The Anti-Aging Answer: How to Activate Telomerase to Stop Telomere Loss Transcript

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Introduction to Telomeres and Longevity

In essence, we're making this cell act like a younger cell. It can replicate more. I mean, the Hayflick limit is basically 50 replications and then it goes through either apoptosis or it becomes senescent.

We've in the Petri dish and vitro have been able to have a cell continue to replicate ongoing. It doesn't see a Hayflick limit. Welcome to the Peptides and Longevity Podcast.

Each week, we'll dive into groundbreaking science, innovative therapies, and the future of health and longevity. Alongside visionary physicians and experts, we'll explore how peptides, cutting edge medicine, and lifestyle strategies can redefine the way we age.

Get ready to transform your health, optimize your vitality, and unlock the secrets to a longer, healthier life. Let's get started. Hello, this is Dr. Kenton Holtorp with another episode of the Peptide Summit.

It's now 2.0 and today we'll be interviewing Eric McDonald of TA Sciences. We're talking about activation of telomerase to stop telomere loss.

Podcast and Guest Introduction

Thank you so much, Eric, for being on. And telomeres are really in the really hot in terms of regenerative medicine. But you guys have been at this for quite a while.

Yeah. And normally everyone's, you know, the cutting edge, but you were cutting edge cutting edge a long time ago. Tell me a little history. How did you get into this?

How I got into it, I started the company seven years ago. I just started with them. And the company itself was incorporated in 2002. It was founded by Noel Patton, who's our founder and chairman.

And he acquired the molecule from a biotech company in California called Geron. And Geron is still in existence in this day, but they were looking to try to produce a molecule as a drug.

So they were looking for it to be a pharmaceutical agent. And when they realized that the FDA was not, you know, ready for a anti-aging product. They did a stage left with this thing.

They did a ton of studies in the 90s on this product. They knew they had something that was good. It's just that, you know, it would never get approved at that time.

And still here we are, 2021, and the FDA is still walking at, you know, aging products.

Company History and Telomerase Discovery

Yeah, I mean, it's a great molly to go over and, you know, as a supplement, then as a drug, because, yeah, God forbid you do something to prevent aging, you know, it's like better not cure cancer.

Too many people are going to lose their livelihood. That's true. So from 2002 to 2007, we did additional testing on the product and then we eventually marketed the product and launched it in 2007. So you've heard the phrase, timing is everything.

Two years later, we got a really strong foothold into the tumor biology world when the Nobel Prize in Medicine was awarded to Elizabeth Blackburn, Carol Greider, and Jack Szostak for identifying this enzyme, telomerase.

that actually, actually once activated, you know, that it adds these nucleotide bases to the telomere. So we were at the right place at the right time.

And I mean, the curves on the product sales was just, I mean, because I imagine you trying to explain it to someone, you know, this is what it does. And they're like, like three heads, like, what I want that.

True. And all this stuff becomes common knowledge, you know? Yep. Yep. It's taken a while, but, you know, I was really quite surprised at how the lay person, you know, knew about telomeres.

So it got a lot of press. It was on 60 minutes, you know, like I'm thinking in 2010. And then we just took off. And then we had two other studies that were published in rejuvenation research in 2011 and 2013. And that, again, just added fuel to the fire.

And we just took off exponentially. And so here we are, 2021, and we still are the only clinically proven telomerase activating product on the market.

I was going to say, I don't know of any other studies that people say, oh, this may do it, this may do it. So what happens, you'll get a lot of companies that will have, you know, these little knockoff companies or physicians that come up with some formulation and they'll say clinically proven to activate telomerase.

And it's because they have like astragalus as an active ingredient. They don't do any of the studies. They basically cite all of our studies and it's, it's not the same because we extract a single molecule out of the root.

I mean, you start with a stragglers, but this is a given species of a stragglers. And then we extract the molecule out of that. So it's now. have a patent because a lot of people, they don't do a patent because you do a patent, you kind of give away the secret sauce, right?

We have a patent on the extraction process because you can't have a patent on a naturally occurring substance. And so, but it's, it's sophisticated. So someone can do it.

They do do it. You can, then you can go after them. Have you had to go after anyone on several occasions? Yes. And it's, it just gets to the point where, you know, or probably sometimes just making it.

It is just threatening them or, you know, you're going back and forth. They don't have their studies. They claim they can do this and there's only so much you can do, you know, and it's, if you're going to waste your money in court, You know, to do what?

I mean, they have to prove that their product works. They have to have the studies and, you know, studies for a very small company are very expensive.

I mean, oh, yeah. And it's interesting our patent defense. It's one of our patients had a patent on all mobile searches. So he's trying to sue Google.

And it was just, of course, did not go well. Yeah. And that's tough. I guess studies are very expensive. That's why you don't typically see them with with supplements, you know, and they seem to be getting more and more expensive, you know, as time goes on to do a decent study.

And you guys have what, 10? We have 10 peer reviewed trials to date. Yes. Wow. Wow. We've been spending a little bit more than a million dollars per year on clinical trials.

Clinical Studies and Market Position

And we've been going since like 2005 with studies. And then we found that, you know, I came in, I came from the pharmaceutical industry. I launched Lipitor and Cognex, the first drug for disease.

Yes. Yes. Yeah. No, I, when I came into this field, it was like, You know, Lipitor, yeah. But that was an exciting time in my life. And I worked for Park Davis, and we had a product called Lopid, which was a lipid regulator.

And its claim to fame was HDL increasing. And doctors would be like, what's HDL? So there's a real kind of interesting bookends to my career, starting off with Lopid in like the early 80s.

And now here where you got two products that are basically ahead of their time. Yeah. Nice. Nice. I remember what happened to that. I went generic. Jim Fiberzil is the generic name.

And Pfizer acquired Park Davis, which was a division of Warner Lambert back in 2001. And I was on the last, this whole week conversations with the whole COVID thing and what's true, what's not, you know, how some of these huge pharma companies have so much money, you know, they can predetermine their studies by manipulating just the way that, you know, data is done.

But that's awesome. Yeah. Well, there's two major studies that were published here in the last couple of months. You had Maria Blasco out of Spain. She's a big tumor biology cancer expert.

She heads up the Cancer Institute out of Madrid. And she's been a telomere person for probably as long as Elizabeth Blackburn. And when she heard that the initial problems that people were seeing with COVID-19 that were lung related, know like pulmonary fibrosis she said you know what and it's infecting the elderly she's like what what happens to the elderly their telomeres are shorter and what happens in people with pulmonary fibrosis at any age their telomeres are shorter and even like diabetics and hypertension yeah you can look at any study where you have twin studies They did the astronauts of the, you know, the one that went up and it was up in space and this, you know, the International Space Station for like up to a year.

And he came back. His telomeres were drastically shorter than his brother. But that was just going up and coming down. They did a baseline and he came back.

But after about six to nine months, his telomeres bounced back and they were the same as. Well, they should be a few seconds younger. But you would think, yeah, as of, you know, going the speed of light and less, you know, whatever.

But I was watching a thing like if you have a baby on a spaceship, like the kid is going to be so different. But one, you can't even get pregnant. You know, the sperm, I don't even know where to go.

And they have no bones. And like, you know, we'd be aliens if we basically had generations in space, we would come back as aliens. How about that? and come back you couldn't walk you couldn't you know so all those all those you know sci-fi movies are real it is you come back green a little head Awesome.

But yeah, I love that you guys put I mean, the companies don't do that. I mean, they just typically don't put so much money back into research. And, you know, just what's what's fascinating, though, is that all the studies that we've done, it's kind of like this this molecule has like a Midas touch.

It's always showing some result that is generally favorable. And if you think about it, you got a product is impacting the DNA. You know, the end caps of the DNA, the telomeres, and we're lengthening telomeres.

So in essence, we're making this cell, you know, act like a younger cell. It can replicate more. I mean, the Hayflick limit is basically 50 replications, and then it goes through either apoptosis or becomes senescent.

We've had in the Petri dish and vitro have been able to have a cell continue to replicate ongoing. It doesn't, it doesn't see a Hayflick limit. I used to think I'd like to live forever.

And I don't know with all this crap going on. The most important thing is, Hey, like these live healthy. I live very, very sick and you certainly don't want to live.

No, rather not, you know, so this definitely prevents that. Well, that's David Sinclair of Harvard. He's the one that is basically, he said, hey, you know, I don't think in my lifetime, and I think right now he's like about 50 years old.

He said, I don't think in my lifetime, I'm going to be able to take the mean age and have people live longer in his lifetime. He said, but I know for a fact, I'm going to be able to make those last two decades of your life a much healthier two decades of your life.

And you know, we do, we do have it so backwards. You know, we really do. I mean, you work all your life. So you retired at 65 and you live to 85. Those are your two worst decades of your life from a health point of view.

Oh yeah. You're alive. You're in nursing home. Oh yeah. You had a stroke. You got heart failure, diabetes.

Telomere Testing Methods and Biomarkers

You got, and if you look at all the money put in as well to keep someone alive for a year, it's just the resources, you know, And I don't want to live in a wheelchair and, you know, basically without my mental capacity.

And I'm kind of living like that now, but it's a different live better longer, you know, and then let me go, you know. But yeah, it is interesting. Well, but, you know, grandma in the home and we'll visit her for 20 years.

Like, who wants that? An extra neighbor. My next door neighbor is 72 years old. His mother is still alive. She's one hundred and four. And when I first moved here like 13 years ago, she would come and visit and she would walk upright and you know, walk down the street and you're like, she turned like 98 you know he goes yeah i go wow she's got a posture like a 60 year old or a 50 year old and but she's miserable especially during this pandemic she's 104 years old and her husband died when he was 98 and she wants no part of being here anymore which is sad What's the use?

I mean, I'd say from that old, I'd love it. You get the right to say whatever you want to anyone you want. And I have this theory, too, like in nursing homes, you people demented to lose that frontal lobe and lose that inhibition.

And whatever their inner person comes out, that's what they really are. It's kind of like a, you know, me drunk or you got the guy who's just chasing the women.

just nice as can be and yeah so I think it's interesting but yeah you take advantage of those golden years and retire you know working and live and that's what you guys are are helping people do.

So you asked me about different you know criteria that we looked at in our in our studies. So our most significant study to date was, I call it our Spain trial.

It was conducted in Spain. The telomere testing was done by life length with, which most people, if you're familiar with telomere testing, they're like the gold standard they're based on.

Yeah. Well, I had a couple of questions regarding that too. And so we do study 117 subjects, double blind, placebo controlled. We had them on doses of our starting dose, which is 250 units per day.

And then we had another arm taking four capsules a day or a thousand units of which at that time we had a number of people. you know, the typical American way, you know, one's good, two's better mentality.

And when people have deep pockets, they figure, hey, you know, I'm 70 years old. I'm going to I'm going to take more. That might help me. And lo and behold, what we found out is that the sweet spot in this particular study, which the inclusion criteria, everyone had to be CMV positive.

So sin cytomegalovirus. Yes. Herb, really interesting. Herb, how about you? Yeah. Herpes number five. And the reason why is because the science was already out there.

If you're CMV positive, you're basically a senescent T cell factory. Yeah, you have your immune system shot and you're probably going to get cancer and you probably feel like crap.

And yeah, you probably have multiple medical problems. So ironically, I mean, the seropositivity rate is pretty stunning in the United States at the age of 10, 30 percent of the population at 10 is positive and it goes one percent per year.

So by the age of 30, it's a coin toss as to whether you're CMB positive or not. And it's an asymptomatic condition generally. But if they do get symptoms from what I've been told, it's like lupus like symptoms.

Yeah. And that happens generally later in life. But my word, if you know that you're CMB positive and knock on wood, I'm CMB negative. And I mean, I've had Michael Fox, I've had, you know, you know, cold source, the net, you name it.

So I've had a number of the herpes strains, but I'm not CMB positive. And my, my STT is low. And it's all about the immune system, you know? And I think, too, younger and younger people were finding because of, you know, pesticides, toxins, you know, roundup, it's like in everything, just suppressing one's immune system.

So it was low. It's kind of like when you get the chicken pox and they go, I'm over the chicken pox. No, not really. It's still there. It comes back out of the shingles where your immune system drops.

So it shows that all these people are getting low immunity and getting says on EMFs. Like it's a problem. Like I just got my second vaccine on the shingles last Friday.

Oh, don't do it. Well, I did because that's the last thing I want. Yeah. But now no one should be getting shingles. They, you know, they need to fix your music.

You know, I didn't need it. You got enough. I think my dad had it pretty bad at like the age of 75. And he said it was one of the most miserable things he's ever experienced.

And he's done kidney stones and you name it. So, yeah. yeah no that that is true and sometimes i had a co-worker that had it in his mouth yeah oh but yeah more and more people are getting it because their immune system we've become immune modulator including because it's just the cause of all these illnesses you know and as you get older the more Sickness, you get the worst immune system.

So now you get reactivating infection, like see the shingles and everything's a vicious cycle and you fixed immune system and which the means are replicates fast.

And so as a gut with a gut brain access, so you need to be able to have those cells keep up. That's right. That's right. And so they need to be able to replicate which requires telomere length.

Yep. They're also noticing that the T-cells in COVID-19 patients are being drastically impacted. The CD4 and CD8 T-cells, we offer a UCLA immunology test that looks at about 10 different biomarkers of immunology.

Every clinical study to date, we've used the UCLA test to identify how people are reacting. We have what they call the CD8 to CD28 negative, which is a marker for senescent T cells.

Really? I want to check that out because that's huge. There's really no great, like through standard tests, through Quaz LabCorp, like great ways of looking at the means.

So we're a mean modular clinic, but we ought to make a lot of compromises. Right. So the four biomarkers that UCLA offers in this test are unique and custom, so you're not going to find those at LabCorp or Quest or any other.

Can you name those again? Because this is for doctors. CD8, CD… It's kind of like CD8 forward slash CD28 negative. And then you have one that measures naive T cells.

And of course, you want naive is good. It's young. That's a CD8 CD95. So both of those positive. Those are two biomarkers that are great to know. You know, you want to make sure that you have a good amount of or optimal amount of CD95s, which are naive T cells.

because they need some reserve. Yeah, absolutely. And so does the telomere length correlate with these? CMV correlates with the CD28 negatives. You can almost look at this UCLA test and be able to identify someone that's CMV positive, but you can't definitively say that.

You got to do an IgG titer to rule out CMV, but you can look at the numbers and you can say, if you look at enough of these, Dr. Joseph Raphael has got it all broken down.

You know, what's optimal, what's okay, what's normal. Do you find these changed taking the product? There are two studies that were published in 11 and 13 that used that test and there was a statistically significant improvement in senescent T cell reduction.

Interesting. Alright, so you're diving deep into peptides and longevity on this podcast and we're right there with you. Integrative Peptides stands out, trusted by over 10,000 doctors to deliver real results for their patients.

These premium peptides are your key to unlocking vitality, recovery, and a longer, stronger life. Visit integrativepeptides.com and use the code PODLIFE for 10% off your first order.

Again, integrativepeptides.com, use the code PODLIFE for 10% off. It's time to elevate your journey, starting now. Well, how long of a period does that take?

Well, the study was one year in length. So typically you're going to see immune response three to six months. Three to six months. Yep. Okay. And then also you hear a lot of different telomere tests and you hear, well, it's not the average, it's the number percent of short telomeres.

Immune Health, CMV, and Senescent T Cells

Can you comment on that? The most important thing is the methodology that's used. So you get a lot of these finger stick ones that are out there. Those are all PCR.

And PCR is just going to give you a mean or average telomere length. And that is amplified. They're not actually measuring the telomere. So you want to use what they call, see, it's been a while.

I was telling you. But there's LifeLength, which is out of Spain, and then you've got Repeat Diagnostics, which is out of Vancouver, Canada. You said Repeat?

Repeat, yep. Repeat Diagnostics. And both of those two companies use fluorescent in situ hybridization. So they're actually fluorescing the telomere and measuring the individual telomere in the sample.

So it's a more exact measurement of what your telomeres are. And repeat diagnostics looks at granulocytes and lymphocytes. So your granulocytes are what they call your God given telomere legs.

It's coming out of your bone marrow. They do not replicate. It's kind of like an amputee. Yeah, they don't because they die in 24 hours. So and they only come out like an ambulance when you really need it.

So they pop out, they do their work and, you know, it's kind of like, you know, certain insects that come out for, you know, one day and hopefully find their mate and be on their way.

So then you got the lymphocytes, which can circulate in your blood for a decade. and they do replicate. So you'll…

That's a decade? Yep. And you'll find that those two cellotypes are generally a kilobase different on average.

So say as a 50-year-old man, your lymphocyte will be 6.5, which is $6,500 base pairs and then your granular site should be about 7.5. Okay. So basically what it's saying is the best you're going to get at that point in time in your life is 7.5 if you do Nothing, because that's what your body is able to produce.

But over time, yes, it'll degrade and basically a full kilobase pair per decade. So if you're starting off at, you probably heard 10,000 base pairs at birth.

And then usually as you get into your 70s and 80s, you're roughly around 3000 base pairs. So now we're talking seven decades of life and you've lost 7,000 base pairs.

Now is that for cells on average or for new cells produced? That's just on average. On average. Yeah. And so let's say, and we've been wanting to do this for a while is, you know, do a longevity program.

Okay. So we use TA65, we check their telomere length and also about- I would do their CMV status. I think that's very important. Do you think the percent of short telomeres is important measure as well.

It is very important. It tells you, so if you get like the average, it'd be like saying, all right, you took a class in college and you got a 3.0 or you got a B in that class.

Okay. But how did you get that B? were all of your tests a 3.0? Or did you have a couple of 2.0s, a couple of 4.0s, and you averaged three? So that's where that short telomere comes into play.

It kind of tells you really how bad you are or how good you are. So if you have a low percentage of short telomeres, that means that your mean telomere length is pretty rock solid, like you got a lot of good grades.

Okay. But if you have a high percentage of short telomeres, that means that you're really kind of dipole with your telomere length. You got quite a few that are short and quite a few that are long to give you this average.

So when you find someone who, let's say, it seems like a big spread versus they're more same, let's say they're the same number, what's the difference between the two people?

The difference is that the ones that have a higher percentage of short telomeres it'll end up catching up to them. So they got some stress on those particular cell types.

And every telomere, I mean, we got 23 pairs of chromosomes. OK, so you got four telomeres on every pair. So you got 92 telomeres in your body and only takes one to get critically short and the cell stops replicating.

and then which then causes all that inflammation because you have energy to die. The spell becomes senescent, becomes cytotoxic. I use the analogy like when you have like a bunch of grapes and you got them sitting out on the table.

and one starts to frost up, right, starts to go bad. Well, what's the next grape to go bad? Is it on the other side of the bunch? No, it's the one that's adjacent to the one that's cytotoxic.

So the same thing happens with senescent T cells, is that that cell becomes, it's rotting. and it becomes cytotoxic and it basically poisons the other cells that are random.

So do you want to do like a senolytic program and get rid of those cells before starting TA 65? Dr. Cleaver is a big advocate of the synolytic approach, and I think that it's ideal for someone that's CMV positive that has a senescent ducal.

It's not hard. I mean, you can do a number of peptides and even flavonoids, you know, and other things. So maybe do a couple of weeks or a month of that and then start.

And then when would you recheck the telomere status? I would not do it, but annually because, you know, the accuracy of the test, you know, is one in which if you were to do it like three months from now or six years now, yeah, you're going to get as as Joe Rafael says, you got to look at your telomere testing like a 401k.

You do it every year and you just monitor your portfolio. Because you're going to they call it the oscillating hypothesis where you'll get this, you know, almost like a sine wave.

It's going down. You draw the line and it's going down. But you can't get too excited because, you know, maybe your baseline test life was good. You had no stress.

You had nothing happen. And then a year later, You know, you had, you know, the death of a child or something tragic or this pandemic we're living through.

I bet you every, well, not even the US, the world population, I bet has lost telomeres quite a bit.

Skin Cream Results and Inflammation

So what do you think is the biggest influence on shortening of teller stress? You name it. Everything we know that's bad for you impacts your telomeres.

Smoking, obesity, stress. You know, x-rays, living in a city versus living in the country. I'm going to search because then I did, I just did a presentation on EMFs and how peptides protect you from EMFs.

I couldn't believe the studies on EMFs. I'm going to see if they shorten telomeres. I've bet you they do. Possibly. I don't recall. I mean, there was a big study that came out about hypobaric chambers.

I think it was in London and they showed lengthening, pretty significant lengthening in telomeres. But it's kind of like Dean Ornish's Mediterranean diet showing telomere improvement.

But it's got to be realistic. For example, this hyperbaric chamber, they had to be in it for 90 minutes every day for like three months. Well, I'm sorry.

The average American does not have that kid. Only Michael Jackson, yeah. Yeah, right. So it's great to know, but not necessarily, you know, ideal. And even Dean Ornish's study, I mean, when you really kind of dig into it, yes, the Mediterranean diet is favorable, but man, I mean, the way that they had to live on that diet was difficult.

I always say you don't live long, it just feels like it just drags on. But yeah, that's what I'm more like have fun and take peptide, you know, but you know what I have I've seen I want to ask you is so these people like elite athletes and they're doing triathlons and they're in the best shape and You check their telomeres and they're terrible Yep, or do they're like glycan aids or their DNA methylation and it's awful It's awful.

It's oxidative stress yeah i'm like and these guys are the epitome of health and it's like dude sorry you know so that's why i mean i work out religiously every four months for eight minutes you know i don't care rain or shine i'm doing it you know So, uh, yeah, but, uh, that, that was very interesting when I, when I saw that it's consistent too.

Let's talk about your cream. Oh, TA 65 for skin. Yes. Yeah. Yeah. So I'm, I'm a big fan. We have to lock it up at the office because all the staff takes it.

Uh, I think I mentioned you have to hide it from my girlfriend because she tries to bathe in it. Well, the takeaway is when a lot of people don't realize, like you say, she bathes in it and a little bit goes a long way.

It really does. The four ounce tube, which I think is more than gracious. I mean, it's it'll last. It should last at least four months again, unless you're bathing in it.

But if you really you I mean, it's an emollient What I call a triceramide base There's three different ceramides in this

vehicle and it spreads really nicely and ideally especially on your face just a thin coat because what you'll find is that if you put too much on it doesn't enjoy it only absorbs a small amount of it and then it just sits there and then you have this kind of like almost like you know, sticky, massive.

Hey, I'm gonna have her watch this part of this. There you go. But you know when stuff works when you have to lock it up at the office, right? Yes. Now, most people that use it really do enjoy it.

They like it. We get about a just about 20% reduction in fine lines and wrinkles of the crow's feet. You got about 10% pigmentation, you know, like a redness reduction.

The real takeaway is we have an 89% increase in skin firmness. Oh, that's interesting, because most things don't claim that or do that. Any hair growth?

We were going to be doing this study in hair, but yeah. Yeah. Well, you can tell it's not it's not working for me. But, you know, again, I don't use it every day.

I should. I get the product. Oh, it's it's like, you know, the cobblers children's children have no shoes. It's like, like I find all the stuff like right here and I don't do it, but I'll go do it when I'm out of state.

Right. Right. But yeah. And then we had a two to three full reduction in inflammatory cytokines and proteases. So like IL-6, TNF-alpha, MMPC. Yeah. So, so what is that mechanism?

And that's another anti-aging of course. We see that both in the skin cream as well as the oral. The skin cream, you know, if you're measuring, you know, the impact on the skin.

Yes, the skin cream has got a bigger impact on the skin, but orally. those inflammatory cytokine improvements on the oral is probably, I always, when people say, should I start on the skin, the skin product, or should I start with the oral?

And I said, well, the oral is systemic. If you're in LA, you do the skin cream. Yeah, then the skin cream, right. Doesn't matter how you feel, it's how you look.

That's right. But a lot of people are using the combination of the oral as well as the skin cream. So that's interesting. I'm just kind of thinking back with the, you know, with the COVID and when that was her first thought and, but also, you know, of course everything is, you know, lowering that inflammatory cytokine storm with that.

Have you done any studies or anything with COVID or? Uh, no. And I know that our federal government, you know, got their antenna out there. loud and clear, you know, with people that are trying to claim their product.

I didn't say COVID, I said MOBED. Don't touch it with a 10 foot pole. But a lot of, like I was telling you, like that Maria Blasco and Dr.

COVID, Fibrosis, and Broader Longevity Discussion

Aviv out of Rutgers, he did a study. And I mean, the hypothesis makes perfect sense. Okay. It's not impacting younger generation. It's impacting the elderly.

What's the difference between those two telomere lengths? You know, and when it's impacting the lungs, pulmonary fibrosis, as I mentioned to you, you do telomere lengths on pulmonary fibrosis and God forbid you have a husband and a wife that both are, you know, IPF, they then generate another type of disease.

The name is like this long and those kids don't live to be, but maybe three years old, but you look at their test results, they're awful, awful. Pulmonary fibrosis, you're in like the one percentile for T-liver length.

Yeah. And the nice thing with peptides is the TB4 frag, huge studies on fibrosis, especially cardiac, diabetic,

nephropathy, and fibrosis, and breaking down that fibrotic tissue is really interesting.

And just another interesting thing that I was reading is that a pathologist found that when he checked the lungs of the COVID patient, they had no thyroid in their lungs.

And so it was a, you know, one person trial and a one, but was already sick and then also gave a big dose of T3. boom, just totally reversed it. So interesting stuff.

I think when, when this virus eventually, you know, says bye bye and the data that we will be able to acquire, I mean, hopefully we don't have this issue of this magnitude ever again in our lifetime, you know, but it is phenomenal.

Yeah. When you think about a virus that impacted the whole globe, I mean, You think about national or natural tragedies that occur, hurricanes, volcanoes, it's so defined into the area.

This is impacting the whole world, especially where you're at right now. You're pretty much a hotspot still, right? It's close to the ground, but it's like, No one should be dying from COVID.

I think if someone dies in a hospital, I think it should be a big lawsuit. There's so many medications. I mean, I gave a talk on peptides and stem cells for COVID-19 ARDS, you know, basically a, you know, respiratory failure.

A dramatic improvement. Right. Who's getting that? Just giving glutathione, you know, of course, even that people on respirators giving vitamin D and five percent.

OK, five percent mortality on the vitamin D, 50 percent when they didn't get it like. okay cost eight cents right you know and these hospitals are refusing to do it i think there should be liability there but it's like hey we need the vaccine we need the vaccine here's here's something fascinating african americans have longer telomeres than Caucasians from Europe.

But when you look at COVID, they have a higher death rate to COVID than European Caucasians. And it's kind of like, okay, well, then maybe it's not a telomere thing.

Well, when you think about African Americans in general, when you think about hypertension, their hypertension numbers are off the chart. So now we're looking at the angiotensin receptor.

And that's basically the pathway for COVID. It's a bus driver. So it's fascinating. And I think the results that we're going to hear when they put the data all together.

Hopefully, if they do it, honestly, I don't know. I can't get started. It's like, oh, I hear you. I hear you. And it's hopeful that the human race will be able to find ways to be able to.

Yeah. And I got a funny, I got a funny feeling. This is going to be like flu vaccine or the flu. We're going to have no flu anymore. No cold. Yeah. Everyone's COVID and show me a study that masks help or lockdowns help.

Yeah, that's how we follow the science. I also want to see… Black helicopters are coming down already. But I would also like to see the results of, you know, the rate of typical mortality like heart attacks, lung cancer, all the things, the top four.

Did they miraculously… Yes, yes. No one's hit by a bus anymore. It's cold. Well, that's true. Yeah, it's crazy. And yeah, I think it's so political.

And basically, people are that's not going away, apparently, from what we're seeing. So yeah, that's true. But yeah, back to the good stuff. Yeah, the product because I've been around tried and true and proven and scientifically based and, you know, put your money where your mouth is.

And, you know, I don't know any supplement has done 10, you know, well done studies. Where do people purchase this and give advice on how to implement it to a doctor's practice?

Yeah, we have a whole marketing package that we send to our new physician licensees that join us. The obligation to sell it in your practice is just to buy a one-year supply for one person.

We provide you all of the, you know, patient brochures, doctor brochures, and then I even offer my services for like open houses that practices will do where they'll have like a wine and cheese evening.

They bring what they feel are the ideal TA65 patients. And let's face it, we know that from this price point that we have, we'd love to say that everyone can afford it.

But we know that not everyone can. But at least 5% to 10% of an average practice in this peptide world, these practices, I would say probably more than 50%, if not more, of your practice could be candidates for TA65.

Yeah, I think people are finally realizing it's like we have patients that like, oh, I don't want it if my insurance doesn't cover it. I mean, if you want to do insurance, you're going to get the most minimal care.

OK, if you break your arm or something. Great, you know, but anything other than that, you better be an educated health consumer, violent doctor, that's that's cutting edge.

And I'll just say a quick story. You know, I'm terrible live and I had no immune system and I had sepsis and I was in ICU and I'm asking the doctors about, you know, IV vitamin C.

There's only thing shown to reduce mortality and sepsis in the last 40 years. Right. And they never heard of it. And I'm like, what? It's been in every journal, let alone every ICU journal, a critical care journal.

And then so the nurses were kind of passive. And then I finally got this one nurse who was fighting. She was, I'll tell them. And she comes back, big smile, and says, he's going to do it.

He's going to do it. They wouldn't even look at the papers. I printed the papers out for them. And it says they're going to do it. I'm like, OK, that's good.

And then about five hours later, she comes a big smile. a little cup with 500 milligrams of vitamin C. I'm like, I go to 7-Eleven and get 2000. Just give me two oranges.

Well, yeah. Yeah. So it's scary. But, you know, I used to get really mad at the doctors, but they're also in a system that if they were to say, I would do IV vitamin C, the hospital eventually navigate and we don't do that.

That's not what we do. You know, and I have other instances where a blown pupil, you know, at dinner and all my girlfriend's kids like your eyes so cool.

I'm like, what, what are you talking about? And I go look at the bathroom like that is not good. My whole eye is the pupil, which either stroke, you know, basically.

So I go in and they're like, OK, what's your family history? I'm like, OK, give me any of these peptides. Give me progesterone. And they're like, oh, that's interesting.

We'll take the studies and then you'll do it with the studies. Like, well, we'll look at the studies. I give them studies. They're like, I didn't say we do it.

And some calling people get down. They're going to save my brain, you know. And it turns out they do MRI CT to Terry. not that it was a herxheimer from lime and growing up one pupil was always bigger than the other because i had my lime since i was was a kid but uh it's where'd you where'd you grow up uh honey the beach okay yeah so uh whether of course no lime of course but yeah okay no but you know i mean the problems obviously pretty low

out there I would find it is so high.

Practice Use, Patient Access, and Closing Remarks

In fact, we had another person right next to our Fountain Valley, a CEO who we diagnosed with Lyme, just very sick and the same guy who had the patent, actually, and do him better.

And then by his doctor, he went to his doctor and said, there's no Lyme. This is quackery. And he calls, just panic, say, there's no ways the diagnosis is so wrong.

I try to explain to him. And then about two weeks later, his dog gets totally sick. And they bring the dog in, the vet goes, he's got lime. So I'm like, so you started going to the vet.

Yeah. Yeah. Like the Seinfeld Kramer. But yeah. So I think this is just, uh, you guys have been ahead of your time and, you know, quality evidence based, you know, well, it all comes, it all comes down to awareness.

So when I'm at any given show and I have the opportunity to spend the time, not this much time, but let's just say 10 minutes with a physician, the close rate is astronomical.

You know, it's, it's just, they hear what I have to share with them and they buy the product. Yeah. We have so many people that every year, you know, I'm ready for my year supply.

You got any specials going on? Well, I found is that also don't forget to take it. And I'm like, damn, I could feel my telomeres shrinking. It's like, yeah, I mean, that's that's like the number one question that people ask is, you know, to their doctor, what am I going to feel when I'm on this product?

And I and I kind of say, well, I really wish I knew what it felt like when my telomeres are growing. yeah it's people have put in perspective that that's really what this product does it does impact your biomarkers of immunology and we'll have a 500 patient study published this year looking at all of our doses strengths some in a BID regimen or versus QD.

We want to find out where the sweet spot is for, you know, we saw that in the Spain trial. We want to see if that replicates in the United States, but we're also not looking at telomeres in this study.

We're looking at the biomarkers of immunology. Oh, interesting. Interesting. Yeah, that made me think too, not feeling anything. It's kind of like also you don't feel your arteries are becoming clogged.

Right, like blood pressure medication. Most people don't know, you know, and they'll just make a decision to stop taking the blood pressure medication.

I think blood pressure medication is one of the lowest compliant drugs that people take. They fall off because they just, they're like, ah, that doesn't work, you know?

And lo and behold, you know, they're coming in the doctor with, you know, 180 over 120, you know? Yeah. And so I mentioned that cardiovascular disease highly associated with telomere length.

Yep. Cardiac tissue. Yeah. And people will say, oh, well, I have an average telomere length, but I have severe cardiovascular disease. Well, what does that mean?

I said, well, unless we're doing a biopsy of your cardiac tissue, I mean, what that tells me is that if you're average and you have terrible Cardiac tissue then you have other parts of your body systemically.

That's doing much better than it normally would Yeah, the only is gonna be able to do it as a biopsy. I don't know if you can answer this but does it selectively increase the lower telomeres or guess or let's say when you take your do you see a change in the percent of short telomeres versus the average first or What do you typically see?

Yes. I mean, it's fascinating how the human body works when telomerase is introduced to somatic tissue or somatic cells. It goes where it should. It goes where it should.

Yep. So I use the analogy. It's like a mother that has, you know, a single mother that has five kids and one of them sick. You know, she's going to tend to that sick child and think of that sick child as being the one with short telomeres.

Yeah. It's fast. I don't know. Now I'm thinking of anyone I know because they're short term or they're not, but I think, I think that is awesome. I mean, that right there, I think that's a great closing piece of information because that's key.

Yes. It is not making the longer ones longer. It's making the shorter ones longer. So. And I'll tell you, it's companies like Lifelink that were able to identify that for us, you know, because they do measure not only the mean telomere length, but they also do the critically short or the short percentile.

Cool. Cool. Uh, lifelink and they're out of Spain. So you can reach them at lifelink.com. And so again, because of doctors, do they set up an account and then ship it?

They ship them kits, you know, and then I'm not sure exactly. Some companies have it to where you pay 10% for the kit. And then when you send it in, that's when you get charged for life length.

I'm not sure if they're on that. That's it. No problem. Right now. No, actually what they do is they ship it to a location just outside of Philadelphia.

And then it's flash frozen. And then every like, every Tuesday, they send the batch to Spain. and then generally you get the results in two or three weeks and that particular blood work and the analysis that's done and how they provide you it's not just like one sheet this is what your telomere length is i mean it's a whole booklet and it tells you you know ways in which to improve you know if your results are not that good i have the test though in my in my bathroom which i'm planning to do along with all these other but i will tell you and everyone that's listening If you're doing telomere tests annually, you do not want to do a telomere test if something really is tragic going on in your life.

I'll never be able to do it. or if you're sick and other things too. Right. And now you also want to make sure, cause your workout schedule is cordial.

I got it. I want to over, over exercise. But again, people, people that do strenuous exercise, they need to take a day off and then do their telomere test.

A day. See if you're gonna do a day, you might as well, you know, do better. I'd also like to offer anyone that's listening to this that wants to purchase the product, they can call our main office and the office number is 212-885-5508 and they can put the passcode SUMMIT and we'll provide them a special discount for being listeners of this program.

If anyone has any questions or wants information, you can either go to info at TASciences.com or they can come and email me directly. And my name is Eric, E-R-I-C at TASciences.com.

And we'll, we'll try to get that up in writing. Um, and so with the summit discount, what was it? 80% off, I think. It would typically be our conference specials that we give to physicians that come to our conferences, which unfortunately has been kind of dry this last year.

That's just been tough. But I've taken advantage of you guys at the conferences all the time. Well, awesome. Hey, it was fun, educational, impressive.

So thank you so much. And you are one of our wonderful sponsors. And I suggest you go to the website and take advantage of all the information. And these stuff is great for your patients.

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