Kara Fitzgeraldu2019s background in functional medicine

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Steve Horvath did not think that biological ages could reversed or slowed in humans. We saw that the diet lifestyle interventions slowed bio age or reversed it by over three years in the study group as compared to the control.

We went on to publish it, I went to write a book about it. infinitely more powerful than we've really respected to date. Hello and welcome back to the Evolution of Medicine podcast.

We are live at IFMAIC and we are talking to Um, but today we are talking with Dr. Kara Fitzgerald, who I have known for more than a decade. I've seen you lead so much in this industry.

And I heard you speak a little bit earlier today. So welcome. We did do it a long time ago, like maybe your first one. It's been time to come back and do that.

Well, look, I'm just starting with, for those who don't know your work, tell us a little bit about your journey to be here and give the talk that you gave and sort of your, your Right.

So I'm an atropathic physician by training. And after I finished, actually while I was in school, I heard Dr. Jeff Bland, the father of functional medicine, speak and was deeply inspired.

He was lecturing on Hoppe's mechanism and its relation to estrogen and all of that was super exciting for me. And I immediately knew that nutritional biochemistry at through the functional lens was kind of something that lit me up.

So after school, rather than going into clinical training, I did a small part-time clinical but I was in a laboratory under the direction of a nutritional biochemist, Dr.

Richard Lord, who's kind highly regarded in this field, but he's retired at this point. steeped in nutritional biochemistry and laboratory science, and that has carried me through my career.

So that did a few things. One thing was it directed my training towards teaching other professionals, so I've done that. I immediately leaped into being faculty at IFM after I finished my my, training and published a book, Case Studies in Integrative and Functional Medicine.

And I contributed to the functional medicine textbook in the laboratory. textbook for integrative and functional medicine. So just a very dense kind of academic, if you will, focus.

And I also had a clinical practice. But doing that laboratory background kind positioned me to move into clinical research. The big question for me that was very exciting was, can a diet and lifestyle intervention change gene expression, change epigenetics?

When we started that study back, that clinical study, back in 2018, biological age, which we talk about all the time now, hadn't, there had been no publications that biological aged could be reversed in humans.

Diet, lifestyle, and reversing biological age

So in 2019, it was just like, you know, yesterday practically, we didn't think biological ages could reversed. In fact, Steve Horvath, the father of, developing the epigenetic bio-age clocks, did not think biological age could be reversed or slowed in humans.

I mean, he's on record saying that many times. So our interest was more broadly looking at epigenetic expression using a diet and lifestyle pattern. We were planning on looking a bio age, but I wasn't anticipating we would see any movement.

It was a big deal, kind of a career changing moment when we were crunching our data and we saw that the diet and lifestyle intervention slowed bio age or reversed it by over three years in the study group as compared to the control.

I know it was really wild. And we went on to publish it. I went onto write a book about it We've continued to published We are drilling down into what elements of the dietary pattern did the heavy lift and we published that last year and I can talk to you about It and now we're working on an NIH grant to kind of study why those elements did what they did and just to kind of explore.

So the elements, as I know you're going to ask me this, is the polyphenols. And I want to stop and let you ask some questions. But I think poly phenols are infinitely more powerful than we've really respected to date.

I just hope to begin to tease out some of that science. If we get our NIH grant, stay tuned. Yeah, what do you learn? Because obviously with a lot of these interventions, right, it's a multimodal thing.

So you know that it works, but you don't know why exactly it doesn't. That's right. And so what have you found as you sort of teased it out? We found that, because we took a lotta data.

We were tracking our participants very carefully, and we've got really detailed food frequency questionnaires. And we were able to, from that and from the epigenetic patterns, discern that those interventions, which we called back then methylation adaptogens, they're the most polyphenol-dense interventions.

It was that collection of interventions that did the heavy lift on biological age in our participants. Wow. Yeah. So is there more, where would you go next?

So there's a few questions to answer here. One is, could we do a polyphenol intervention as a standalone and expect to see that? If we did the diet and lifestyle pattern and layered the poly-phenyl intervention on top of that, would we see more?

What's the dosing of the Polyphenols intervention that would be optimal? And how is it moving the epigenome? So there's two ways that I think about epigeonetics as it relates to longevity.

There's the aging phenomena that's environmentally influenced like exposomic aging, like the assault, the wear and tear of toxin exposures, poor diet, stress, et cetera, etc.

Exposomic ageing. deeper than that is probably what's been referred to as pseudo-programmatic aging, or you could just call it programmed aging. Like it's where the Yamanaka factors work.

So you know Yama-Naka Factors, you expose it to a somatic cell, these four transcription factors, and you can reverse, so you take that sommatic cell and reverse it pluripotent stem cell.

So you bring it back in time to ground zero using these four transcription factors. I think that that phenomena is touching on programmed aging, aging that's baked into all of us, regardless of how impeccable we live.

like menopause is baked into every woman, you know, menarchy, et cetera, like these developmental milestones that we're all gonna hit regardless of how well or perfect we live.

The aging phenomena is also baked in. And so my question is, and we can test, I think we're starting to be able to have the tools to test. So we contest aging as the assault of life, the exposomic aging.

And then my second question, can these polyphenol interventions influence a deeper level, this programmed

aging? So that's like my… And that would be the NIH grant.

Yeah, that will be a piece of it. I really hope we get it We get it covered. I hope so too. On that journey, because I think it gave our field, your research gave the field so much confidence because it was like, see, I told you, it's happening.

It's so exciting to have been able to contribute that because indeed, We've been talking forever that our interventions influence gene expression. I mean, way back, I remember Mark Hyman talking about it, but we didn't have any data.

So thank God we were given a grant and we're able to test it and to see, yeah, okay, they do.

Polyphenols, epigenetics, and future research

One of the cool things that you did last year that I wrote to you about, because I recognized that, I thought it was really cool, was the sort of, the event that did on the connection between longevity medicine and functional medicine.

And obviously, you know, there's a sort an economic incentive for everyone to come up with their own name for their thing because they can have their conference and have own thing.

But ultimately, like one of my dreams and efforts with the functional forum or otherwise was to really create unity about salutogenesis. Like how does it happen?

And one of the reasons I like that is because what I recognize is in having been in this field a long time, I see what i would call a lot of like, i don't know if this is derogatory, but a sort of a Johnny come lately longevity doctor.

who hasn't done the training in functional medicine and they've got a toolkit, but they don't have the context for how to use this toolkit or what's happening.

And one of the reasons I like that is because I knew that someone should do what you did to say, hey, look, the best way to live for a long time is not to get a chronic illness.

How do you know whether you're gonna get chronic? Well, it turns out you can measure the journey from health to death and we have tools and there's already a sort of a group of people that have been pioneering this, come and check it out.

I don't know what it looked like on the inside because I just saw it from the outside, but I know from doing summits and stuff, you get a lot of feedback and you got that.

Did it do what you hoped that it would do? So I want to take a minute to talk about the incredible mission partners that we have here at the Evolution of Medicine that have made this possible.

So first and foremost, I wanna thank So Fullscript has been an amazing partner for 10 years. We only pick partners that can help us achieve our vision and help you achieve your practice vision.

And FullScript have been incredible partner, for a decade, but their new offering journeys, this is why we called it the Evolution of Medicine Journeys, is allowing practitioners to combine the relationships that they have with the newest technology to sell direct-to-consumer lab testing and use it as a funnel to bring into your practice and it's a game changer for the whole industry.

So go to goevomed.com slash journeys and you can get started on building the journeys for your practise an optimal way into you practise. We're going to have some conversations about it.

This is a Game Changer. Next, Jenova. Janova have been fans of the Evolution of Medicine for a long time. We're

big fans with them and they now have a lot more specialty testing.

They have lot of more tools and it's a key part of understanding the body ecologically. So go to goyomed.com slash Jonova to find out more. Come on over here.

I want to show you about the other mission partners. If you've been following us for a while, you know that these are organizations that we trust, that add a lot of value.

Freedom Practice Coaching, I have been supported by them since the beginning. And so many of the issues that practitioners face in building a successful practice, scaling a success practice come down to having the right support with people who have being there and done that.

Go to goevomed.com slash FPC. Big boost marketing, Uli and his team are the best in the business when it comes to really understanding how to market your functional medicine practice.

Go to goevomed.com slash big boost and see how they can help you. And then what you're going to be hearing a lot about is the formation of clinical networks.

Ultimately, True Neura is our first effort at that, which is to build an integrated clinical network combining independent practices from across the country into a network that can reverse cognitive decline.

And if you go to goevomed.com slash Trinura, you can get a demo. You can see what it means to be part of an integrative clinical networks. That's mentorship, that's software, and that is making it easier for you to get incredible outcomes in a disease state where there are no other options.

So thanks to our mission partners. Let's get back to the content. It kicked ass, quite frankly. I mean, it was so exciting, and we had great speakers, great interviews.

Everything was in alignment. So the other thing with summits or masterclasses, the topics can be super disparate, like really not have anything to do with the central theme.

Our motivation was motivating functional providers, like just giving a serious confidence boost to their training structure to your point. We have these tools already and elevating them, making, just really providing people with like a mirror of like, you already know how to do this if you're a well-trained functional medicine provider, even if your new transitioning in.

And then layering on top of that, some of the next generation stuff coming down the pike to make clinicians aware of, to think about adopting or stationed.

The every presenter and even our partner, the sponsored partners, they were invited so that everything brick by brick built on itself. We had awesome scientists and then, you know, we had Mark Hyman participated, Jeff Bland was there a handful of times, Laurie Hoffman, like, just kind of luminaries in our space on Messier.

And they were good conversations. Each conversation was edited down to 30 minutes. So the key points were featured. And we had 110 countries. We had like 4,000 people rotate through live.

One of the cool things we did was invite the speakers on the prerecorded conversations to come back and participate in the chat.

Building community in functional and longevity medicine

A lot of them did that. So you could just be right in there dialoguing with this individual you're hearing speak. Yeah. And so there was a juicy community element, which I know that you are really, really big on and is important for me, like keeping us together.

So yeah, it was huge success and we're going to do it again this year in September. Amazing. Tell me a little bit about what you spoke about here and what your topic was and why that came up and how you got here.

Well, I submitted to talk about longevity through mitochondrial lens. That's what I was going to get into some really crazy science around that, which is super interesting to me.

But Robert Luby, I don't know if he was the director of medical education. I'm not sure what his hat is at the moment. But anyway, he's like, look, Kara, we want you to come and talk about being an old G, an original gangster in functional medicine.

He wanted me to talk like my career trajectory and how I manifested How I met Halle Berry. So I talked about how I ended up in naturopathic school, but then ultimately seeing Jeff jumping into laboratory science and Functional medicine and becoming faculty like that that whole journey and now today, you know having a clinical practice doing I still do I have a podcast as you Know a webinar we did the master class.

So I Still offer a lot of Platform stuff for professionals and functional medicine. And then you no my research research platform training for Professionals and clinic those three things.

That's basically what I talked about and just yeah, I And I wanted to motivate people. Christine was there, as you know, Christine Burke, amazing. Our stories are so different, but functional medicine is a big tent.

And we all fit under it. I said, if you read Christine's mission statement or the mission of her practice, I guarantee that it overlaps with mine. I mean, there is much that all of us can do, you know, if we really manifest our vision and our passion, and there's a lot of room for us to do that in a really creative way.

Like, not everybody has to walk in Christine's shoes as incredible as they are, nor mine, I means. So anyway, we're a big tent. But there are a lots of opportunities.

A lot. what would you say, by putting yourself wearing a functional medicine hat, right, as opposed to the naturopathic hat as your primary hat. Yeah, opened up a lot of opportunities for you doing the clinical research opens up these other opportunities.

And now you start to see that, you know, there are so many because this is becoming on vogue now. There's so many opportunities for people to be relevant in so different ways, but you had to have done the hard yards early on to get those opportunities because ultimately, when something expands exponentially, which I think we're in the middle of right now, solutogenesis is blowing up.

What would be your recommendation to practitioners who are at the beginning of their journey? What kind of advice did you give to them about what's most important to focus on for a rewarding career?

Well, you know, Christine and I both talked about coming from a bootstrap model. We both had to do a lot of building because it was before the tipping point.

It was when we were still relatively isolated, when were assaulted by the greater medical community as being quacks. I anticipated my career being in that environment, sort of just working away in relative obscurity, but I was completely committed and impassioned by what I doing, so it was okay.

It a fate I had no problem accepting. But to your point, I mean, we're at this tipping point. It's being accepted. Functional medicine is expanding. As I shared in my talk today, you know, I live in Baja California, Sur, in a small, small city, and there's at least two, probably more, functional medicine providers in little podunk town.

There's even somebody offering some form of epigenetic testing. So we're out there, and I think today practitioners have a greater opportunity than we did.

They don't necessarily have to stick their necks out in an epic entrepreneurial journey in the way that we do. Um,

they can join a practice. There's all sorts of permutations around how they could manifest this medicine.

I think it's important for providers to do a couple of things, and you were huge in this. Get into a community. You need to have some sort of regular contact with your peers.

We have rounds twice a week, I know Christine is doing rounds, she did functional forum. We had a journal club, you know, with a lot of the now IFM faculty before we were faculty, David Hasse and Tom Saul and Helen Messier, Patrick Hannaway, kind of before, we ended up being a faculty early in our careers.

And this was this community where we talked through the emerging science. We talked to you clinical cases. That community element is hugely important.

And taking some time to vision out how you want to manifest this medicine, you know, and writing it down, like putting some intention around what you're passionate about.

These tools will help you bring it alive. And then obviously being here at this conference live in real life to connect with other humans, I think is really essential.

Yeah, so much happens outside of the content, right? There's dinners and other things. I think I remember being at a dinner with you maybe like 12 years ago.

And that was, you know, like that it was the first time that I was hanging out with people like David Harsey and other people.

Career advice for new practitioners

I'm just like, oh, this is a cool guy to be part of. But it's so much of that, the gelling happens when you're actually here in person. Yeah. The confidence that comes from other practitioners saying, yeah, I did this, and this how it worked.

Because, ultimately, unless you are a naturopathic doctor, if you were a conventional doctor and you coming into this space. You know, if you go back to your specialty conference first and you tell people that you're sniffing around this, you might get laughed out of the room.

I know. Yeah, that's right. So you need that sort of confidence to come back and those sort areas. Well, how do you see the balance of work that your involved with?

You see patients, do the podcast, the webinars, have this sort following in the provider space, obviously you are doing this research, could get the NIH grant, right?

Whatever. What do you think is the balance moving forward for you? Well, ideally, I will be able… Well I'll continue with a small clinical practice because that kind of informs everything that I do being in contact with patients, treating patients.

I'll continue with the podcast webinars, but I really want to put my energy towards doing this research. You know, I'm jazzed up about it. I think there's some important next generation information we can glean from it, and I honestly think we're just beginning to tap the power of polyphenols or what we call the postbiotic poly phenolic derived compounds like urolithin A.

powerful, powerful players, you know, multifactorial in physiology. And I think, we need the right dose. We need to right duration. I really think we can make some pretty profound changes with them.

It's interesting. As a clinician here, what do you hope happens? Because on one hand, it's like, well, if the supplement does it all, then you've probably got a blockbuster thing on your hand.

Whereas if the medicine, if it's the multimodal approach that it is just one part of, then it validates the salutogenic thesis. And I can imagine that both would probably be cool.

But you know, you care about the medicines. You care the piece. What you'd hope would happen. I do not think you can supplement away a lousy lifestyle.

Like, I just think there's no way. You know, as potent and drug-like an exquisitely designed polyphenol cocktail is, you cannot supplement a way a poor lifestyle, so I don't ever…

That's a really interesting question, Chip. It's funny, it seems like it would be an obvious one that I've thought of, but I hadn't. I know you care about the medicine.

Yeah, I think, so my question is, we know that we can inhibit the development of chronic disease or slow down that journey. We know we could improve health span.

And so my question is, are some of these interventions that we're using routinely, can we actually extend lifespan? So not just inhibit disease, but perhaps actually push lifespan itself forward.

And, so, I'm really enamored of dancing in that space with natural interventions. I mean, they're looking at it with drug interventions, you know, like Yamanaka factors are in phase one trials right now, people are looking a rapamycin and other drugs to find that blockbuster anti-aging drug.

But I suspect that we already have some of that information in what we're doing. Again, it won't replace all of this foundational functional, you know, in living a quality life.

It would be adjunct to it. Awesome. Yeah. Well, one of the things that's happening, recently, and it's funny you said how it seems just a few days away that we were in 2018, but you can see the world is changing rapidly.

Right. And, there's been tools out there now that, for very, a little amount of money, people can kind of get into understanding themselves functionally.

Patient data, wearables, and the future of practice

I was wondering, when you and new ways are emerging now to bring patients in and give them an understanding of what's going on as a pathway into your practice or anyone's practice here, what are some of the key factors that you want to understand for your new patients that would inspire them to go further into the journey and want go on a path way with you?

I mean, I have to be honest, like some of the new suites of lab tests being offered that are, you know, panels that we can get at Quest, but they're offering addressed to consumers.

I think those are pretty cool. And I think that can provide great information to the patient, especially when it's interpreted through the lens of a provider who's well-trained.

I know that a lot of these are going direct to consumer, and I have so many patients who've done direct-to-consumer labs and then they just come to me because they're not sure what to do with stuff.

Or they upload them to ChatGTP and maybe sometimes to benefit, but also sometimes it's really, really inaccurate. Yes. Go to the hospital now. It's like some crazy stuff.

But I think laboratory can be really motivating to patient. to patients. I think if patients are willing to adopt the changes that we see based on the lab data, if they're willing regaining or optimizing health, whatever their goals might be, but probably those two tools, I think.

Cool. Yeah. Well, it's an exciting moment for practitioners to be able to use some of that. It's become clear that

people want their data. And people want it.

So if you can put it as the top of the funnel for your practice, which it kind of is right now, then I think it's a good set for the future and we're super excited.

And mirroring it to wearables. It's pretty cool. I've gotten back into competitive cycling. I was a cyclist when I was in school, but my bike has at least five batteries.

Like it is a wearable. It's got so many metrics, so I have a lot of data. It is really cool. To have that and to have the system and the tools to be able to marry it to lab data and clinical data, we are not there yet, but we're heading in that direction.

Amazing. Well, cool. Well thank you so much for being part of the Evolution of Medicine podcast. We'll have all the details about the summit coming up in September so that you can join and be part Thanks James, likewise.

Likewise. Well, this has been the Evolution of Medicine podcast. I'm your host, James Maskell. We are here at IFMAIC. You've been here with Dr. Kherifetz-Gerald.

Thanks so much for tuning in and we'll see you next week. So we are asking practitioners about their practitioner journeys. And the reason why is because Journeys is a new product from Fullscript.

Journeys allows you to set up your own lab offerings as the top of the funnel. Give the patients what they want. They want to know about themselves and it's the easiest way to bring them into your practice.

We have all types of practices from across the country that are building their own unique lab panels for their unique practices, selling them to their community and acting as a great funnel into their practice is a massive innovation.

I think this will accelerate the evolution of medicine. You can go to goevomed.com slash journeys to find out more, set up your own journeys in half an hour and transform the health of your community.

Go get them. So that was the podcast. What an epic session. Thank you so much for tuning in to the Evolution of Medicine podcast, we'll be back again next week.

And thanks so