How Functional Genomic Testing Can Guide Your Healing Strategy Transcript

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Introduction to Kashif Khan and The DNA Company

I'm so excited to introduce our next guest. Kashif Khan is Chief Executive officer and founder of the DNA company, where personalized medicine is being pioneered through unique insights into the human genome.

He's also the host of Unfilled Podcast. Growing up in Vancouver, Canada is an immigrant household. Kashif developed an industrious, entrepreneurial spirit from a young age.

Prior to his tenure at the DNA company. Kashif advised a number of high growth startups in a variety of industries. As Kashif drove dove into the field of functional genomics as the CEO of the DNA company.

It was revealed that his neural wiring was actually genetically designed to be entrepreneurial. However, his genes also revealed a particular sensitivity to pollutants.

Now seeing his health from a new lens, Kashif dove further and started to see the genetic pathways that led him to his own family's challenges and the opportunities to reverse chronic disease.

His measure of success is not in dollars earned, but in lives improved. Kashif. Welcome. Thank you. It's a pleasure. I'm really excited about this talk because this is something that we love to talk about.

Well, and this is so fascinating, right? I think we've seen a very interesting perspective shift when it comes to genes and health, right. At first everybody got super excited when we sort of mapped the human genome.

We thought all diseases solved. We figured it out, and then we figured out, oh, man, like we got way ahead of ourselves.

Why Genetics Moved Beyond the Hype

And and then what was interesting in sort of functional medicine, integrative medicine, naturopathic medicine, we I think there was a tendency to throw the genes aside and say like, screw that.

You are not your genes. You know, it's all about lifestyle, you know, and and so I think now we're kind of coming back to the genes a little bit and got maybe there's more to the story.

And so maybe just kind of give me your thoughts on that and kind of how the, the perspectives are now kind of all over the place in a sense. And I and where we're at with the whole genetic story.

Yeah. You just laid out all the drama for the genetic industry in the last few years in like 20s. So that's exactly what happened, is that there was this promise if we decode our human instruction manual, that's truly what it is.

It's instructions telling your cells what to do. Different cells know what pages in the instruction manual read to do their jobs. The thinking was, well, if we can decode this, we know everything.

We're going to fix everything. The challenge and why the thing that you said happened, happened is because the research was not aligned to what we could truly derive.

It was aligned to sort of the conventional doctor's toolkit of how do I diagnose and treat a symptom. Right, right. So the and that's how they knew how to do research evidence, evidence based double blind, you know, try and figure out if this guy has it.

This guy didn't have it. Okay. We figured something out. The challenge is most of what we deal with in health

chronic disease, aging, poor performance, energy levels, all this stuff is not a single gene factoid pointing to a problem that's really powerful when it comes to genetic conditions, right?

I'll say something like sickle cell syndrome. You have it. There's a gene switch, turn on or off. And there's no doubt that you have this problem and somehow we have to treat it and manage it.

The majority of health care is not that the majority of health care is. I have a suboptimal genetic profile. There's some job my body doesn't do well, but not sick.

But my propensity to get sick is much higher because I'm not doing this job well. What does that mean? What are now my environment, nutrition or lifestyle choices that load on that bad profile?

So that's we went kind of full circle, just like you said. I fully agree that if you go down the genetics route of here's the big data dump, here's a bunch of snips, here's a bunch of gene variants.

Most of it is not actionable, right. And this is and this is what's interesting too, because, you know, I get I got excited, right? Like I did my, my 23 me that was the first player on the market in this game.

I got all my snips, which are single nucleotide polymorphisms. And I'll, I'll have you explain, kind of what that is and its limitations here shortly, but I got all those and then I'm like, okay.

Yeah, I'm like, the heck do I do this? And then and I'm in the functional game, like, so I kind of understand a little bit about how to work those things and, but but even then I had to go work and study and learn from some of the experts who have been doing this, in the real world, because there was so much nuance to it.

And I'm not saying the SNPs, the SNPs are worthless, but there is such a limitation to them. And then even if you do understand what they're capable of or how to read those, there's so much variance and how to work with that.

And so with that, that's where I kind of left that whole game on the genetic thing. But then what's interesting is that I got into more Ayurvedic, philosophy and understanding.

And this is such a fundamental thing in our Veda, which is you have a constitution now, they use different languaging different terms, you know, pick the kapha.

But, and, and we can go deeper and deeper into that and what I find interesting is that in their framework of our Veda, same thing in Chinese medicine, we can just call it the genes.

So you have a genetic sort of way that you are built, so to speak, and propensity for entrepreneurialism. I have that same thing. Like I have a more, more, propensity to take risk and to engage with these type of things.

So there's just there's uniqueness to us. Right? This is what's cool. And I think now with, the DNA company, you know what? You guys are doing and some others, it's like, now we're finding the Western way to understand who we are at that sort of essence level, and then how to work with that.

Because that's, that's really, a key factor in not saying what are our limitations. But if I live an incorrect lifestyle for me, then what's going to happen?

Right? And how do I avoid those things? Right. That's the cool part. Yeah. That's. So you laid it out. It's like if you come at a problem disease centric, then that's all you're looking for, right?

But if you're if you believe that genes are a tool to point to a disease and that's all you're looking for, that's all you're going to find, right? What it really is, it's so much more.

It's every cellular process, 50 trillion cells in your body constantly doing all these jobs. Every single job is instructed by this man, this code. Right.

So it's so much more than just what diseases am I going to have. It's what jobs do I not do that then lead to diseases? So to your point, a snip a gene is thousands of letters long.

There's 22,000 genes in your human genome.

From SNPs to Functional Genomics

Most of them we don't really act on. So a lot of them we don't really understand. There's really only 100 that are functional in nature. If you think about medicine versus functional medicine, medicine is when you break something.

Call me and I'll fix it. Right. Functional medicine is like, let's make sure you never break anything like what we'll get into why and figure out why you would get sick and prevent it or reverse it.

Same thing with genetics. So it's it's kind of like let's look for the snip and point to a problem. Or we can understand that in these thousands of genes there's more than just snips.

What is the snip? It's literally a spelling mistake. So a T instead of being a T it's a C. That Gene now has a little bit of a broken instruction and does its job in a different way.

Better or poorer. Right? There's also something called it insertion or deletion, which most genetic testing companies don't look for, which are much more impactful.

If imagine that the spelling mistake is so important, the 23 mes telling you about it. What if there was a whole paragraph missing? Completely missing, or there was an extra paragraph in that gene?

And now you're trying to read this page with this missing paragraph, how comprehensible is it? Right, right. Then there's something called a copy number variation, which very few companies test for because it's a whole other test you have to write in.

It's not that big data dump that pharma companies are looking for. It's much more nuanced, which is do you even have the gene? Forget about a spelling mistake.

Forget about a paragraph missing. You might not even have it. In. Some of the key areas where this happens is in the brain. There's certain, you know, chemicals that that need to be cleared, cleared, and your clearance processes can be deleted in your growth ionization process.

So how well do you detoxify some of us, particularly in the gut, think about it ancestrally, food wasn't a threat until quite recently. Right? So and according to our data, 49% of people don't even have this gene.

The GST, M1 protective of the gut blocking toxins, which is why there's so much gut dysbiosis and got problems, which directly leads to mood problems, right?

It's also glucagon addition. Your ability to clear hormones and your ability to deal with mold and airborne toxins. So some really impactful areas most of well that most of us a lot of us are walking around without this genetic code.

Right. So that's one. What do you test for the second and the other three things we should say that sort of the new frontier of how we can apply genetics is interpreting in the context of pathways and systems, as opposed to a list of snips.

Here's a bunch of genes. You got an 80% chance of breast cancer, 60% chance of Alzheimer's, a 50% chance. And you keep going down the list. None of it is certain. None of it is actionable.

You're taking the most personalized thing you have and personalizing it versus here's how the endocrine or hormone system works. Here's how the neurochemicals of the brain work.

Here's how the cardiovascular system work. Let's take those genes and apply them to these maps and think of things functionally. It's not a bunch of steps.

It's a baton pass. There's things that work together in a chain. And if you know what the weak link is, now you know exactly where to intervene. So the whole chain works, right.

The third thing is, even then, even though you've gotten to this level of precision for an individual, you still don't know if they're getting sick or if they're aging rapidly or the performance is off.

They still may be present presenting well because of environment, nutrition, and lifestyle. What this allows you to do. True genetics isn't IQ gene. You have a 80% chance of Alzheimer's, right?

That's not what our genes are for, what our genes are for. You fit in this bucket. Here's what your environment, nutrition and lifestyle choices should be.

That's how you really apply genetics. And by the way, if you do these choices instead, here's a list of problems you're going to have. And this is really key because and I'm going to give a little bit of a framework around why I think DNA testing where it's at now and why it can be so useful, particularly in our modern context.

So with with I of work that I've done, I've done with the Human Longevity Project, I went to the Blue zones talk with these people that are in their 90s and beyond 100 and and what I, what I discovered in that quest was that when we were in the mountains of Sardinia and I was talking to a 98 year old gentleman or a female that was over 102, what I noticed was that this was a subset of the human population that basically was confined to these mountainous regions for hundreds, if not thousands of years.

In other words, the way genes work from my perspective is that they do adapt over generations, right? But they adapt to the environment, right? We are open, energetic system.

So everything that we are contacting, whether it's the food, the, the sun, the, the temperatures, the air, everything that we're the microbes, they're influencing our genes and over generations are our genes.

Well, essentially adapt to the environment that we're in. So for them, generation after generation after generation after generation, in the same environments, eating the same foods, doing the same things, thinking the same things, believing the same things, their genetics essentially get specialized right and and they can get preserved.

And that's actually what we saw from archeologists in Sardinia, was that some of the most ancient preserved genome was in that region, because it's an island and it was protected.

And they they fend off the, the Romans and everybody that was invading. So it was very unique in that regard. What's unique about where we're at now? I have German heritage and Irish heritage, and I'm a European mutt and I live in San Diego, California.

So I've got genes from all over the globe, right? Yeah. And now they've landed in San Diego, which is not native to my ancestry. And I'm eating foods from all over the planet.

Right. And I'm doing exercises that are. So my point is, is that we live in a hyper novel environment with genetics that come from everywhere, that are no longer specialized.

So it's almost like we, most of us are some kind of mutt. And I say that lovingly. We have a random mix of heritage that we that we that we have, and we're using it in an environment in a context that is totally new.

So the point is, is that when I can start to understand my, my constitution from an aromatic perspective or my DNA and genetics from a more modern perspective, now I can start to figure out, because I'm not eating the diet that my ancestors came.

I'm now using different diets and different. Now I can start to, tailor my lifestyle, my diet, my exercise to my genetics, which is fairly randomized at this point.

So I hope that I hope that made sense for for people.

Genes, Environment, and Modern Mismatch

But actually, this is cool now, because now we can get precise with what, what we're working with and our unique environments and how to, to, to do so in a way that provides health long term.

Yeah. It's as if every the, the people you're talking about in Sardinia, every choice they're making is perfectly aligned to their genomic legacy. Right.

Just habitually everybody's doing the same thing and they're all wired the same way. So we now, like you said, we're scattered. It's a shotgun of everyone went everywhere and we don't know what those choices are.

Right. And even the things that we think are good sometimes are completely counterintuitive. Right? So if we go back to the topic at hand, talking about the brain, I can use myself as an example and how I ended up where I am.

So I remember I have on my WhatsApp profile, I have a picture of a guy wearing a turban, smoking a shisha pipe, the a random picture that I found online and I thought it was hilarious.

So that's my picture. So one day I was in a museum and I found that picture on the wall. That actual picture of the way. Oh yeah. So my mother always tells me, change that thing.

It's stupid. Right? So I sent her. I said, look, this guy is famous. And then she said, send me the plaque to describe who that guy is. She said, oh, wait a second, that's your great, great great great great great great great something. Grandfather. Oh, wait.

What are you. Yeah, this is actually happened. I said, what are you talking about? She said yeah. And then she put my aunt on the phone. They told me the story that, so apparently somebody way back in my ancestry was the king of Kabul, of city capital of is.

Wow. I didn't know until that day. This was like four years ago. So anyways, moving forward, if you look at my genomic legacy and you look at the way my mom behaves and my aunt who was on the phone and some of my uncles, my ability to deal with dopamine, dopamine is that chemical that powers pleasure, but it also powers reward, essentially satisfaction.

You get satisfied by experiencing dopamine, the D2 gene that that determines how dense your receptors are. Mine is way down here. Clinton. Right. So my ability, the intensity at which I experience pleasure and reward is very, very low.

Then there's the machine, which sort of breaks the dopamine down. I have the fastest possible meal. Then there's Comt, which is a hormone clearing protein.

It also has a tail end of methylation. It also clears neurochemicals. I have the fastest possible pumped. So I feel things way down here and it's gone like that.

Yeah. What are my potential outcomes. And this is why we're saying it's not your genes. Don't prescribe the problem. They give you your avatar. Who's your you are context right.

The context right now the way I perceive the world. If I just go, go about my day to the way everybody else is, I'll probably be depressed. So I just don't feel real.

Or I could find something that gives me pleasure and I'll become addicted. Or I could find something that gives me

reward, and I'll become entrepreneurial and I'll achieve because I'll keep taking risks.

Whatever I did yesterday is not good enough for me anymore. Now layer on top of that. Another neurochemical, your serotonin. My serotonin is somewhat dysregulated, which means.

So serotonin is meant to be your sort of mood balance. Or, you know, people talk about it in terms of depression, addiction, certain things. What it's really doing is determining how you prioritize stimulus, right?

It's reacting. Your brain is reacting to stimulus. That's that reptile response, right? So when you're dysregulated in your receptors a little bit shorter, like mine is, your brain has a harder time prioritizing stimulus, which to some people looks like you're distractible, you're ADHD.

But in work it's like I see every little detail, a nuance, and I catch everything. So the combination of my dopamine pathway of I don't feel and I strive for a reward because that's the path I chose, and I'm doing it at this high level of detail, creates as somewhat of a high functioning, anxiety warrior type mentality.

Right. And you wonder why I'm wired like this when you think about my lineage and even my grandma, my mother's father, my grandfather was a military man and apparently they all were.

I didn't know this until recently. Right. So, so I am designed for this. I'm designed to be a warrior because this is who survived in my family, right.

And but I'm doing it in a very different context. I'm now sitting in Toronto in the basement of a house doing a video with you online. Right. And I'm living off of that, that high functioning anxiety being plowing, you know, my work forward.

That's what I'm doing with it. So if I was in the wrong context, if I was sitting in a job somewhere that it didn't enjoy, that didn't give me a sense of reward, I would probably lean on pleasure and become addicted, or I would fall into depression.

Right? If I grew up wealthy and had everything handed to me, I maybe would have been depressed. Also, because there's no both sides don't work for me, right?

Pleasure or reward. So this context wrapped around your innate neural wiring is kind of the same as the environment. Nutrition on all your health stuff.

When it comes to your mood, your mental map, and your behavior. Context is a big one. And we can go on. There's a lot of pathways we can talk about, but this is a big one for me.

Well, I see a lot of myself in you and what you just described. Right. And what's interesting about that is that, look, I'm going to say this. You don't need to know your genetics.

It's not a necessity. However, it can be really, really helpful, especially if you're someone that goes, gosh, like, I'm I'm feel depressed all the time.

What's wrong with me? Right. And this is, this is, I think, something we probably all deal with on some level. Right? We think there's something wrong with us, or we have a problem that there's something that we're trying to fix or something we're trying to resolve within ourselves.

And I think that can help us, push us toward a solution. In other words, maybe it's pushing us towards meditation or breathwork or a certain exercise or something to help get balance in these, in these arenas.

But wow, when you find out that, oh, these are my genetics and explains how I feel and who I am to a large degree, then it kind of takes this weight off of you and go, oh, there's actually nothing wrong with me.

This is how I'm wired. How do I work with this in a context that not only suits my genetics, but suits my my internal desires and fuels my my natural gifts and capacity. Right?

Because you pointed to the warrior. That is a really important context, a really important skill, particularly in the past. But now, of course, even today, applied in a certain way.

So I'm pointing to this idea that what seem to be shortcomings or problems or issues in one way, there's a flip side of that coin is that there's a gift.

Neurochemistry, Personality, and Context

And if we can start to recognize what those gifts are and figure out how to apply our genetics in the context of our lives, all of a sudden, somebody who's caught in a 9 to 5 job, maybe that helps them understand, oh, actually might thrive in a more entrepreneurial environment, right?

And that's what I found the hard way. I got really, really frustrated in a 9 to 5 job. I didn't understand why, you know, and we can explain it as sort of a soul mission.

And there's there's all that context to and that's great. And if my genetics are helping me to understand the new path, then it just help shortcut the process and get me going in a, in a way, and, and living a life that is more aligned to who I am.

Yeah. You're so we've met with thousands of people. So part partly the reason why we understand. So again, I just described a pathway. It wasn't a gene. Right.

When it comes to depression people talk about serotonin usually. But you can see how that wasn't even part of the that was a later thing. Right. So first the pathway.

So why do we understand this in our research, what we realized the gap was and why genetics kind of sucked is because geneticists never sat in a clinic and dealt with anybody.

Right. But we spent three years studying 7000 patients before we put products out there to understand how these people behave, how they act. And of these thousands of people, exactly what you said is the majority of the case.

Yes. There are some people that have a chemical imbalance. They were born with a genetic condition and there's a mood disorder. The majority, majority, majority is not that.

The majority is. I'm addicted, I'm a depressed, I have anxiety, I procrastinate, I burn out. Why? Because you're in the wrong context. That same thing that feels like Kryptonite is actually your superpower.

Yes, totally. It's all true. And we see it over and over and over again. We've seen it in people that haven't spoken to their families in years, that sleep all day and awake all night. They don't eat that.

All of a sudden they're high functioning leaders of the family, right? Because they finally understood why they didn't fit, why they felt bad, why. And it's they're designed for something great.

They're just not doing it in so many ways. We're fish trying to climb a tree, right? And we go, yeah, what's wrong with me, Rick? Why can't I figure this out?

And we try and we try to learn how to climb the tree, and we try to figure out why we have a struggle breathing and and all these things. And then somebody finally puts us in water.

We go, oh, this is so much easier. This is beautiful. And I'm super skilled at this. Right. And so, I love this. And again, this is a new way to apply the genetics even beyond the health context.

Like I think there's a lot to the physical health aspect to understanding your genetics. And even beyond that, if you can help push somebody into the right environments in which they can thrive.

Yeah, this is where health starts to just resolve itself in a huge way, right? Like, I mean, you're pointing to something beyond just the basic health kind of how do we work with genetics? Right.

So I think that's that's a huge aspect. I want to get into a little bit more of the actual health chronic disease component, because, again, one of the things that I, one of the reasons I ran away from the snips in the 20 threes and mes and all that, even though I was really cool at the beginning, was that I couldn't find an applicable way to work with my clients or myself.

That was, to be honest, super useful, right? Like it wasn't helping me figure out to help them, execute a diet because like, let's say a diet, there's still contacts, like if they have functional issues, but the the snips say one thing.

I couldn't really go anywhere with it. So how does the DNA company, how does what you guys are doing? Cause I know you guys go so far beyond the snips so I could talk to me about that.

The what are you guys providing beyond just. Here's your snips. Yeah. We actually used in a, in a modern context part of this that what you would describe that experience was horrible.

It wasn't just anybody can test. In fact, anybody listening can go by a genetic sequencing machine, put it in their basement and start testing. Right. Testing isn't the problem.

It even comes with reports built in. You don't need to worry about it right? The challenge is the interpretation. What does it mean? How do I apply this stuff?

And the way the things are outputted are not aligned to the way they should be interpreted. And real quick, I want to I want to hit on something, because what I had to do is I ran those tests, I got my snips, and then I had to go buy a separate thing put together by a different company and different experts, and there was like 3 or 4 at the time.

This is again maybe 7 or 8 years ago, and I'd run them through this whole other program, and then that would spit out some recommendations. Right. And of course, there was 2 or 3 different ones that were put together by experts, and they were great.

And I love them for what they were attempting to do. But even that I got limited use out of their recommendations because it just wasn't enough. Yeah, it wasn't there.

They're limiting it to genetic, problems, direct genetic thing. You need to be able to apply and interpret the bridge that gap between clinical chronic issues and what the genes are saying.

Right. So so as an example, you know, if we if we focus again on the brain, literally just this morning, I was speaking to somebody, who sort of a VIP client of ours that called me once in a while.

And there was this conflict in their team where a senior leadership person just wouldn't do what they were supposed to do. But this person was so valuable and had all the right credentials, etc., that if they were actually to do what they were supposed to do, it would be incredible for the company.

So the CEO was asking me what's wrong, what's going on? So I literally, with the permission of the person, said, do you mind if I ask? And you're like, we already have their reports done for the team, right?

So what I saw was that their brain derived neurotrophic factor, this this one. Yeah. This one gene that drives one process, which is your neuroplasticity, the available ability to develop new neural pathways was completely off.

Right. What does that mean now? They were mature. This person was in their late 50s. So they're well set in their

ways. So as you age if you're BD and F is suboptimal it's not doing well.

Then you don't do a good job of developing new neural pathways, the synapses where the information sort of flows. And, you know, these superhighways of transferring information.

Right. What that means is you become a subject matter expert that has difficulty learning new skills. Once you start and actually accept and start doing that new skill, you become a master of that.

Also, right? So you become a master of few things and not a jack of all trades. And so this person who is now as well into their 50s, was a subject matter expert in what they do now, put it into a different context in a company that does different things with what that person does, and they don't work that way.

Right. It's kind of like, I'm the author, I will speak, I will write, but don't ever make me do the accounting. Don't ever make me do the legal. I don't want to ever see a lawyer's letter.

Versus the entrepreneur is like, throw it all at me. Give me. I was gonna say, you're naming me. But on the opposite, like, I'm not jack of all trades, but none.

And like, I don't consider myself an expert in any one thing, but it's rather enough of an understanding of all the things to to put them all together and give you context for it, for all the things. Right.

So it's really interesting because even for me, I did there was a little bit of an issue I had with that was like, what's wrong with me? Why can't I become the expert?

Why am I like, you know, the jack of all trades? And so it's it's really interesting that that you actually looked at that we looked at and that's one component.

Now why did they call us. Because this team was at the point where this person was slamming doors, yelling and walking out of meetings. Right. So we show them the same exact gene profile also was leading to that.

What's going on is when your Bdnf is off, things mean a lot more. So you and me are at a meeting. We hear a problem. The way we perceive it could potentially be different, and our reality now changes.

The way this person was perceiving it was everything is drama. Everything is a major, major problem. The gifting. And same thing for positive. When they experience a funny joke or YouTube video, it was a little bit too funny for them, right?

So they give things a lot of meaning. So this is what we call shell shock. And we've done this work with the US military with like black ops special forces, where who should actually be deployed on the frontlines or not, who's going to come back with problems. Right.

So this particular person was truly experiencing shell shock that every time they had a problem slam the door, yell, walked out, I'm not doing this again.

I'm never working with that person again. And that hamster wheel would spin. And they were enumerate on this thing for hours now and they can't sleep at night.

Clinical Examples: Migraines, Mood, and Sleep

It also affects their circadian rhythm. The same. So it's not only, looking at multiple genes to come up with the pathway, it's also looking at multiple meanings of a single gene. Yeah.

Because not most genes don't do just one thing. Right. So it was also dysregulated circadian rhythm. You couldn't fall asleep on at on time at night. It wasn't sleeping probably wasn't recovering.

And his mood was off. So this was one area. The second area. And this gentleman we looked at at YouTube is a gene that determines how well or not so well you deal with negative stimulus, your adrenaline response, noradrenaline.

And this gentleman was deleted. So I remember I talked about it. Insertion are deletion like a paragraph is missing. He was missing that paragraph both copies.

Which meant that not only did he give things a lot of meaning for because it was beating up, but he also experienced the emotion and use that as a primary filter.

So for him, PTSD, the shell shock, which is a means a lot. And I can't stop thinking. There's also PTSD, which I feel the feeling when there's a car accident, when there's that argument, whatever, I hold that grudge and the next time I see that person again, I go down that street again.

I get the feeling as if it just happened. That's PTSD. He was also experiencing that, right? So now he's coming into this boardroom where the company that he just left had screwed him.

You had not paid him properly, ripped off his work, not treated him well going into another boardroom, bringing back that feeling of you people are going to rip me off.

You people are bad, right? I'm experiencing PTSD, trauma and on top of that, I'm giving it a lot of meaning. And I'm going to walk out of here as soon as I hear something that's not 100% aligned with what I want.

And on top of that, you're asking me to learn and do new things, which I'm not good at. That feels like a threat. Yeah. Super threat. I mean, that's okay if you don't learn if you're not adaptable in that way, but rather it takes you a little while to learn something.

You learn it really well. That's super scary to be asked to do this new thing, to solve a new problem that you're not familiar with. Yeah. So now imagine what do you do with this?

This looks like a bunch of clinical problems. Yeah, right. This looks like a bunch of pills that are needed, right? Right. He doesn't listen. He doesn't get it. He yells, he screams.

He's got anger management issues. He needs counseling, right. Meanwhile, if you just shift the context and understand how he's perceiving what's going on, everything is golden.

Everything is perfect, and this person is going to be flourishing. And it's a context shift. And but that starts with understanding how they perceive the world.

Know what? You do this over and over. You can start to understand the cues. And you may not even need genetic testing at that point, which is kind of what we see. Right.

So that's applying it in sort of mood and behavior. But you asked about clinical. So there's there's areas where we look at things for, you know, as an example, take something like migraines. Right.

We've been dealing with that a lot. People keep calling saying, I don't know why I have these problems. So there's a young lady we just dealt with who, lawyer in California who twice a month is not showing up at work because she gets these crazy intense migraines that puts her in bed.

So what do we find? Okay. She grew up in LA, one of the most polluted cities in the world. Apparently, one hour of LA traffic was equivalent to two packs of cigarets.

I read this recently. Yeah, we're going out of LA. Yeah, yeah. So what's going on? Is earlier I talked about these copy number variations. Right. So she was completely missing the GST one gene and had the suboptimal version of the GST P1.

So what does that mean. That first line of defense that the lungs didn't do a very good job. -70% capacity to filter environmental toxins and threats entering her bloodstream. She didn't block them.

They got in the GST one gene. We all know that when we drink, alcohol goes to your liver and you get rid of it. How does that happen? Go to Thailand. By now the toxins find all the garbage and nonsense.

Send it to the liver to do its job right. And in real quick. If somebody has mold right like that, that gene becomes pretty important, right? So again, actual sure mold is bad. Yes.

And it may affect this person a heck of a lot more than that person. Yeah. I can't tell you how many family families we've dealt with where there was denial because only one person was sick, right?

Because they had that suboptimal pathway and other people didn't. Right. So now this young lady just went into law school into law of law firms. She just started working. Was blaming it on stress, right?

I have too much stress. I need stress counseling. I keep getting migraines. I have stress, which makes sense. It's a trigger for sure, right? Yeah. So what was actually so the and that's exactly it.

The stress distress was that inflammatory trigger the catalyst that pushed her over the edge. But she was teetering. That's right. Right. Right here. It's only because she's young that it wasn't already constant and chronic.

Right? Right. She's young enough where her body was already not just there but not enough. And the stress was the trigger that pushed her over the edge.

But we're talking, and this is this important, what we're talking about right here. Because this is the interaction between the genes and susceptibility.

A certain, let's say dysfunction that's maybe taking hold in the body, which is another component. And the third component, but would be the trigger. So now we have this and then and then the age. Right.

So how much capacity and vitality is in the system. Right. So I've worked with a lot of young people in the vitality so strong that we can overcome all these, all three of these components.

Somebody is a little older, it's a little more difficult. So it's really important to identify the difference between the trigger that's triggering the symptoms versus the dysfunction that's held in the body.

Right. Yeah. Or the or the sort of stress level we can call it. And then there's the third component which is the genes. And I think it's really important what you're hitting on here, which is we can't blame just one of those things.

It's not the genes fault. It's not just the dysfunctions of all. It's not just the triggers, but we actually have to figure out the context for all three of those.

Yes, remove the trigger totally. And let's hopefully clear up the dysfunction, build a little more coherence and harmony in the body and understand the genes so we know how to navigate the context of our environment so that we don't run into those issues going forward.

Yeah. So you just described functional genomics to a tee. You know I need to get that clip and put it on our website as our virtual right. Because that's exactly what it is.

And so now you look at this young lady, what changed in her life? Why now? Why now is because now she started working where she was driving in that LA pollution every day, which he never did before.

She used to walk to school in her neighborhood. Right. She lived on campus somewhere else. She went to Stanford. And I think that's in San Francisco. I'm Canadian, so I'm not quite sure he got it.

So, so anyway, she, and she was now going to an office every day breathing in chemicals that were used to clean the desk air through the vents, which she wasn't used to, you know, going to lunches in the city, all this pollution and stuff.

So her environmental context changed. So that load that, you know, the function that she didn't do well, she was now exposed to the thing that she wasn't capable of handling.

And this is why all sudden that inflammatory load increased, increase increased. And the days that she was stressed, it would push her over the edge. Now, there's one other thing that sort of paints one layer to this picture is that she also had serotonin dysfunction, like me.

Right. So on those stress days, she was reading into things and seeing things at a much greater level of detail than they actually were. Right. And this was what actually made her a great lawyer.

And we find a lot of the lawyers we look at have serotonin dysfunction, which is what allows them to read 20 pages and capture all these little details that you can't capture if you spent twice the time reading it. Right.

So her serotonin dysfunction caused her to sort of experience these problems at a higher level of detail. And her perception was there. This is a reality for her.

She actually thinks that this was happening. The people around her don't see it that way, and that creates frustration also. Right. One interesting thing about this is we found this is a common area where weight management, you know, there's this I hit a plateau and I just can't figure out I'm doing everything right.

So your serotonin dysregulation and some other mood dysregulation causes you to lean on food as a coping mechanism because your body no stress is bad.

Your body knows cortisol is bad. And if it's chronic in nature, every time I go to work, I feel bad. Eventually your body's going to keep fighting that resiliency, which is go eat something, go enjoy your life, go have something tasty.

Soul food. And it's actually perceived as really you feel hungry. It's you create your brain creates hunger to go create pleasure for dopamine to get out of the pain.

Wow okay so a little nuances like that. But anyways, so her problem. Yes the stress was a trigger. It wasn't the source. It was this multi factorial functional look at what was actually going on.

It was the environment. Sure. So what do you do about it. There's a couple dials like you said get rid of the problem which was hard for her. She has to go to work. She has to drive there right.

So okay then the other option is you have to supplement. If you don't do this job well, let's give you the right ingredients to optimize and support you with that job.

Right. And that was really the only answer for she wasn't quit the job she just got. And she also was going to stop, you know, driving to work. So this is the path we chose for her.

And she's feeling better by replacing the job that her body doesn't do. And now it's doing it and she feels better. Yeah. This is beautiful. And kind of going back to my previous analogy, you know, it's like humans, in, in water, right?

Like we're never going to be able to swim like a fish or like a shark, but we can supplement with scuba gear, right? And we can get in there, and we still have limitations, but it gives us more flexibility, gives us more freedom.

Right? Gives us the ability to do what fish do a little bit better. Right. So so this is kind of the contextual aspect of things that when we understand the environment, when we understand the map that we're working with now, we can selectively choose.

And look, I've been in this in this industry long enough. And the tendency for most people is just to kind of, you know, fairy dust with, with supplements, try look that little bit of this, little bit that didn't work, add some more of these things.

And and while I appreciate the effort and I and I appreciate going the more natural route, this is the challenge with a lot of, the supplement industry is like, what do I take?

How much do I take? When do I stop? Is it working right? And like it has become very, very difficult. And I think the more we can get precise with our environment, with our context, with our own personal constitution and map, the more we can be use targeted supplementation in a way that's supporting our natural way of being.

So you just reminded me of another story, which is important, because it's exactly what you just said. So there's a gentleman that we were working with who complained of a mood issue.

Right. It was an unexplainable ups and downs, which he didn't have previously. Just all of a sudden, I would say he was probably in his late 40s. So what we found again, when we're looking at the genes, we're not looking for the symptom.

We're looking for system failure. That may point to why that symptom has happened. So mood is off. Why is mood off? So what we found again was again, I'm trying to find examples that lead to brain and mood.

So in this case again it was serotonin dysfunction. So what was actually going on and why did it happen then. So when when it comes to your sleep the problem was actually asleep.

You there's there's some people that can fall asleep properly. That's one sleep problem. There's some people that sleep through the night and they wake up not so rested.

Like I can't understand why I don't feel like I slept. And there's some people that can't stay asleep. They have no problem falling asleep. But it's that second half.

It's kind of disrupted. So this was his problem. He didn't even realize this is the problem. What was going on? We know that melatonin is that hormone that sort of we bind it and it puts us to sleep.

And serotonin is what wakes you up. So what's meant to happen is that sunlight coming through the window, piercing through your eyelid triggers this sort of peachy glow, and your brain knows time to start binding the serotonin that I just finished making at that time and get up right.

That first half of sleep is more recovery, detox, lymphatic drainage, lymphatic, all that stuff. Right? The second half is more getting ready for the next day, producing hormones, producing chemicals, all this stuff.

So your serotonin is made at that time, which is one of the things that's used to wake you up and get you ready for the day. If your serotonin is dysregulated and your brain can prioritize stimulus, then it doesn't know if that sunlight is the thing that's triggering your reaction right now.

Or is it it's too hot. It's too cold, which also often happens to people that habe just pulled on the blanket and it erupted on your skin. Hubby's cold foot just touched your leg and bothered you.

Dogs barking two rooms down. So all that stuff happening in the second half of the night triggers your brain like, oh, let's find some serotonin. Wake up. Wait a second, I'm still tired. I'm going to sleep.

And you get this up and down, up and down, up and down until you find the actually get up. Right. I got this a lot when I had a kid, and he was sleeping in our bed at the beginning.

And yeah, I would get all these stimuli right and constantly waking. Yeah. Constant consequences. So this is so this gentleman now was spending $400 a month on supplements because nothing was working.

But he also didn't want to give up what he was giving, what he was on. So the answer wasn't for him. Like more is not always more, right? Less is more sometimes.

So we got rid of everything. Now he's taking two things right. Literally two things. There's a there's a cocktail that we made for him that's about maintaining that deep sleep level.

And then there's a serotonin modulator. Right. So that's what he needed.

Aging, Chronic Disease, and Systemic Health

And now all of a sudden his mood is better which was the symptom problem because he's getting the rest and he's producing the hormones and the neurochemical.

If you don't sleep in the second half, you're not making testosterone as a man, right? Right. You're not waking up with that morning wood that you're supposed to because you just finished making all your testosterone.

That's why that happens, right? And that's the drive for the day. The urge to get going, the like there's there's fundamental needs. You build those proper hormones and build that build those proper neurochemicals to get us going each day.

It's a really important thing. Yeah. So this the answer to his problem. Wasn't that give you a pill to make your mood better, right. Let's functionally find out the root cause of your problems.

The root causes. You're not sleeping, so you're not making the things you need to cope during the day. And you're not sleeping because of this, right?

So let's deal with this then you'll sleep better. You'll make all this stuff. You'll feel better, more. The issue is resolved, right? Why did it happen here?

Because we find that, as people age, this particular problem gets worse of serotonin. Does regulating sleep this you're pointing to because I'm in the longevity aging space and that I've done a lot of research in both on the ground and in, in the scientific studies.

This there's a natural arc to the human life, right? We behave differently when we're infants and when we're teenagers, when we're in our, you know, middle years and when our later years and things naturally start to flow and operate differently.

And this is just the reality. I think part of what I'm getting to here is that when things start to break down, let's say, but let me put it this way when we're young, we can get away with a lot of crap.

We can do a lot of wrong things and not know there's no problem. And things here and there's no issues. And then we start getting our middle years, and it's like we can't make we don't have as much room for error.

Right? Yeah. We at our later years. Same thing. Right. So this is this is where it becomes really important to understand your genetic profile and see where your short, weak links are, because those are the things that are gonna start breaking first, so to speak.

Right? For sure. But the real reason, and I appreciate you putting a lot of this, this discussion in context of the brain. But I also want to point out to, to, to the more the deeper point that you just brought up, which is that it's really important to look at the the genetics of your liver and your kidney for brain health because it's all connected.

Right? Like it's really important to make this point that if I'm not doing things that are conducive to good glutathione production and recycling of glutathione, you know, now I'm going to have more systemic inflammation and mold, perhaps, or whatever the case that I'm trying to detoxify and keep my system clean.

Eventually that's going to make its way to the gut, to the brain, to everywhere. And the system is connected, right? So so again, it's really about system coherence, not just targeting.

What are the genetics of my brain and my neurochemicals. That's great. And it's really important. And we've centered a lot of that discussion around it.

And I think it's it is important to to point that out and really important figure out what's going on in the whole body so I can optimize everything. Yeah, keep my brain healthy, especially as I get older.

So things that the weak links don't don't start breaking too soon, into a point of disaster. Yeah. And people inherently know this for everything except for themselves, right?

Right. So it's like you got your car, you don't only buy nice tires and that's it. Right? And just like everything else just falls apart. And why I got nice tires. Who cares, right.

No, it's everything has to sync and work together. And this is why you have this, this massive problem of nonalcoholic fatty liver liver syndrome today.

It's not because our livers have changed right? We're the same people that the last generation generation before that were. It's our environmental load has changed and we're not in the same reality anymore.

You know, one interesting thing is people don't realize when we think about our DNA and we think, oh, I'm like my ancestors, and you think about Grandma and Grandpa.

Our DNA isn't grandma, grandma. It's actually 200,000 years old, right? Right. So the people that we are today, we became those people about a quarter million years ago, 200 or 250,000 years ago.

So our brains develop the way they are, our bodies, our ability to speak complex, like all that stuff. Right. So and there hasn't really been a change.

We're the same people genetically. Now, if you look at what we've been doing in those quarter million years, the blip in time of our current reality of chemical usage, environmental toxins, our food being garbage is, what, maybe the last three generations, right?

Yeah, it's hyper novelty, right? Hyper hyper novelty means that we are experiencing our grandparents didn't experience. Yeah that's wild. Yeah. In even something like agriculture we take it for granted.

Right. Farming a modern agriculture only started 10,000 years ago out of the 250,000 years for what we're designed to be. Right? Right. Designed to pick things out of the ground and kill things and eat them.

So if you look at who we are and what we're wired to do, the very thing that you said about those Sardinian people on the blue zone people, the things that we've gotten good at genetically.

Yes, yes, this is what we were good at. We've been training for 250 years and job optimization. Yeah. Training your whole life to be a snowboarder. And they in a race car. Right?

Right. Is a gut doing and eating well. Yeah. Yeah. So that's the reality that people need to understand because they look at grandpa and they look at grandpa like, well, that's not really that much different, but it is entirely different.

We're not wired for it. And this is why we have a $4 trillion health care budget, of which $3.6 trillion is spent on chronic disease, none of which you're born with.

None of what you're what you're from, you have to have. It's all developed over time because unlike those Sardinians, all the things you're doing are misaligned to what you're wired for.

And using your analogy, we, our bodies, our genetics are our whole system has the capacity to become real good race car drivers. We just need to understand how to operate car, what what we're working with.

And then it's going to take a little bit of time, right. So there's this is the the key factor I think that this is what we're seeing across the board in the health world that not a lot of people are talking about is this hyper novel aspect to what we're what we're asking our genetics to do, our bodies to do the are capable.

We just have to figure out how to do it in a way that's going to maintain our health while we're figuring out how to drive this car. Really? Yeah. So we're to keep talking forever because this has been a fantastic conversation.

I do want to as we wrap up, I want people to understand when they run a test, do the DNA company, unlike 23, me and some of the other early, players in this sort of genetic game, what do they get out of it other than knowing their genetics?

How do they, you know, operate if they're not geneticists and experts in this context, what do they how do they use this to to better their life? That's actually a very important point because I, I don't come from the industry.

So I personally experience the failure of given being given a stack of paper and trying to apply it. Right. I come from the industry the same, same problem.

Yeah. And I kind of what is driving me to our drove us to build what we built, which is it had to be easy to use. That was key right. Easy to use means that it's it's not a bunch of data that you need to interpret.

It's a bunch of insights that you can read and understand. The interpretations already been done. So when we provide reports, we don't report a bunch of information on genes.

How The DNA Company Interprets Results and Next Steps

It's here's your cardiovascular, right. Here's the problems that fall under cardiovascular. Here's anxiety. Here's depression. You know, here's the things that you actually understand.

Here's, carb metabolizes and here's fat. Should you be on a keto diet or not? Should you be a vegan? Do you actually produce the enzymes that drive, you know, metabolism of peas and chickpeas and lentils?

Most people don't, by the way. Right. So simple contextualize. Here's the problem. Let's read about it. And then there's recommendations right there. Right.

By the way if you also want to know about the DNA here's why we said all this. But most people don't care. Most people are like tell me what's wrong and how do I fix it?

That's it. Yeah, I want to know. I'm dealing with an expert that knows what they're talking about, but I don't need to know the iceberg. I need to know the tip. What do I do? Right.

So anyway, so we built this, right. So real quick. And most importantly, you guys determine that information not based on this is a study on this gene.

And this is what it does. And therefore eat this thing. It's more like you work with a lot of people and you figure it out. This is how this is what's useful. Exactly.

And that's exactly what is missing. We studied we took all those genetic insights that are published in peer reviewed, and then we applied them on patients.

This is really important by the way. This is really important because too many people are looking at studies saying you know, turmeric does this and therefore blah.

Yeah. Really. Like how does it actually apply to the population. That's what's where does the rubber meets the road. Yep. Exactly. So that's the work we did.

And I'm proud of that because I personally went through this as a patient, somebody that was ill, that had migraines, eczema, psoriasis, which is autoimmune.

I had gut issues, I had depression issues, and I healed all of that. I would have been on five different pills for five different problems if I didn't know this right.

And I would have continued believing that I actually had these five problems. I actually did at the time believe that I had these five problems. They're all gone now.

So and it was from learning from people, including myself. What was I doing wrong? What was I doing wrong? I was working in a building. I had a business in a building where downstairs, as a manufacturing company, putting toxic pollutants into the airways that I was breathing day after day after day with zero detox capacity, poor methylation or anti-inflammatory capacity, and bad quality endothelial health.

So my vasculature, my hardware was like paper thin papyrus. So it got in plain very easily. Right? So now that I know this, I could have been taking pills and imagine and you've heard this before.

It's like, here's a fish in toxic water. What do you think is going to happen? Right, right. What do you do right now in health care? You start giving it pills for the eczema and it, but you leave it in the toxic water.

That's right. Or you can just take it out and put it in the environment it's actually designed for. It doesn't need any of those pills. Yeah that's the root. Right.

So that is literally what was happening to me. And so threw myself and seven of the 7000 other people we did. Exactly. We said we studied, learn and now apply recommendations that are so simple and easy and intuitive.

We just needed to know where to focus for each individual. And that's super helpful. I mean, this is this is amazing. Because you tell people where they can find more about the DNA company and, and your work.

Oh, sure. Well, I mean, for this particular event, first of all, we honor and, you know, are excited by the people that are joining here today. Like anyone that's here, you already don't have to work.

You're you're on the path, right? You're the path to learn self-healing because you have to quarterback this yourself. So what we what we're doing is the test itself.

We have an additional report, which is a completely separate algorithm. We're on longevity and has some additional genes that using an additional cost.

So what we wanted to offer everybody to thank you for joining us here was, in this audience. And please keep it amongst the audience. We're just going to give you that report for free.

So anyone that takes the DNA test, we'll give you that longevity report. The other thing we wanted to offer is that we understand that people here for a purpose, like it's brain health, it's mental health.

So we're going to host a master class. Anyone that's now got their test, the reports in hand. Come ask whatever question you want. You know we're going to answer it from the genetic perspective.

We'll all get together as a big group and have a lot of fun. So yeah. So when you go to the website, don't buy retail, it's the DNA company.com. And we'll say forward slash, sorry, our RBD reverse brain disorder.

Right. So the DNA company.com/r b d. And we will make sure that that offers there for you. You get the free longevity report. And you'll automatically be enrolled into the master class so that you can learn more and just keep

that amongst this group.

And that's our sort of thank you for joining us here. Wow. That's amazing. And the way you just to kind of further encourage people to to take advantage of that offer, I think the best way to use this information is to get that genetic information and work that in with all these other things that they've learned throughout the summit. Right.

Because it's not just one or the other. We can use this, in conjunction with some other therapeutics, other teams, actually. And that's where all of them become more, more useful, more effective.

Right. And so, again, it's a fabulous offer. And Kashif, thank you so much for coming on. You gave I'm more excited about the DNA company than I was when I, when I first started.

So this is really cool what you guys are doing. And I think the future is so bright for functional genomics and what we can learn. So, you guys are really well positioned to take advantage of, of all the things that we're learning and the fact that you're working with so many people helps you guys, get a better understanding in the real world of how this stuff works.

So, amazing. Thank you so much. It was a pleasure. Good. Good to be here. Thank you.