The Science of Stem Cell Activation Through Plants Transcript

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Introduction to stem cells and cure

In the early 2000, when it became clear that adult stem cells, which is what we're talking about here, umbilical cord, bone marrow stem cells, fat stem cells, V cells, all of those, adult stem cells have extreme regenerative properties.

It brought something in the whole world of medicine. that had not been present in the world of medicine until then, which is real cure. If you look at medicine today, we don't cure.

If somebody has insulin-dependent diabetes and they find a way to reverse it, medicine will say it was a wrong diagnosis or it's a miracle. To just say no, we can reverse diabetes is not accepted.

It's not part of conceptual language in medicine. It's just not there. So stem cells come in and they bring cure because they actually repair. So that is the biggest threat of the pharma world because pharma does not want to cure anything.

Welcome to the TBD Fit podcast on Dr. Talks. I'm your host, Daniel Keeley, and I will be guiding you through this wellness journey in terms of optimizing health and longevity, where we unpack the science, the dos, the don'ts, and everything in between.

Come join us. Look forward to seeing you inside. Today's guest is Christian Drapeau, a neuroscientist and stem cell scientist, published author and founder of Sturmagen.

His cutting edge work in stem cell research has really led to groundbreaking natural approaches to support the body's own stem cell release, which we're going to really dive into today.

for regeneration, repair, and the buzzword, longevity. With over two decades of experience and innovation, Christian brings a visionary but also science-backed approach to cellular health.

So I'm super excited to bring him on a guest to leverage all things stem cell. What initially sparked your interest and passion for stem cell research?

What was kind of the the catalyst for you to, I guess, jump in to plant medicine and knee deep into the world of stem cells. Well, I've always been interested in plant medicine.

I mean, I've started to really play with plants as a teenager. So plant was one thing. But my background is neuroscience, so I was working at the Montreal Neurological Institute doing research on memory and epilepsy.

And things led me to start to collaborate with a company that was selling, this was in 1995, that was selling a product, you may have heard about it, Blue Green Algae from Klamath Lake.

And my task was to study what it does in the body, how it works, so that we would have science, they would have science to support any of the claim that were made on this blue-green algae.

How blue-green algae led to stem cell research

And as I was studying this blue-green algae, I came across people reversing multiple sclerosis, insulin-dependent diabetes, heart disease, emphysema, liver failure, Parkinson's, Alzheimer's.

I mean, so many different conditions. And some of them, they're just stories. They're not studies. They don't necessarily have a value. But this being said, when the number keeps growing and there's a point where it becomes significant, It became to me a thing.

Like it looked like this blue-green algae was really doing something in the body. We had no understanding. So for a number of years, we did a number of studies to try to explain it.

And really the turning point was early 2001, I came across an article that was the first documentation, at least as far as I'm concerned, first documentation of stem cells going from the bone marrow to the brain and becoming a brain cell.

Now you go back in 2001, stem cells are only known to be precursors to blood cells, I am 100% sure that in your training, that's what you were told, that's what everybody was told, and of everything in the body, well, the brain and the nervous system is the one thing that we know does not repair.

So to see a study showing that a stem cell went from the bone marrow to the brain and became a brain cell, I thought it was pretty fascinating. So I went to the, at the time, it was not on the internet, so the local medical library to see what else I could find.

I found similar data documenting, by similar data I mean one study documenting stem cells going to the heart, becoming heart cells, another one to deliver.

So I really just thought, Stem cells can become heart, liver and brain. Why not pancreas, skin, lung and the rest? It makes no sense that they would become those three and not the rest.

So let's assume it's just a matter of time. Stem cells can become everything. Then the question is, if they can become everything, then that means they have to be the repair system of the body.

So we published an article in a journal called Medical Hypotheses in 2001, suggesting that stem cells were the repair system of the body. And in the back of my mind, for the first time, I had a, I must admit, far-fetched, like really like out-of-the-box hypothesis, but to me, it looked really solid.

Stem cells look like they are the repair system of the body, and just like we have plants stimulating the immune system, what if this blue-green algae was stimulating the repair system?

So we acquired a flow cytometer to start to count stem cells in the bloodstream, and then we took a blood sample, we started on ourselves, took a blood sample, took this blue-green algae, took another blood sample an hour, two hours later, and we saw the whole phenomenon.

And that was the start of the next 25 years of working in the field of stem cell research. So I got interested in stem cells, not because stem cells by themselves were interesting, But because I was just trying to understand how this blue-green algae was working, and it led to, I think, what I consider to be like a major discovery in medicine, that you have a repair system just like you have an immune system.

And in terms of the blue-green algae in your research, How has that evolved? How are you using that now? Well, the moment we documented all of this and the first reaction by the scientific community, rightly so.

Like I'm not at all criticizing it, but it was like, this is just an artifact. Like it's not a real thing. I mean, stem cells cannot become cells of other tissues.

Putting more stem cells in your bloodstream doesn't mean anything. Until you have a mechanism of action and an active compound, this is just like, like anecdotal observation.

So we spent the next three, four years documenting the mechanism of action, the active compound, proof of concept, and animal models of injury. And then we launched that first product in 2005. We sold probably over the next 10, 12 years about $400 million of that product.

But it was not, so I was able to see really the impact of putting more stem cells in circulation on human health. But I thought, if I really want to make this a thing in medicine, meaning you can inject stem cells, but you can also

release your own.

For this to be meaningful, it needs to penetrate the medical community. I needed a product that was stronger. So I then dove into, I started to look at other plants and I studied probably, I don't know, a dozen, 18 plants.

And I'm using the top five into a product now that is called stem region release. I'm sure we'll have a chance to look at it. So this blue grain algae is still in the product.

It's the original plant with which everything was discovered. But of the five plants that I'm using, it's actually the weakest of them. So it was the vehicle from the vector to make all these discoveries.

It's still an important part of the product, but the science have evolved beyond this. So for the viewers to continue to stay tuned, definitely want to showcase the other several more potent factors that can stimulate endogenous production.

In terms of this blue-green algae, is it similar to kind of what most people maybe know as chlorella or spirulina? Or how do those differentiate? No, so Chlorella is a green algae, so it doesn't have those benefits.

Spirulina is a blue-green algae, but we tested it. It does not have the effect on stem cells. So it's one specific species of blue-green algae. There are about 5,000 species of blue-green algae.

Of those 5,003 are known to be edible. Spirulina, Nostoc, and that species that grows in in Climate Lake called Athanizomenon flosaqua, in short, AFA, So that's the one that I'm talking about.

So on the marketplace, it's known as blue-green algae. Although spirulina is technically also a blue-green algae, we're referring here to the species growing in Comet Lake.

So how was this stumbled upon? It sounds like out of 5,000 species, this one, the only holy grail that can up-regulate stem cell potential and proliferation.

How did that, did someone, was this just like kind of local medicine at the time? And then they were seeing these benefits? and the population circle this location?

It's a cool story. So it's Daryl Coleman, who was the owner of a company called Celltech, which is the company that I started to work with in 1995. So Daryl Coleman in the 1970s got an interest into growing a superfood, which was spirulina.

So he had these ponds in which he was growing spirulina and at some point the pond looked like a spaceship when it was covered. So it became like sort of a, I don't know, like a cute photo op for a senator in Arizona or New Mexico, one of the two, at the time who was a former astronaut to take a photo op beside a pond that looked like a spaceship.

And that article, it was just a column in the newspaper, showed up in the newspaper in Klamath Falls.

Blue-green algae, spirulina, and algae safety

And there's an attorney there reading this column, wrote to Dowell Coleman and told him, well, if you're interested to grow blue-green algae, there's a lake in my backyard.

I mean, it's a big lake. It's 25 miles long. But there's a lake in my backyard where blue-green algae is growing naturally if you're interested in it.

He says, I can send you some. So Darrell said, sure, send me some. So the guy went in the lake and with window screens collected two 55 gallon drums of that blue-green algae and shipped it to him on the reefer truck.

And when it arrived, Darrell Coleman looked at this and he says, this is two months of harvest in my ponds. And the guy just collected that like in a few hours in the lake.

So hopped in his car, drove to Klamath Falls. Look at this massive lake with all this blue green algae growing naturally and then started to harvest it and then consume it.

and install for himself the health benefit of it, which is a lot like spirulina, but there are some differences. So the polyunsaturated fatty acid profile is slightly different, and it contains this compound that has an effect on stem cells, aside from this similar effect on the immune system, on inflammation and all of that.

So it shares benefits, but the main difference was that it is a natural source of phenylethylamine, which is known in chemistry as the molecule of love or the molecule of joy.

So your brain makes it whenever you're content. So as you take it orally, it gives this feeling of just Joy happiness like feeling content and a sense of mental energy mental concentration So it really exploded in the early 1980s, but really and in the 1990s as an amazing Supplement for just brain health if you want and that's how it exploded as a network marketing companies and it's so interesting which is when I No, that's absolutely brilliant.

It's so interesting that what is found in plants is also found naturally within us and how we're very much interconnected with plants. I'd love for you to maybe speak on that component because it seems like your reference with plants go so deep.

But before you answer that, I'm curious because in terms of algae and just maybe to Preface, when we see algae often in a lake, we see that almost like toxic sludge on the slimy surface, almost kind of like suffocating the water.

How should we interpret most algae? Because it sounds like this blue algae, again, is very potent at helping heal. But in general, how should we see algae?

I mean, the view of algae has been stained, if you want, by a few things. Number one, it grows in waters that have a lot of phosphorus, nitrogen, which is a lot of the runoff that comes from agricultural activity.

So oftentimes, it's linked in people's mind with pollution. But, you know, it's like, think of manure. that is on a field as organic fertilizer. When it slowly falls in the water, now it becomes toxic because it grows algae, which can be toxic to the fish.

So there's a biology here that has been associated with pollution But it's sort of organic fertilizer if you want for the water. But it's oftentimes associated with a negative experience because when there's a die off at the end of the season, it's oftentimes a lot of protein that starts to decay.

So it smells like, you know, dead bodies. So the smell can be absolutely horrendous. So that's one thing. And a few species are known to produce toxins.

Not that many, but a few species are known to produce toxins. So in the scientific literature, there is a plethora of literature focusing on the toxicity of blue green algae.

For their toxicity, but also because when you understand how a toxin is working, Oftentimes it gives you a deeper understanding of how the human body is working, meaning you take a snake toxin for example.

The way that the nervous system is working today with action potentials, neurotransmitters and all of that was essentially discovered after the discovery of snake toxins, fish toxins, and various toxins that block these neurotransmitters, so now you gain knowledge about how the nervous system is working.

So it's fully documented in the scientific literature, but it's not a common occurrence, but it does happen. So that's why blue-greenology as often times been associated with like Pond's Calm, something negative.

But aside from that, as analogy itself, like as a food product, it is a super food. Those that are edible, and there's three again that are edible. The rest, you know, they all have some reasons why they're not really edible or recommended as food stuff.

But those are edible. I recall some years ago with the tides or the red algae bloom I believe it was in Florida and the toxicity when you reference pollution.

I think a lot of people have this notion that certainly plants can be harmful. I guess similar to mushrooms. There are mushrooms that are edible and then mushrooms that are poisonous.

Let's maybe unpack some of the findings that you have found over the years in terms of how we've kind of evolved with plants and maybe how similar we are in many respects to plants.

I mean, this is a deep discussion on its own, but yeah, you're referring to the red tide. So it's not a blue-green algae. It's a red algae that produces toxins.

I would have to go back. There are a number of those toxins, probably three or four of those toxins, saxitoxins, is one of them. There's a few others.

They're not coming back to mind. But they are absorbed by the food chain, so they end up a lot into shellfish. So shellfish poisoning is essentially shellfish eating that toxic algae.

So it's a thing. So we need to be careful. But there are so many examples of these in the, I mean, I was going to say in the scientific literature, but in our entire medical world.

I mean, most drugs that are utilized today were first isolated from plants. You go back in the jungle and there are tons of plants that have pharmacological effect on the body because they contain product that will affect various mechanisms, various physiological processes in the body.

I mean, we can go so deep into this part, but let's just capture all of this by saying that I think it's something like 60% of the physician desk, if not more, is made out of drugs that were first extracted from a plant.

And now, because you cannot patent the plant, then pharmaceutical companies have found ways to tweak these compounds and develop a process to manufacture them in a lab and then file patents on those and those have become drugs.

Oftentimes, those drugs have severe side effects when they're used in their pure form that you don't necessarily find in the natural form. So at the end of the day, when you dive really deep in plant medicine, it is a much, much safer way to handle, you know, as medicine, if you want, than pharmaceutical drugs.

But the power of the pharmaceuticals and big pharma is such that right now we rarely hear about the plans that have those kinds of benefits. But I think it's your background, right?

from my heart healing with nature, right? You're leveraging plant medicine to do or amplify perhaps what the body is already doing. And so the connection or the interconnectedness with us and plants to me is how we've evolved.

Plants, pharmacology, and whole-plant medicine

And so I want to highlight kind of the plants that you have brought to attention that have been tremendously Therapeutic and in this whole kind of buzzword of longevity medicine in terms of plants.

So when you're referencing pharmacology and I suspect is the problem then when we're kind of hyper isolating or pulling out or extracting certain components.

Is that where the danger often resides? Because in nature, when you have the whole plant, often enough, there's

balance there. And so when you isolate certain components, is that where kind of sometimes things begin to fall short?

Yes. I mean, there are many examples, like one that is notorious. And if you search it on Google, you find all kinds of opinions. And there's so much politics into it.

And it's Graviola. You've heard of Graviola. Yeah, so Graviola, so this work was done at Purdue University, and they found something like 32 or 34 compounds that are anti-cancer.

And when I mean anti-cancer, up to 100 million times more potent than some current chemotherapy that is being used. Extremely anti-cancer. But as you isolate them, then they either lose their effectiveness as isolated components, so they work as a combination of these compounds, that cannot be manufactured and some of them separated from the whole are toxic.

So you need to go back to the whole plant but a pharmaceutical company cannot capitalize on this. If they do all the research to show the real effectiveness of Graviola then anybody can take their research and start to sell Graviola leaf and then they cannot recoup their investment.

So there's no benefit for a pharmaceutical company to continue in that direction. So once that became clear, they just dropped it. All that work is in the scientific literature and they put their focus on something else.

And now because the work was not completed, then a bunch of people will say, well, you know, it was never fully documented. Yeah, it was not documented because nobody has the money to be able to fully complete that documentation.

But there's tons of documentation to show that Graviola can be extremely effective. But again, you split it into its active, you try to separate the active components and you lose the power of the whole plant.

And it's not the only example, there are a lot of examples. And I was going through, I was having that discussion this weekend trying to explain somebody that I had met, really the difference between pharma and plant medicine.

And we were discussing this in the context of the mortality associated with somebody who is, let's say, 90 years old and falls and breaks a bone. And the typical, typical course, if you want, journey is that you take a healthy 90 years old that is taking virtually no drug, no medication.

They fall and now after the fall to help them recover and to prevent for a potential stroke will put you on anticoagulants. And then the anticoagulants will bring other side effects.

It will give you like drugs that covers these side effects. You give it about 6 to 18 months. That person that started with no drugs, all that person had is an accident.

like a broken bone, that's it. The heart, the lungs, everything is fine. That person within six to 18 months will be on about a dozen drugs. And normally that person will have a life expectancy after that injury of somewhere between 12 to let's say 36 months.

Only as a con, and this person will die as a consequence of the use of all these pharmaceutical drugs. I'm not making a story here. This is well documented.

The fourth leading cause of death in America is using pharmaceutical drugs as prescribed. It is so big and yet it keeps going under the radar and all of this to say when you take those same compounds as part of plant medicine associated with because oftentimes what pharma will say is that isolated it's not as good as the drug but plant medicine is not made to be done isolated it's made to be done into an overall program that addresses lifestyle that addresses so many different things and when it's coupled to this global treatment let's say that includes lifestyle change and more than just one plant Plant medicine to me is by far- Yeah, your analogy is brilliant.

The same way how we, when we speak to our patients and when people seek us out, they understand we have a holistic approach. So when I say we practice functional medicine, we're looking at the body as a whole.

You're not just one organ system. And so the problem becomes, I don't want to undermine any specific specialties, but if you only treat one particular part, you're kind of not addressing, again, typically the root of what this issue created how it came to be in the first place.

And so the problem I see similar with certain drugs, if you will, and when you're doing things kind of in hyper isolation is you're not addressing the symphony as the body was intended to heal.

And so when we're leveraging plant medicine, which you're doing so elegantly, you're providing natural nutrients in the proper ratios that the body can absorb in the correct formulation where it becomes this beautiful harmony so that the body can now begin to to heal.

Now before again we showcase some of these nutrients that you've done so well to put together. Let's provide maybe a an understanding for our patients, our clients who want to understand in terms of stem cells, what are their options?

So because now to me, stem cells, this kind of terminology of stem cells and exosomes, it's almost kind of the holy grail of modern medicine in some respects.

And we have patients flying all over the world, getting procedures done for the tens, 20, 30, even $40,000 for for injections. What are, if you can provide maybe the options, the differences in stem cells, what's out there, and then kind of looping in obviously what you're doing as well.

So the different options that people have in terms of stem cells that they can to access healing. Okay. Let me first by sharing one thing. So when I give lectures, I oftentimes show this video, which I found absolutely like, I think it it creates a breach in people's mind to kind of really open their minds as to what stem cells can do.

So it's the work of Doris Taylor. She took the heart of a mouse, circulated on the cardiac muscle digestive enzymes that completely digested the cardiac muscle.

So after something like 10-12 hours, all that they're left with is the soft skeleton of the heart. So the connective tissue of the heart And on that connective tissue that still retains the trace that it was a heart, they laid out stem cells isolated from the animal's bone marrow.

And a week later, they have a beating heart in the test tube. This is amazing. So your stem cells in your bone marrow can completely rebuild and reconstruct a full beating heart.

It's amazing. So the question is not, are stem cells working? Can stem cells help? Is it true everything we hear about stem cells? The real question is, what stands in the way of stem cells expressing their full potential?

What is happening in someone's body when they get a stem cell injection or they release their own stem cells and they don't get the real healing effect that they're looking for?

It's not that the stem cells are not working. In that context, in that body, at that moment, the opportunity was missed. These stem cells did not work.

And that's why there's an interest here of saying, let's do this every day, a little bit less, but over long periods of time, which is really what I've developed.

But we'll get into that a little bit later. So the aim here with any kind of stem cell approach is to increase the number of stem cells in circulation because there is a direct link between how many stem cells are in your bloodstream and your body's ability to repair.

It's your repair system. If you have something that is broken, whatever it is in the body, that area is calling for repair. So if you have stem cells in circulation, they'll be called to migrate in that area and then start and support the process of tissue repair.

If you don't have enough stem cells in circulation, that repair can not happen. We are born with red marrow that makes stem cells and that red marrow quickly converts into fatty marrow very early in life, fatty marrow that does not make stem cells.

So by age 30, we have lost about 90% of our red marrow. So that's why we all experience, at some point in our 30s, early 40s, I have an injury, I've had the same injury 15 years ago, now I'm not repairing with the same efficiency, the same speed, it's because I just don't have as many stem cells in circulation.

Most people who go for a stem cell injection, they're not in their 20s. because you have enough stem cells when you're in your 20s. They're later on. So I'm painting this picture just to understand what is the meaning?

Why do we want more stem cells in circulation? It's because there's a direct link between how many stem cells in circulation and your ability to repair.

So the main question is what kind of stem cells are best to be injected and where should they be injected? So there are two types of injections, injections in a specific tissue or in the systemic circulation, like in a vein.

Stem cell options and how they work

What the past 20 years have shown is that if you inject stem cells in the coronary artery, for example, or in the heart, or at the entrance of various tissues, The amount of repair that you see six months later is not a whole lot different than if you just put them in the systemic circulation.

So it has simplified a lot of these approach with stem cell injection over the years so that you can now just put it into the systemic circulation. So I have colleagues, for example, 15 years ago were doing this in the OR in an hospital with some risk, if you want, and they finally realized, I can do this in the clinic, just IV systemic injection in a vein.

So that's simple. So either systemic or in an organ, and here I'm talking mostly, it will be in a joint because you want to inject it in areas where stem cells in your bloodstream don't have an easy access.

So in your joints, in the capsules of a joint, or in the eye. These are the areas in your body where you don't have a strong vascularization. So even if you release stem cells, you inject stem cells in the bloodstream, they don't have a great access.

So for a joint, you want to go in place where it can do injection in the joints. The type of stem cells, every, how could I say? There are pros and cons with every one of them.

The people who have chosen one over another will kind of tell you a message to say, that's one of the best. The other ones are worthless. And it is absolutely untrue.

They're all good. They all work like you as a person, the terrain. And everything that is done around that injection is probably actually more important than the stem cells themselves.

But you have fat stem cells, not as powerful as stem cells from your bone marrow, but not far from it. Your stem cells in your fat do not age. So when we extract stem cells from the fat, they are relatively young stem cells, so fairly potent.

And the good news is that they'll be there for your entire life. So it's an endless source of your own stem cells. Stem cells will age with us as we age.

So stem cells from the bone marrow, if older, are not as effective as young stem cells, which has led people to say,

on the web, even people like Tony Robbins.

I've heard him say on YouTube and on different podcasts, you know, past 40 years of age, your stem cells are falling down the cliff and they're worthless.

That's why you need umbilical cord stem cells. We have a study right now with our product where we trigger the release of the person's own stem cells every day for six months.

And in a study on stable chronic congestive heart failure after six months, every single patient in the study so far have normal heart function. They are between 60 and 74 years of age.

So absolutely untrue. Your stem cells are less effective. at 60 than they were when you were 10, but they're still good enough. So bone marrow stem cells are good.

Umbilical cord stem cells are developing as probably the most popular right now on the marketplace, and it's really because they're the easiest to use.

You get a little vial, you buy it from a pharma company, and then you just inject that vial. and it's been pitched as being the most effective, it has a lot of marketing in that message.

I don't want to decrease it, they are effective, they work well, it's an option, there's no question, but this message that they are by far the best, I don't think is true.

So I would say find a clinic that, and then there's also V-cells, which are very small embryonic-like stem cells, which the closest application that people may have in mind is PRP.

So platelet rich plasma, platelet rich fraction. These are blood sample that you spin and you isolate the platelets. And historically we thought this is filled with growth factors and it's these growth factors that have an effect on repair because it's been used for decades in joints.

And we know very well today that there is a type of stem cells that is very small, the size of a platelets, and they are in that fraction. You can identify them because platelets don't have DNA and you will have a subpopulation of these small particles in that population that have DNA and they have marker for stem cells.

They are stem cells, and they are extremely potent. So PRP is a form of stem cell treatment as well. See, these are the different options. What I have developed, and we can go into the stories of how all of this was developed, we talked a little bit about it into what led me to stem cell research with this blue-green algae, but it's just to understand that stem cells are literally your repair system, Every day of your life, you release stem cells.

Anytime you had an injury in your life, you have released stem cells for that area to repair. So it's like your immune system. Anytime you have infection, your immune system is triggered.

Every time you have an injury, your repair system is triggered. And if you have more stem cells in circulation, you will repair better. So because this process is natural, I have found plants that trigger the release of stem cells from the bone marrow.

So instead of having one big injection of stem cells or an increase in the number of circulating stem cells in one day after an injection, we do a smaller increase But we can do this over long periods of time every day and accumulative and slow and safe.

That's my preference. So we'll dive into that in a second. In terms of risk factors, let's say, um, well, two questions, one, a toggle autologous versus non autologous.

When you're referencing umbilical cord, there's a donor there as there are concerns with. kind of safety or the health of those stem cells from the mother that it's being derived from.

I know that's always a concern. I know when you said finding a pharma company that's doing their diligence, but in terms of when you reference bone marrow stem cells, obviously it's your own or a toggle stem cells that's usually safer, but maybe less potent because of the age of the individual versus young fresh new stem cells probably devoid of maybe any other sort of toxicities or how does one think of in terms of when you say less potent, is it in terms of the age of the stem cell or the number of stem cells that is harvested or extracted?

Yes, when you take, and these studies were obviously done in animals, and not tons of them were done. So this understanding comes from a few studies, but it was fairly clear, which is, if you take, let's say, an eight, 10 months old mouse, which is pre-geriatric, you know, it's kind of an old mouse, and then you trigger an injury, and then you inject stem cells extracted from a one day old mouse, or a 18-month-old mouse, which is a very old mouse.

And then you look at the potential to stimulate repair. Young stem cells work way better than old stem cells. So we know that stem cells will, like any other cells, will walk towards senescence, will develop garbage that is going to reduce their efficacy.

And by the way, Fasting has been shown to rejuvenate stem cells and probably because of the simple process of autophagy where the stem cell kind of cleans itself and now it regains greater effectiveness.

So fasting is probably a great way to rejuvenate your stem cell bank if you want in your body. So young stem cells are better and that's the push to go to umbilical cord stem cells.

But it's not the only thing to think about when we choose a stem cell. Your fat stem cells are also not as old as you because they're dormant in your fat.

So they don't multiply. So they don't really age like your body ages. So they are relatively a young stem cell. And they're there all the time during your entire life.

So they could be compared to umbilical cord stem cells. And I'm sure somebody who has really sold to umbilical cord stem cells will tell you that what I'm telling you right now is absolutely terribly false.

It's not that false. They are better. Umbilical cord stem cells will be more potent. But they do come with some levels of risk. It's not big risk, but we just need to be aware of it.

Right now with the FDA, the most commonly reported side effects or negative adverse effect of stem cell treatment, stem cell injection, is systemic infection.

So you basically got an injection of a stem cell sample that has been contaminated. So this is purely the good and quality handling of blood samples. So if you have a company that is doing really a good job, great SOPs, and what they do is really, really done safely and cleanly, you should not have this problem.

But we live in a world of reality and real life, so it is the most commonly reported adverse effect or adverse event after a stem cell injection. So first, find a source that is doing their job well.

And there are some. I mean, it's not necessarily hard to find. Make sure you get a clinic that works with these very well-known providers of stem cells.

A little bit more risky, if you want. Not a big risk. If I consider all the drugs that are used right now by big pharma and in medicine, stem cell injection will probably among the least risky.

So I want to make sure that what I'm saying here is not a big risk. But the risk that has been in the minds of a lot of people who prefer not to use umbilical cord stem cells is that you don't know who you're receiving these stem cells from.

And they could have diseases or genetic something that when you receive it, it does not work well with you. So it could be like genetic diseases that once you receive the stem cells could develop in you.

So it was an idea until about a year or two ago when a study have shown that if you take a gene that code for human Alzheimer's disease, inject that, insert that into the genome of a mouse, and then take stem cells from these mice and inject that into a recipient mouse, that mouse has developed Alzheimer's.

So now it's one study that is clearly showing that, yes, you can transfer these problems into a recipient mouse. So the proponent of umbilical cord stem cells will tell you, yeah, but we test for this.

We test to make sure that these are safe. But in science, you can only test for what you know what to test for. You cannot test for something that you don't know what it is.

So there is a risk there. And now the argument, which is a very good argument, from the umbilical cord side is to say, okay, but you get that stem cell injection when you are, let's say, 60 years old, 70 years old, and then the problem that will develop out of the passage of this genetic material may take 50, 60 years to develop.

So who cares? You will enjoy, in the meantime, a greater quality of life, which is totally true. So somewhere, I am not saying it's a bad source of stem cells.

I'm just really laying out here the whole picture of what is this market of stem cells. There's another stem cell that is on the rise. It's not big yet because the method to isolate them and all of that has not been fully, I mean, it's been developed, but it's not fully available.

And the people who developed this have They have not only tried, but they wrapped this up into patents. And you know, now you get a new type of stem cells that is linked into IPs.

So I don't know how this will develop in the marketplace, but it's called a Muse cell. And it's a form of a dormant stem cells in your body that can be activated and is a little bit like the V cells, meaning they can become pretty much like everything in the body.

When I say everything, I mean, including eggs and sperm, which is unbelievable. So it can do everything in your body. So these right now, there's a big focus on these mu cells.

I think that give it another five, 10 years, the whole field will have evolved and we're not going to rely on umbilical cord stem cells. People have stem cells that are good enough in their own body.

And there's also, there's a limit to umbilical cord stem cells. You're limited to how many babies are born in a year. There's a point where there's a limit to that medicine.

And let's understand the reason why you have umbilical cord stem cells. And what I'm going to say here is going to be extremely, I don't know what's the word here, provocative, let's say, but controversial.

In the early 2000, when it became clear that adult stem cells, which is what we're talking about here, umbilical cord, bone marrow stem cells, fat stem cells, V cells, all of those adult stem cells, have extreme regenerative properties, it brought something in the whole world of medicine that had not been present in the world of medicine until then, which is real cure.

If you look at medicine today, we don't cure. If somebody has insulin-dependent diabetes and they find a way to reverse it, medicine will say it was a wrong diagnosis or it's a miracle.

To just say, no, we can reverse diabetes is not accepted. It's not part of conceptual language in medicine. It's just not there. So stem cells come in and they bring cure because they actually repair.

So that is the biggest threat of the pharma world because pharma does not want to cure anything. I'm going to sell you insulin every day for the rest of your life.

It is an amazing business model. I know it looks harsh. It looks conspiracy. I'm just going to say, man, wake up and

just like look for reality for what it is.

Pharma is a business. They're going to pursue the bottom line. And at the end of the day, if the choice is to cure you in one shot and I get one payment or I have a revenue that is coming every month for the rest of your life, pharma will definitely choose the latter.

And that is what has led to the medicine that we have today, which is not a curative medicine, it is a palliative medicine and stem cells come in this picture, they bring cures.

So as a way to capture this thing, pharma has tried to muddy the water. And that is why you still find people today thinking stem cells is dangerous. It's Frankenstein medicine.

Actually, it's not working. In the early 2000, it was baby parts. It has never been baby parts. All this thing to make the whole field look like murky, and like something to be careful of.

Risks, potency, and autologous versus donor cells

And none of it was true. It is clean curative medicine. But it did not work 20 years later. A lot of this negative has lifted. So the only way to capture something in there is to collect cells and sell you a little vial, which is the model of pharma.

I'm selling you a vial of something. But everybody is a walking depository of their own stem cells. And the world of stem cells in the future will be, you go into a clinic and they can extract a stem cell from your body, put it back into your body following a certain protocol.

And it's going to cut everything that we know today of pharma. It's the biggest threat in their entire existence. And that is why we see a market that we see today.

That was beautiful. Well said. I'm glad you said it and not me. And in terms of moving on to the business of plant medicine or nature's wisdom and healing through nature, the last question to round out the discourse around stem cells, what about the importance and administration of exosomes in conjunction with stem cells?

Is your product speaking to that? How necessary is kind of this delivery vehicle of exosomes if you can help our listeners understand the terminology and idea of exomes.

Yeah. So, stem cells, if you put one stem cell into a test tube, and it's a dormant, let's say a population of dormant stem cells, they're dormant. If you put an active stem cells in there, it won't be long that all these stem cells are active.

If you put into a population of stem cells, you put a stem cells that is transforming into, let's say liver cells. Within a few hours, the whole population of stem cells will start to become liver cells.

And that is happening because stem cells talk to each other. And they talk by forming… by releasing growth factors, but these growth factors are extremely fragile.

So in order to protect them, they bud from their membrane surface, they bud a little vesicles, like a little sphere of lipids in which they put these growth factors, and now that lipid called an exosome, which is a vesicle that has been released by the cell, We'll go into the environment and we'll fuse with another stem cells and then we'll carry that message to the other stem cells, which will be instruction for that stem cells to proliferate, become cells of another tissue, like activate them.

So it is the language of stem cells. If you inject stem cells in the absence of exosomes, you're not going to get a whole lot out of them. If you inject exosomes without the presence of stem cells, your exosomes won't have a whole lot of people to talk to.

So they're extremely complimentary. So if you do a stem cell injection, I would say make sure it's done also with exosomes. If you do exosomes, make sure you have stem cells there.

If it's too much to have a stem cell injections, you can take our products, stem regen release. You take two capsules, within two, three hours, you will have released 10 million of your own stem cells.

It is a very, very powerful synergy to do these two together. And that's the approach that I have developed. So we talked a lot about injection. You get an injection.

You get, let's say, a massive injection, 200 million stem cells. This is like a whopper. It costs you maybe 20 grand to get 200 million stem cells. You will have about 20% survival.

So you'll get 40 million stem cells. You take two capsules of stem regen, you will release about 10 million of your own stem cells. Do this three times in the day, you have released 30 million of your own stem cells.

Do this for two days, you've released 60 million of your own stem cells. It just immediately gives you an idea that releasing your own every day is not a lesser approach.

It can have a strong impact on the body's ability to repair. As I mentioned before, we have an ongoing study on chronic stable congestive heart failure.

We published the data of the first 10 patients a few months ago and all 10 after six months have regained normal heart function. These are people that are at least two years in a stable condition where whatever medicine could do is bring them where they were.

So their life at that point is I climb one set of stairs, I walk one block, I need to sit down and catch my breath for five, 10 minutes. And after six months, they just have a normal life.

Whatever their age, they just have a normal life for a person of that age. So releasing your own stem cells can have a strong impact. If you ever do exosome treatment, I would advise.

So in that Whopper dose that you just, the sample you provided, is there a typical 20% attrition? Cause I know you said there's only going to be a percent that becomes effective.

Is that correct? Did I understand that correctly? Yes, I'm an attrition. The data is not super strong on this, but it's clear in all the work that has been done.

When you inject stem cells into a vein, so these stem cells, the first place that they will go is in your lung. So as they get into your lung, stem cells can be anywhere, mesenchymal stem cells, not V cells.

Mesenchymal stem cells can be anywhere between, I don't know, 15 micron, 12 microns to 30 microns. Your capillaries in your lung are some of the smallest, 10 to 12 microns.

So stem cells cannot easily circulate in the lungs unless you open that microvasculature. So a lot of these cells are caught and they basically lyse and die.

So for various reasons, there is an estimated 20% survival. There's also a lot of people doing these injections who will tell you, when I say you get the genetic material of somebody else, they will say, no, these stem cells don't survive.

So they're not going to be part of your body later on as to reduce the the potential negative impact of having another genetic material in your body. And the truth is in the middle, meaning a lot of them do die, but they don't all die.

The proof of that is that if you go through chemotherapy and then we need to give you an injection of somebody

else's stem cells, a compatible donor, or your own stem cells, because chemotherapy will kill for cancer treatment, will kill your own stem cells, we don't put them in your bone marrow, we just put them into your bloodstream.

They will find their way to your bone marrow, and they will repopulate, in six weeks, will completely repopulate your bone marrow. So if you put any stem cells in your bloodstream, some of them will find their way to your bone marrow and then we'll start a new population of stem cells.

So many of them die. Okay. So that certainly makes sense. Now, is that why the reason sometimes when people do an injection, they express, I don't feel anything.

There was no change. I mean, certainly. So we leverage umbilical stem cells in our practice. Uh, and I want to talk about to know the efficacy of now perhaps adding in what you're formulating as well.

But when patients, before they have come see us, sometimes I hear the stories all the time, probably you as well, that I had my stem cells didn't work.

Is that attributable to that reason or why? Yeah. Yes, yes. Like across the board, and many clinics will tell you, I have much better results, which I'm not debating.

It could be a mixture of marketing, but also the field has evolved. Let's say 10 years ago, the message was 30% of your people getting a stem cell injection are super happy with the results.

30% will tell you, yeah, it did something, but it didn't do everything I was expecting. 30% will tell you it was a waste of money. Like it didn't do anything.

And somewhere in this whole picture, it's more about how ready the person was on the day that they received those stem cells than the stem cell injections themselves.

Let me take a step back. Somebody has a chronic condition, whatever it is, something that has not repaired for five years and it's still there so they get a stem cell injection.

You get a new liver every two, three years. Your stem cells, so turnover rate, meaning the turnover rate in the liver is roughly two, three years. So if you've got an injury for five years and it's still lingering or a condition, your stem cells have worked for your liver because your liver is fine.

So your stem cells are working. Why aren't they working in that area? And oftentimes the chronic nature has damaged the micro circulation in that area and a big stem cells cannot circulate easily into a small stem cells, into a small blood vessel system.

That condition has led to an inflammatory, how could I say, that area releases inflammatory compounds that have become systemic. So now the signal that should be localized just by an injury now has become systemic.

So the stem cells cannot easily find where that injury is. So you need to suppress systemic inflammation. So the clinics that are getting much better results, there are clinics that really prep ahead of the stem cell injection.

So we've developed a product, Mobilize, that is meant to open the microvasculature signal to suppress all that systemic inflammation. So I would say a month before that injection, They start to get in the mobilize to improve all the microvasculature you suppress systemic inflammation and then and then you you you take strong antioxidants you take I would say C 15 or fatty 15 to try to do a a a not a change but a kind of a maintenance of cell membrane because for a stem cells that is 20 microns to squeeze itself into a small capillary you need a membrane that is really healthy and flexible.

So do a good regimen for a month of good healthy lipids and prepare that, and when you go for that stem cell injection, and also start to prepare for, let's say, mitochondrial function.

One stem cell, when it gets into a tissue and starts to multiply, can lead to a million tissue cells. that amplification in the tissue is extremely costly in terms of energy production.

So you may want to kind of prime the body to develop better mitochondrial function, mitochondrial biogenesis. You want to provide a lot of collagen peptides because your tissue, when they repair, they need to repair on top of a soft skeleton.

The soft skeleton has to repair as well. This is collagen, hyaluronic acid, so include that into your diet as well. So you prep like this for a month, and then when you do get your injection, you are much more likely to be into that group of people who get good results.

So that's really what a lot of people, a lot of clinics have done. So let's talk about now your products, will you develop your formulation, highlight the specific components, and then the degree of efficacy you're seeing because you just kind of alluded to that, but let's showcase kind of your compounds now.

Yeah. Well, these are plans that we have all documented in double-blind placebo crossover studies. So people come in the morning, they rest for an hour, then we take a blood sample, then we give them placebo or the plant that we want to test, and then we take another blood sample an hour, two, three hours later, and then they come back a week later, we do exactly the same thing, and give them the other, the one that they did not have the week before, the placebo or the plants.

Why stem cells matter for aging and longevity

And then we use the placebo to determine their normal circadian cycle, and then we see what the plant did above and beyond, what is their normal number of stem cells in circulation.

And that way we can calculate how many more stem cells were released. And we quantify the number of stem cells at a specific time point, let's say two, three hours after consumption.

But stem cells are released and they have a normal residence time of about an hour. So they come in and they migrate into tissue. So although we have 10 million more stem cells after two hours, Who knows, maybe we release 30 million, we don't know.

So we can only report the data that we have. So you release a wave of stem cells. In our clinical trials, we do this three times a day. So a wave will last about six hours in the body.

So you do this three times a day, it's almost like all your waking times in the day, we have more stem cells in circulation that will migrate in the area that is in need of repair.

So if you do this every day, that's 30 million or more stem cells that you have released. So over time, the cumulative impact becomes super significant.

In this hard study that I was talking about, we actually have three groups. One group is stem region release, the other group is stem cell injection, and the other one is a combination of both.

because we wanted to study how does stem region release compare to an injection but also what is the synergy of both because the doctor that we're working with for more than a decade has used the product that I developed in the past now stem region release in combination with his injection and he says he's getting much better results than all of his colleagues but when they ask him what do you do to get these results?

And you say, I just give my patient this product. The first reaction is that no, a pill cannot make that difference. So they don't believe him and they say, you're joking, you just don't want to tell your secret.

And he says, you know what, let's do it in a study so we'll quantify it. And what I can tell you right now, so it's preliminary because the study is ongoing, but stem region release give you something similar to an injection, but

when you combine both, you get about twice the benefit.

And so I would say the result, if you want, of the study that we're doing, if I capture all of this into one statement, I would say, if you can afford a stem cell injection, you would be foolish to not do it with stem regeneration release.

If you cannot afford a stem cell injection, just releasing your own stem cells can already give you good benefits over time. So it kind of opens the door here for any approach that you can do in the world of stem cells.

There's a place here to include stem region release. And in preparation, if you use any stem cells that you isolate from the blood or the bone marrow stem cells, then you start with stem region release a few weeks before because the amount of stem cells that you will extract will be greater.

If you use umbilical cord stem cells, then start right after. right after those stem cells, many of them will go to the bone marrow, then you kick them back out of the bone marrow and you echo that treatment over two, three months past the injection and you end up with a much greater outcome of that stem cell injection.

And what are the specific ingredients within your formulation that's amplifying that effect? Well, their main stem cell mobilizers. So we started with that blue-green algae.

Then later on, I came across in Madagascar a unique species of aloe that had been used for centuries as like a cure-all if you want in Madagascar. So we studied it.

We found that it produces stem cells. At some point, I'm traveling on the Tibetan Plateau in China. And I gather the information from a bunch of biochemists that there's a berry that has like amazing properties, cibacthone berry used in Chinese medicine, Mongolian medicine, Tibetan medicine to boost, to help cure problems linked with the lung, with the heart.

a cardiovascular system, diabetes to boost or accelerate repair from burn, bone fracture. So it looks to me like you look at the whole spectrum here, it looks like probably we have a stem cell effect.

So I went in on the Tibetan Plateau, I teamed with a farmer, and we developed an extract that we demonstrated act as stem cell mobilizer, a specific source of neurogenicin, We have an extract from seaweed.

So all of those were demonstrated separately to act as stem cell mobilizers. There are different mechanisms of action to support stem cell mobilization in the body.

They're all, let's call them, just like you have fasting, mimicking compounds, call them like injury mimicking compounds. They fool your body into thinking that your body needs to repair, so your body releases stem cells.

It's sort of how they're working. And then as I studied many of these plants, I came across plant, I won't have the time to go through the whole story.

It's interesting for me from the side, from the point of view of of experiencing the life of a researcher in the lab. You know, you found something totally unexpected.

You think it's a mistake. You fight the mistake for a number of months until you realize that looks like it's real. So we realize that there are plants that stimulate not only the release of stem cells from the bone marrow, but some of them, their migration into tissues.

So you take these plants and within 20 minutes you see a drop in the number of stem cells. So the moment we discovered that some plants do that, like medicinal mushroom, for example, guji berries.

So we coupled the plant that release stem cells with plants that stimulate their release, sorry, their migration into tissue, because that's what we want at the end.

We want that the stem cells that are released go into tissues that are injured. So we've coupled those. So stem region release, that's what it is. It's the top five stem cell mobilizers blended with our top two stem cell migrators so that you can release stem cells and push them into tissues within hours of release.

So after the umbilical stem cell, you suggest the dosing is what specifically? The clinic that I'm in our study, we do two capsules three times a day, but that's all that they do.

They don't do an injection, so that's all that they do. The clinics that we're working with that couple stem region release with a stem cell injection will do two capsules twice a day within two, three months after the stem cell injection.

And the beauty, honestly, oftentimes I have when I speak with practitioners using that, they come back and they tell me that the people have experienced a broad variety of benefits that oftentimes are not necessarily directly associated with the stem cell injury, with the stem cell injection, like better sleeps, better concentration, their vision has increased, but also they go to the gym now and they recover much faster after the gym.

So they come back oftentimes and they say, can I continue on that product? thinking that it's just associated with the stem cell injection. So it becomes something that can be associated after the injection, but later on they can kind of stay on and onto a maintenance.

So you're suggesting this becomes like a staple in someone's foundational plan. The moment we understand, so we've talked in this call a lot about how stem cells repair.

The part that is also super important to understand is that stem cell research has clearly demonstrated something that was there before. I'm sure you heard this into your training as a naturopathic doctor that the body is constant, like you have a new body every year, every seven years, 12 years.

None of these numbers were based on actual data. Now we do have data. So now we know that it's every single organ and tissue that have their own turnover rate.

You get a new skin every month, a new liver two, three years, a new pancreas every six to eight years, muscles nine years, even your heart that was believed to not renew past, let's say 10 years of age.

We know today that until at least 50 years of age, you have about 1% annual turnover rate in your heart. It changes everything. That means your heart that was believed to not be able to repair, now we know the heart can repair and we've seen it in the study that we did with stem region release.

So if everything is constantly a turnover, that means your entire life you're losing cells and your stem cells replace the cells that are being lost. But if past age 30, you lost 90% of your stem cells, there's a point as you age where you don't have enough stem cells to offset cellular loss, so you start to accumulate a deficit.

So about 10, 12 years ago, I published in the scientific literature hypotheses that the fundamental cause of aging and the development of age-related diseases, it's just the decline in the number of stem cells.

we lose our ability to keep our health so we develop problems. So I suggested there's a way to see for this. Let's go and count the number of stem cells in the bloodstream of people who have developed various types of age-related disease and we should find fewer stem cells.

And now there's maybe 50 of those studies and you take people with heart disease, cardiovascular disease, even simple hypertension, liver failure, kidney failure, emphysema, lupus, Alzheimer's, Parkinson's, arthritis, migraines.

I mean, the list keeps growing. All these people, erectile dysfunction, all these people have 50% or less the number of stem cells that you find in a healthy person of the same age.

So my point here is that the focus oftentimes is something is broken, I need to repair it. So I focus on stem cells at

that point. But outside of that period of time, in the rest of your life, every day you're losing cells.

Exosomes, fasting, and stem cell rejuvenation

And every day you need to offset that cellular loss if you want to keep the health that you'd have today for decades to come. So you mentioned longevity earlier on.

If you study centenarians or supercentenarians, they share two main characteristics. I mean, many have been looked at. Genetic factors, different kinds of things.

Only two really are present with all centenarians. They're happy. They found a way to live with happiness, number one. And number two, they don't develop age-related diseases until a few months before their passing.

So anything that will delay the onset of age-related disease will give you not only longevity but also healthspan during that longevity. So more stem cells in circulation will help you maintain your organs and tissues, so it is going to give you that healthspan.

So to me, once that knowledge about stem cells really sink in in medicine, then just like everybody will say during the winter, during the cold season, make sure you support your immune system, then we will say in the winter of your life, make sure you support your repair system.

It will keep you healthy for the rest of your life. Two subsets of a population who I see kind of often enough now, SIRS patients are very chronically ill, sensitive, mold, Lyme patients.

What degree of efficacy could be expected if they start taking, let's say, your product? It will not be like stem-regen release will not be the approach for these patients.

It needs to be added to whatever approach you need to have because there's detox. I mean, there's a lot of things that you know much better than I know.

However, that toxicity over time has led to tissue damage, has led to pockets of inflammation that has led to damage in the body. Stem cells will come and they will repair that.

So you can oftentimes clean everything in the body, but there's a remnant, there's something that is left in people's life for years. So if you boost repair, oftentimes you can get rid of all of this.

So it's really an added to the treatment that you already, the protocol that you're already using. In terms of vision, you mentioned vision. Are you seeing any sort of vision restoration with stem cells plus your product or your product alone?

Because that's a hot topic now, being able to reverse blindness, if you will, right? There is studies that have been shown that you can, I mean, there are many different aspect here.

If you talk about blindness associated with, let's say, corneal burn or corneal scarring, you need an injection here. But if you inject stem cells in the cornea, there is, if I remember well, the data, 80% success, sorry, 90% success.

And by success, I mean an improvement. And 80% of the cases recover full vision. It's impressive. But it's a specific application. If we're looking at damage to the optical nerve or to the retina, yes, stem cells have been shown to lead some form of regeneration.

We have seen it with our product, but it is a few cases, like all the cases that came to me and I said, okay, let's see, I'll give you the product and I want to see if it's going to help you with macular degeneration, retinitis pigmentosa, whatever.

I've never had one case that came back with positive results. But I do have cases of people who came to me.

Some of them, I had their medical records.

Some of them became good friends of mine. And their vision really improved after taking stem-regen release. So the question here is that, so it's possible?

It's not very common. Yeah, I was also thinking in terms of cataracts. We have seen it. Vision-related issue? Not cataracts. Vision, we have seen vision like, like I would not do a study on it because I have not heard it often enough, but I have heard people coming back and say, after taking your product, I don't need to use my reading glass anymore.

So we have heard it, but, but, but again, I won't say like it's a great strategy. I mean, you can add this to a strategy to increase your vision. Cataract is a different story.

So cataract is really like deposits on your crystalline, on the lens. And I have not heard any stories about improvement with cataracts. And in terms of fasting, which you mentioned previously, at what point do you see the increase after a specific amount of hours that there's stem cell proliferation into a fast?

So 72 hour minimum. Three days. Three days is really correct. In many studies, I'm not saying it's not starting before, but you really see different physiological effect of fasting 16 hours, 24 hours, or 72 hours.

So studies have not looked at is 36 better than 24, is 48, it's too complicated to see that. So the studies have oftentimes went to three days. You see it after three days.

So three days of fasting, if I take a sample of stem cells, look at their ability to proliferate, migrate, just stem cell activity. Before and three days after fasting, stem cells behave like younger stem cells.

Like your 50-year-old stem cells behave more like when you were 30 years old. So it's a rejuvenation of the bone marrow which is, it's fascinating because it really brings together to me two things like cutting edge science with stem cells and something that have been known for centuries to be associated with so many different kinds of health benefits.

You fast and I mean so many benefits have been reported of fasting and many hypotheses as to how it's working And now we discover that at least one of these mechanisms of action is by really rejuvenating your natural innate ability to repair.

Just by itself, it almost explains everything that we experience with fasting. So I'm not saying it's the only thing, but it definitely brings power and understanding to this concept here of, you know, every year give yourself a three day fast, twice a year.

And is it the same fasting mimicking diet or is that specific to only water only fasting? I don't think those studies were ever done with anything but just water only.

However, let me just open a door, but it's hypothetical. A lot of the benefits of fasting, in terms of autophagy at least, have been mimicked by using diets that create ketones that is one of the main components of fasting.

So I would suspect that ketogenic diet or fasting mimicking compounds could bring some of those same benefits, but the studies have not been done. So I would say do both.

Get the discipline of doing a fast three days, twice a year. What's the big deal? And aside from that, have episodes of ketogenic diet and it is going to I mean, you won't get negative.

And I'm curious, what's your personal regimen in terms of have you done injectable stem cells, fasting, everything like what is your personal stem cell regimen look like?

I have not fasted in a while, I need to do it. But I but I fasted a lot in the past. I mean, a lot. 21 days was probably

the longest. I've done a few of those.

Fasting for me was, but my body has always handled it well. Like, you know, some people skip a meal and they start to get, you know, they have headaches and they can't work.

For me, if I skip a meal, actually I can concentrate better. So for me, fasting has been easy. I've not done it lately for one specific reason is that it makes me so sensitive.

Like I become so perceptive that my life sometimes is too much to handle when I'm in a fasting phase. But the time has come, I'm in a place in my life, I should be able to go back to fasting.

So I've done a lot of fasting and I've not done yet stem cell injection. I'm not against it at all. I might take the offer of a colleague of mine and do a MUSE stem cell injection in the near future, but I have not done it yet because, I mean, honestly, what I have seen so far in 25 years of working with these plants And what I see and I hear about stem cell injection from colleagues, I mean, honestly, let me summarize it with that line.

If you can afford a stem cell injection, do it. But make sure you do it with stem regen. You would be foolish not to do it with stem regen. If you cannot afford it, stem regen release is going to bring you like a good alternative.

And I've been doing it for so long right now. Anyway, I've never had the Given this conversation, I'm definitely going to, as a post-care op, we're going to have all our patients on stem cell region, given the efficacy and the science behind what you're doing is nothing short of incredible.

And the goal is always to enhance outcome. And so now we have tools that are available to do that. So I appreciate the breadth of work of what you've been able to achieve.

So the stem, I want to highlight again, to, to round off your products, the stem cell region, the other one enhances the microcirculation and the mobilization.

Correct. Mobilize opens microcirculation, signal suppresses all this, let's call it background inflammatory noise. The best analogy is to say, let's say you've got a small fire going on for two weeks in your house.

Now you open the door, go find where that fire is. There's smoke everywhere. Clear the smoke first and you can very quickly find where the fire is coming from.

Product formulations and preparing for procedures

So when you get micro like foci of injuries and problems in the body that have been there for a while, the call for repair is now lost into your entire blood circulation.

Stem cells cannot find easily where the problem is. Let's suppress all that background noise and now your stem cells can know where to go. So even before an injection, it's an important thing to do.

mobilize to rebuild and reset the microvasculature, reduce that systemic inflammation, and then a month before the injection. And no doubt in my mind, you will get much better outcome from that injection.

And then you follow up with Stem Regen to just echo that injection. it's going to be like the pre is to take the product right and what is the dosing and when mobilize is one session a day stem the signal is four tablets either once four tablets a day or twice they need two capsules twice a day these products to be effective must be taken on an empty stomach So it makes compliance a tidbit more difficult, but that's why we say, in the morning, first thing, just open that sachet, mix it with water, and take the four tablets of Signal, and it's going to be doing its job for the day.

And you do this a month prior to an injection, it's going to increase the output. And what are some of the star ingredients in that product that's doing it?

Natokinase to increase blood fluidity, so it mobilizes natokinase to increase blood fluidity, nitric oxide producers to dilate arterioles. Your capillaries are passive, so you need to increase their flexibility to properly handle now this increased blood flow.

So we have bioflavonoids to help rebuild the microvasculature. And then we have specific polysaccharides to rebuild the glycocalyx that allows cells to really circulate more effectively if you want in tissue.

What you can add, which we don't have in this product, is you add collagen peptides and now you've got the whole recipe to really help rebuild all this microvasculature.

So this is like a good preparation for your injection. But that product, almost as a standalone, sounds like a home run in some of these chronically ill with high systemic inflammatory load patients, just to take in general.

No question. No question. And SIGNL is the same thing. SIGNL is a series of plant extracts that have all been documented to block cox-2, 5-lox, all the different pathways of the production of inflammatory cytokines.

bromelain to digest existing inflammatory cytokines. So we really go like touching all aspects of inflammation, we just suppress it so that we remove that background noise so now the stem cells that you have released or you have injected can see where these injuries are and your blood vasculature has been opened so they can reach the area.

So you get a much greater… What I'd like to do is highlight all this in our notes. And I don't know if you have any sort of code perhaps our patients and clients can use to give it a try.

I mean, definitely for us, we're going to have all our patients utilizing this for stem cell procedures when they come to us. But in general, this sounds incredible and absolutely…

I'm going to start integrating that within myself. So I appreciate kind of everything that the science and the efficacy of what you're doing is nothing short of astounding.

Lastly, I know we spoke before this call in terms of what you're doing in the pipeline, what you're working on, any other products, if you want to kind of plug anything that you're up to.

Well, we're working, these products are sort of ready to come out. It's just a matter of timing them very well, but it's really to complete the cell cycle.

So we release them cells, we make them circulate, we make them find the tissue, we make them migrate in the tissue. So what we need to do now is, bring products that will magnify these stem cells in the tissue.

So mitochondrial function, DNA repair, all the cofactors needed for the proper expansion of these cells in the tissues. And as cells are aging, we want to have fasting-mimicking compounds to trigger autophagy And when a cell has reached the end of its life, synolytics to make stem cells kind of kick the bucket so that you replace them with new cells.

So we really feed this entire cell cycle because now that we understand it, and we need to understand this is very, very new in our medical understanding.

We age, we move thinking, you have an organ, you need to protect it, you need to help it, but rarely with the concept of thinking, wait a minute, that organ is extremely alive in its process of turnover.

It loses cells every day and its health depends on bringing new cells every day. So I want to bring new cells, rejuvenate the cells that are aging, make the old one kick the bucket to really support this overall process of tissue maintenance.

So it's going to be like, take all the products that we're talking about right now and bring them into this regenerative package. It's clear that you understand the redox.

It sounds like you're almost kind of upregulating AMPK and focusing on that aspect. Absolutely brilliant. I know that we've went well way over time. This has been nothing short of incredible for me.

You're an absolute breath of knowledge and I appreciate all the wisdom and everything that you put together in your formulations. And what I appreciate above all else is the level of detail that you go to.

It's very clear that you don't cut any corners and so I appreciate everything that we discussed today. To wrap up every conversation here, I have one final question for all the guests.

And if you had any sort of superpower, what would you choose? What would it be? to completely stop the thinking process at will. Complete peace of mind.

Absolutely brilliant. That is true, Sage. Christian, I'm incredibly grateful for your time. This has been an absolute privilege. Everyone listening has learned a lot today.

We'll include everything in the show notes, how you take your products, when to take your products, pre, post care, maintenance, etc. If there's any sort of code for the listeners that they can dive into.

to try everything themselves and start feeling the benefit and start focusing on cellular health. That would be great. And at some point I would love to do a round two with kind of some of the stuff we discussed prior call as to kind of how you evolve and kind of the other stuff you're working on.

But again, I am very, very thankful of our time today. I look forward to some time seeing you out in Montana too. The background, I don't know if guests are seeing this live, but if that is your background, it looks absolutely majestic.

Again, true Zen. We have an amazing background. Excellent. So thank you again for tuning into this. Thank you for tuning in to the TBD Fit podcast on Dr.

Talks, where we unpack all things health and longevity. If you enjoy the show, like, review, and subscribe. This allows us to have a greater reach. and help others on their health and wellness journey.