah, it's interesting too.

And you say that a lot of what I talk about in a lot of what some of our other guests are talking about our our language patterns. And I talk a lot about rebooting your operating system just because so many of us have one of these floating around.

And when it doesn't work, we either turn it off and turn it back on and get a good night's sleep, or we reboot the operating system. And one of the things really is that I've learned is it's that this habitual way of thinking, whether it's unspoken words, I speak to myself in my head or even what comes out of my mouth is Reprograming and reprograming me and everyone around me.

So that's like that's another part. I didn't even think of that earlier. The collective ness of this is we're all talking the same experience, and if you can change language patterns, that means you're changing thought patterns in a more permanent way.

I mean, it's it's just mind boggling. You said it it's it's almost infinite how much you can do.

Meditation, immunity, and viral infectivity

But it's just one of the things I want to you know, I know will at the end let everybody know how they can kind of learn more about your work and support it.

Because I remember I was talking to Dr. Hillary, who works with you guys about doing a group of Lyme patients as part of this. That takes a lot of money and effort.

How can we make that happen? And so we'll let everybody know that. And I'm sure if we. Were to dissect into Quantum, I thought I saw Lyme disease listed as one of our SO we have 18 where we have 30 people or more.

But if you look at all comers and to quantum, there's about 50 diseases that are represented, some that are more rare than in some of the other ones that we see.

Well, if you guys are seeing a few more Lyme patients, I'm sure we can find them for you, you know. 30 now. Right. And so one of the things is that's really cool is like heart rate variability.

Energy was talked about this for a long time and it's a thing that like if it's up, you have resilience to stress, you have their resilience to infection that shows that your immune system is working better and generally you have an overall better outlook on life.

So increasing heart rate variability is a quick and easy way to actually boost your immune system rather than taking

75 immune boosting supplements. Just get into your heart and feel some gratitude.

One of the other things though, to Hummel that you were mentioning that I think I would love if you're open to chatting about it, is you're taking all these substances, you're taking out of bodies to study.

And one of the first things you and I actually talked about was when you remove blood from people during the pandemic. Yeah. And I was wondering if you could share some of the things you learned, you know, about meditation and and how potentially powerful it is in infection.

Yeah. Now, so we have a paper that's been kicking around. It's hopefully off to the next journal where it's tough to get a science paper published. Right.

You got to get people to buy in, go through all the review process and all of that. So we're in this. It's a it's an interesting finding, but I think there's some political weirdness with it.

And so it's it is there. May or may not be some of that. And so it was this idea and was almost a project that was born out of necessity. And so the first event we did was February of 2020, 2020.

And we all know what happened in March of 2020. Right? The world basically shut down. Our labs were closed. We had to leave campus and work from home and those sorts of things.

In order to come back onto campus to do research, you had to focus in one way or another on essential work that needed to be done. And the essential work at that time was around understanding SARS-CoV-2, COVID infectivity, those kinds of things.

And so we had this I had this thought, right, we've got this blood from meditators. We know that meditation has in the literature, there's this clear connection with meditation and rise in immunity.

So could we test the blood of these meditators in an immune response kind of assay that we could develop in the lab? To do the real work, we'd have to get live SARS-CoV-2 virus and study that in the lab.

The problem is my lab is not equipped as a BSL three facility to do that. We have a BSL two plus designation so we can do a lots of virus work, but not the. Full line with the hazmat suit and whatnot.

Right. And so there is one facility on campus and it had a line out the door. And so what we invented in this is with the viral vector core on campus is a pseudovirus.

And so the pseudovirus behaves on the surface like SARS-CoV-2. So it's got a spike protein from SARS-CoV-2 too, but the inside is completely gutted, so it's not pathogenic and we've replaced it with a read reporter And so if this pseudovirus that looks and behaves like SARS-CoV-2 on the cell surface and can engage with the cell and enter within 24 hours, it turns the cell red.

And so you can very quickly count how many cells were infected. And so you've got it infectivity assay. You can sort of look at this. So the hypothesis we had is there's something that meditators do during their practice that elevates factors in the blood that somehow limits the ability of viruses and other things to enter the cell to create infection.

And so we did this pie in the sky experiment, the thought, well, you know, this isn't going to work, but let's just try it anyways, right? So we took lung epithelium cells and we did what's called an adaptive transfer experiment, right?

So these lung epithelial cells are from a subject many, many years ago who donated their lung cells. This guide may or may not or woman may or may not have meditated.

Who knows, right? So they're not there. They come from a source that's probably likely never seen meditation. They've divided hundreds of thousands of times.

So their that effect is completely lost. So then we incubated these cells for an hour with the plasma, the blood stuff we had from these meditators, the controls, the novice and the experienced before the event and after the event.

And remember that idea, that concept, that a novice at the end of the event has this explosion of factors. So they're the pre to post look very different so there's unique things in the blood after meditation, what we noticed in both the novice and more so in the experienced meditators is that when we did these assays, there were less red cells.

After 24 hours. And so there's something inside the blood of these meditators that prevented the virus from entering the cell, infecting it, and ultimately it if it was the pathogenic version.

And so then we went on this gigantic deep dove to figure out what it was in the blood of these plasma, from these meditator eyes that created this effect.

And so we again went to this unbiased sort of approach to do this. We fished everything out and put it on a mass back and looked at the protein spectrum of things that interacted with the virus and with the antibody and with the complex of proteins inside that plasma.

We came up with a list about 107 that that fished out. And as I was sort of annotating the list and looking through it, one thing caught my eye and it was this protein called Serpent five.

And so serpents are a large class of proteins in the blood. And and the reason why they're important is they're a protease inhibitor. And so what Sarge does is the spike protein on the cell surface binds to these things called ace2 receptors on the surface of the cell.

It's trying to target. And then there's a protease that comes in and chops that interaction up and allows the virus to internalized, to create infection.

What meditators elevate in their blood is a protease inhibitor. So these serpents are protease inhibitors, and so it acts as the plugged inhibit that scissors from chopping up that interaction.

And so now here's a factor that a meditator elevates by closing their eyes and elevating their their thought and energy that targets specific this infectivity.

Right. And and when you when we did the search there's actually pharmacological groups out there that are already targeted serving fives as potential therapeutic druggable targets for SARS-CoV-2 so they're developing drugs exogenous that you could take that will limit this and we have data here showing that all you have to do is close your eyes and you can elevate this trip, which is which was just mind boggling.

And so then we we've we learn from this. And so the paper's pending. We got some really cool data on different variants and other things. But the idea then is if you could do this with immunity and infectivity, why couldn't you do this with cancer and other things that we want to look at?

So it turns out that when you put blood from these experienced meditators on cancer cells, the behavior of the cancer cells completely changes. And so now we're on this deep quest to figure out what are the unique factors in that blood that are changing the the energetic state of a cancer cell versus something else.

And so we think that this they could hold the cure for a lot of different diseases. Well, we've got cell model where nerdy Joe. Wild. For diabetes for cancer and so it just like we talk about right it's infinite it goes on and on and on of things you can do with this.

To me and say that's the most amazing thing is like I believe everything you just said, right, in terms of my I know your body can do this, but it's like when you have this science and then you can kind of really fine tune it.

This is like the marriage. This is why I got into medicine. I mean, this is what medicine is supposed to be like. And I mean I've heard so many people recently talking about like, you know, archeology doesn't want to change when

there's new science.

Somebody else in medicine. Oh, we've got we've learned of the persistence of Lyme disease over and over and over and over. But they keep saying it doesn't happen. I'm like, but there's like a room full of papers that show that it does.

And to now little bit of marries sort of what someone might call the more of an esoteric or potentially, you know type of a practice to sort of hardcore science and then to be at a take it.

Supporting the research and closing thoughts

I think it's so important because one of the things that we're looking for in line is not only way to re-empower people and to give them hope to heal, but sometimes we need drugs.

And it would be really cool if through all of us meditating who have Lyme and we maybe come to an event and we donate and we get our name on quantum and and get in quantum and make sure that RS is 50 or 100 or 300 people.

Then you have data to see why and how we can help them, but then we can also give forward and maybe find, hey, maybe this is a new drug for the future that's not about killing the body or before or killing the drug.

The bug before the body. But we're, we're actually supporting self-healing with an actual medicine. Yeah. I mean, this is remarkable. I mean, you know, most that we're trained as a pharmacologist to get children at the beginning right and where we look to design new drugs are the body right and the oceans and the forest drugs exist in nature.

They exist inside us. And we, as as scientists and pharmacologists, just pull those out and make them even better synthetically. And so the concept that the body can create unique therapeutic elements, compounds that are existing in nature and that could be created to heal is profound.

Right. And it does this in a natural way where it's not toxic that you're creating what the body needs to heal. It's amazing that I love this. I think we could talk about all day long enough for.

Ten, 15 hours if you want. But I think people get bored after a while. Yeah, right. And I appreciate you taking the time and everyone watching this, too, because I think so much we're looking for the protocol or just the thing to do.

And sometimes if we can sit back and contemplate just a little bit, maybe even close their eyes while we were listening to the whole interview, but focus, it's amazing to me to see the interconnectedness between the science and the healing and sort of the more energetic healing parts.

We're not separate and there. And for those of us who may have lost hope, there are most people listening. Probably didn't know anyone on the planet was doing this kind of research.

You know, it's not just the new drug with a hammer, but really a way to to inspire us currently and to move us forward to not only help wine, but who knows, maybe your lab is going to help somebody heal Lyme cancer, heart disease.

Just because we're studying that crazy ass thing called meditation. So need one intervention 50 diseases, right? It's amazing. So one of the things that I just really want to highlight is I know we've talked about it a bunch and I've done I want to do everything I can to support this research because this is the stuff that changes my life, my family's life, and all of our friends, as well as all our patients, but the world in general.

How can people help? Because, you know, I know the kind of money it takes to get 30 people, much less 100 or a thousand or 2000. But if you're going to continue to be able to do this work, if anyone who's watching is interested, how can they support you?

Yeah. So there's a nonprofit that's formed that has a mission to bring meditation as a momentum forward for health care. It's called Inner Science Research, and their website is Inner Science Research dot org.

And she can go on and donate money to this organization. And they work really handedly with UCSD to give us money to do this transformative research that we're doing.

We have a very strong relationship with them to set bands. This idea of how does the mind impact the body? Nice. I love it. And it's too it's like if you do donate and stuff, you know, from our conversation in today, but also my own personal experience, your donation goes and it gets work done.

And I've had the privilege in many different arenas both privately with you and then in some in some of these events to see these the data and some of the pictures in the slides.

So everybody watch. I mean, guys, this is like unbelievable. This is the place where we all need to be. And it also to me, as you know, I want to inspire you to all know that while there is some in medicine and supplements that you probably need, so much of the healing control is within you.

And Dr. Hamoud Patel, thank you for sharing the science behind all this because it's just so important. And that way our viewers have the tools that they need and understand that know some.

Sometimes this little woo stuff is actually is a supercharger you really need. In my life it was 70 to 75% of all of my healing was from this alone. I still needed the rest.

But when you brought it back, it was like this was the thing that got me to the point where that other stuff could actually work. Yeah. So just from the bottom of my heart, thank you so much.

Gratitude for the work you've done and how open you've been with our community and our tribe and joining us today. Yeah, no, it's great, Tom. Hopefully we'll see each other at an event soon.

Awesome. So everyone, Dr. Tom Moorcroft here and Dr. Hamoud Patel coming at you with a whole bunch of meditation, researching how meditation can impact immunity and immunity, immune function and infectivity and all this latest breaking news.

So support Dr. Patel's work. And until next time, I hope you enjoyed this episode of The Healing from Lyme Disease Summit, and we'll see you in the next one.