Introduction and Guest Background

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Everything that is foreign to your body, it will be rejected. And the rejection can be severe anaphylaxis. It can be a variety of things that cause horrible symptoms.

This is Doctor Talks, real talk from real doctors on the issues that matter to you most. Hi, everybody. I'm Ed Park, your host for the Recharged Biomedical Podcast.

And today we're very fortunate to be joined by Dr. Dobri Kiproff. Dr. Kiproff, thank you for joining us. You're very welcome. Nice to be here. Nice to meet you as well.

So I met one of your colleagues and Dr. Kiproff is one of the original pioneers in this plasma exchange. And so it's become very popular in the last two years that people will do TPE, therapeutic or total plasma exchange.

And so we're going to talk about that for the next half an hour and his experiences and his wisdom. So tell us about your background. First of all, Dr.

Kiproff. I'm a Harvard trained immunologist. I have been involved in therapeutic aphoresis, which is a relatively new field over the last 30 years or so.

I serviced about 500 hospitals around the United States. And mainly my office was in California Pacific Medical Center, where I was chief of the division of immunotherapy.

And I started outpatient clinic in Mill Valley, California in 2016. Outstanding. So for the last nine years you've been doing this treatment and for those that don't know I'm just going to explain a little bit of what I'm not an immunologist but I guess what you're doing is you're taking out the blood and the patient is not under anesthesia they're just getting getting it filtered either by centrifugation or by membrane and the blood products, the cells come back, the platelets, the red cells, the white cells, but all the stuff that's smaller and lighter like the immune complexes, antibodies, all that is filtered out.

So it's kind of like cleaning a fish tank. Is that roughly what you're doing? Pretty much, yes. Okay, so if you're going to take out all those proteins and people may have heard of albumin, which is one of the main somatic substances, you have to give albumin back generally.

Is that correct? Right. So do you have a preference for the machines over the 30-something years since you trained at Mass General? Do you like the Fresenius or do you like the other brands or what kind of machines do you use?

In the United States, we are limited to the access of equipment that we have for therapeutic caperases. Other countries in Europe and Asia, primarily, have quite a variety of machines that they can choose from.

How Therapeutic Plasma Exchange Works

Here, we don't have that many. I think that people are concerned to go through the FDA and the cost of approving a machine. So there are limited choices.

There is, as you mentioned, there is the Fresenius machine, and there is another machine made by Terumo. These are centrifugal devices and there is a membrane device that removes specifically low-density lipoprotein or in other words cholesterol.

It's a machine made by Kanaka from Japan. These are the three pieces of equipment that are approved in the United States and there are some filter machines that are modified dialysis machine basically, then these are preferred by nephrologists who are used to dialysis.

We don't use them. We use primarily the centrifugal devices. Okay. So I'm not a scientist. So explain to me in a sort of simple way. When you spin something like blood, you get layers, right?

You get the plasma above and the platelets. I mean, the white cells, the platelets and the red cells, right? So somehow you're spinning it and you're Cleaning off the top plasma layer with all the small substances.

And then the other three layers get put back into the patient. Right, so the centrifuge divides the whole blood into the different layers that you mentioned, and that depends by molecular weight.

So the red cells are the heaviest, so they go at the bottom of the centrifuge. Then there is the white cells, then there is the platelets, and the lightest is the plasma.

The plasma is the fluid portion of the blood. So you're not really changing all the fish tank water at once, you're kind of rinsing out the bad stuff and putting in the clean stuff, right?

Well, depends what we're treating. So we remove in TPE, the therapeutic plasma exchange, we remove the plasma. Plasma is the fluid portion of the blood.

And it is very important because it accumulates a variety of harmful substances that may cause diseases. And for the longevity or aging, it is important because over time, as we get older, The plasma accumulates something we call synogenic substances or age-related substances, mainly proteins.

And yes, we remove those and replace them with 5% albumin, which is basically 65% of the human plasma. Right, so just so people that don't know, you're an immunologist and so what you're aiming to do is remove things like immune complexes and there are several indications that are FDA approved for this therapy have been TTP, hemolytic uremic syndrome, Walden-Strohms, myasthenia gravis, and acute inflammatory demyelinating polyneuropathy or Guillain-Barré.

So the thought is if the harmful antibodies and other proteins and even exosomes, which is my area of interest, are in that fraction of the plasma, they'll be withdrawn, right?

Correct. So let's explain to me what parabiosis is. So if you sew an old mouse to a young mouse, then the older mouse will get younger and the younger mice will get older.

And until about 20 something years ago, they didn't really have a robust theory, but now I've been to several of these exosome conferences and they think that there are exosomes which are sort of mitigating this.

So if you're old and senescent, then you have weak and maybe harmful exosomes. So one of my colleagues will do the TPE and then he will give young exosomes from a newborn placental MSC source right after.

Does that make sense to you logically? It's somewhat complicated and there are a variety of factors that play a role in what you just described. The Parabiosis model was developed by Irene and Michael Comboy when they were in Stanford, and basically its connection of the blood circulation of two animals.

Young Plasma, Parabiosis, and Aging Claims

And in their case was, as we mentioned, an old mouse to a young mouse. And they observed two things. And one was that the young mouse became older, and older mouse became younger.

And of course, everybody jumped on the conclusion that there's something in young blood that creates the longevity, the rejuvenation in the old mouse.

But they forgot the fact that the young mouse became older. So there is something in blood that also causes aging. So the theory of the young blood causing rejuvenation has never been proven.

There have been 20 years since the first experiment and some very talented scientists from around the world with a lot of money have tried to identify the silver bullet that everybody hoped will be the answer to aging and nothing has been found.

Yeah, well, I think it's like music theory, right? So you mentioned there's pathways, right? Cytokine pathways, inflammatory pathways, MAPK signaling pathways.

So I guess it's not going to be one thing, but in the last 12 years or so, people in Silicon Valley and Northern California have done these young blood treatments.

And what's your impression as an immunologist and an expert? Is this folly or is there some basis for it? No, there is no basis for it and actually there are some people in Silicon Valley and surrounding area and also in Austin, Texas that have done that.

I personally know two people who have died of trying this. It is extremely dangerous to use fresh rose and plasma and that's what a young plasma is, especially in healthy individuals.

There's no reason to expose healthy individuals to harmful substances. Everything that is foreign to your body, it will be rejected. And the rejection can be severe anaphylaxis.

It can be a variety of things that cause horrible symptoms and eventually death. Okay. Well, that's very concerning. Yeah. We watch very much opposed to the use of fresh frozen plasma from young people or old people in humans, and it was actually denounced by the FDA, and at the moment it's forbidden.

It's illegal. We age because our telomeres shorten and our stem cells deplete. But what if we could support both? I've been taking TA65 for 17 years. It's the only supplement I trust to support better mood, better sleep, and exercise recovery.

And at age 57, I don't have any gray hair and I don't need reading glasses. TA65 is available now. Go to rechargebiomedical.com slash TA-65 and enter promo code recharge10 to save 10% off.

Okay, fair enough. And I was reading one of your review articles where you looked at like 17,000 adverse reactions or patients And you estimated the adverse reactions were around 3.9%. Some of them just being fainting or vein problems.

But the thing that struck me was around 3% of this reaction that can come from the TPE or the plasma exchange is the acid citrate dextrose problem. Can you explain what causes that?

The citric acid that we use is called ACDA. The citric acid that we use blocks calcium. It causes hypocalcemia. Calcium is essential for coagulation. We need coagulation and clotting in normal life.

However, when you have extracorporeal circulation, so blood outside the body, then you need to coagulate the blood. You need the blood not to clot. You have problems.

So we use ACDA as an anti-clotting agent. So sometimes if there is too much, then there is hypocalcemia, lowering of the calcium. And the calcium is essential in a variety of body functions, including the nervous system, the heart and so forth.

So the first symptoms that occur are neurologic. There is tingling of the fingers and around the lips. So that's what we usually see. And fortunately, we know how to prevent these reactions and or treat them.

and prevent their acceleration to a dangerous. Right. So it's very important that a person, if they are considering

TPE, go to a center that has a lot of experience.

Essential. That is extremely important.

Risks, Calcium Reactions, and Safety

And the occurrence of some centers now, because it's partially my fault because I made this popular, but some people are jumping on it without experience and without knowledge.

And I'm personally concerned about that. Yeah, no, these centers are popping up and they get a lot of money, which is an incentive to do it. I don't know.

A lot of people are charging six to ten thousand dollars per treatment. So I'm not sure what the raw material costs of albumin are. Can you give us an estimate of that?

It varies depending, depending who is buying it, where you buy it and all that, but it can be between $100 and $500 per… Okay. So it's not insignificant.

So, but you know, the tubing itself, right? It's single use. So one thing that we'll be reassuring to patients is that their infectious risk is minimal because nothing that contacts your reintroduced blood is touching another person.

Correct? No, the risk of infection is zero. Right. Well, it's not exactly zero because the donor could have a latent hidden. The donor pool can have hepatitis, right?

No, no, no. OK, because that was mentioned in your article. There's a very low rate. No, OK. No, the fluid like the albumin and the other stuff that we use is originally made out of collected human plasma.

But all these centers that collect plasma meticulously check the donors for infection and they manipulate the plasma in such ways that nothing will survive, whether it's a virus or Okay, so just to finalize the technical aspects, they're taking out the blood, they're putting the blood back in, you know, in the machine, it spins it, takes off the top plasma, and reintroduces the blood components, like the platelets, red blood cells, and in doing so, there's some kind of introduction of this AACD or the anticoagulant, and do you give back a little bit of calcium so they don't have these events as you're doing it?

I personally do. That's my protocol, but some people prefer to wait until there are reactions and then they treat it. My protocol is based on prevention and treatment.

That seems wise. So that's really all that's being done, technically. Is there anything else I'm missing? Are you adding back gamma globulin, for example, or fresh frozen plasma?

So fresh rosin plasma is a no-no. You don't want to use that. I personally add immunoglobulin after the procedure, yes. Gamma-globulin, okay. But you've not experienced or you've not tried adding exosomes, have you?

No, at the moment exosomes are questionable in this country. Their production is limited to, as you know, to certain entities. There is very little, if any, FDA involvement at the moment.

So it's kind of illegal, if you will. I think it has a future, but it needs a lot more investigation, and it needs the proper production of exosomes. What is the rationale between adding the immunoglobulin, the gamma globulin back?

There are a variety of things to add immunoglobulin. One is the fact that during plasma exchange we remove all the plasma and all the immunoglobulins are in the plasma.

So you add a small amount of immunoglobulin to replace what you removed. That's one of the reasons. In addition to that, We and others have shown that immunoglobulin has a dramatic immunomodulatory effect.

It does all kinds of changes to the immune system and it's very helpful in autoimmune diseases, in organ transplantation and so forth. Okay, so it's pooled IVIG.

Now tell me, obviously there are reasons why it would make a lot of sense to do a therapeutic plasma exchange. What is the most common use though? It's not these esoteric rare diseases.

Why do most people come to you? With what conditions have you seen long COVID, non-specific autoimmune stuff, other mast cell activation, Lyme disease?

What are your most common indications, sir? Well, a lot of those. So you have to realize that the American Society for aphorism publishes every three years recommendations for the use of therapeutic plasma exchange.

The FDA approves the equipment, approves the machines we use. it doesn't approve the diseases that we use. So the diseases that we use are only recommendations by medical society, the American Society for aphoresis, neurology, hematology, etc.

So in this booklet that is published every three years, there are about 80 diseases that are treated with therapeutic plasma exchange and other aphoresis Yeah, and you've served on the board of that body, right, a couple of times.

So you're helpful, yeah, in making those recommendations. So in a way, it's kind of a gray zone of frontier medicine, is it not? I don't think that for what we are using, there's anything gray about it.

Immunoglobulin Replacement and Common Uses

So we use it because it helps. But you wouldn't consider something that is not yet FDA approved as illegal in this instance then? There's nothing non-approved by the FDA.

As I mentioned, in our field, FDA approves the equipment. And then you can use it off-label as a physician as you feel fit for your patients. And usually we do that by the evidence for efficacy in different conditions.

And if it's rubbish report, controlled, uncontrolled study, and so forth. So that's what we do. That's what I teach. Absolutely. And you've been pioneer.

And like you said, a lot of these people with lesser experience are doing it because it's a profit center. As you said, I think somewhere when you take out the plasma, it'll be replenished by the body and its cells, right?

So the glucose, the hormones, even the amino globulins will get produced again. So it's a radical shift in the composition and the function, but you're not doing anything to remove the, let's say, plasma cells that are producing or, you know, the other cells that are producing the antibodies, right?

Correct. This is very true. However, the removal of plasma has an effect on cells as well. So we have shown actually one of the first publications I was involved in is we showed that plasma exchange changes the ratio of different immunocompetent cells, T4, T8 cells.

This has been repeated time and time again. So we know that plasma exchange is not just removal of stuff, which is the word they for resisting, Greek means to remove, but it also immunomodulates.

It changes a variety of things in the body. And what is the phenotypic shift for the T-cell, the adaptive immunity system? Quite a variety. So there is T helper cells, TH1, TH2, changes the ratio of CD4 to CD8 cells.

It changes something we call naïve cells, cells that are diminished in aging. CD28 positive, yeah. So when we do these treatments in older people, these naive cells become repopulated.

So there is a profound effect of the whole cellular system rather than just removing of proteins. So presumably you do this, you're a believer, patients get better.

What can people expect? I mean, you said they feel euphoric at times, but what is, is the short, medium, long-term effects or can it be curative for some of these?

I mean, obviously for a Waldenstroms, it can be somewhat curative, but how does the normal person who's just in their seventies and wants to experience it, what would be the short, medium and long-term effects?

Well, that's a long answer, because everybody is going to respond differently. People are different, no matter what we think about them. And in our profession, we treat the patient.

We treat diseases. So if a patient have Waldenstrom's, as you mentioned, this thickens the blood. And if you don't clean it up, they're going to die because the blood vessel.

So in this situation, It can be life-saving. In TTP, it also can be life-saving. So there are situations that it can be life-saving. Actually, most of these conditions are treated in a hospital setting, in an ICU, because these people are very, very ill.

And a lot of other things are tried before they come to the plasmapheresis unit. So 10 years ago, I started to do this on an outpatient basis because we found out that if properly done in certain patients who don't have to be in ICU, we can do them in an outpatient clinic, which reduces the cost dramatically.

So we started doing patients primarily with Alzheimer's disease. That's how we started. And some of the other diseases that you mentioned, which some of them are relatively new diseases, or maybe not new diseases, but newly recognized diseases, such as long COVID and Lyme, et cetera.

So these conditions can be treated on an outpatient basis. You know, triggered our interest in longevity or health expansion. And we recently finished the double blind controlled clinical trial.

meeting people over 50 with plasma exchange to see if we can change the rate of acceleration. Right. Did you do a Horvath clock measurement? Yes. And what was the change?

Dramatic, dramatic. So we did 35 clocks. One of them was what Corva, he offers several ones, not just one. In all of them, we saw decrease in the biologic age of our patients.

Outpatient Aging Studies and Alzheimeru2019s Results

More importantly, some of these patients I started in 2016, so it's been nine, 10 years. And all of them are now 10 years older, but they remain younger biologically and most importantly they have not developed any disease over the last 10 years.

They live younger. So your gestalt is it's generally safe and probably helpful in the fight against aging. That's your gestalt. Yes, because what happens is that around age 60, 55, 60, until then, most people are healthy.

They don't have many medical problems in general. And then at that time, if you look at data curves, you will see tremendous increase in the occurrence of chronic inflammatory diseases in older people, such as diabetes, cancer, Alzheimer's disease, and so forth.

And usually these are the diseases that kill people eventually. And despite that, our longevity curves over the last 20 years have increased. We live longer.

In the United States, people live until 85, I think. In Japan, until 97. So people live longer, but they're not healthy. Correct. So there's a phenotype of aging that is involved with senescence and exosomes and whatnot.

So when you talk about that study that they did 400 something Alzheimer's patients to see if TPE would help, what do you think the result was? A slight improvement or not much?

I don't think we rely on data. Well, the data shows that we stopped the progression of the disease in 67% of the patients, which is very important. We saw improvement in patients with moderately severe and mild disease.

The improvement was in about 35% of the patients. And most significantly, none of the patients had side effects. So, but this is repeated sessions, no?

What was the average number of sessions of TPE? In the original study, the number of sessions was 12. Wow, okay. I mean, if you're paying out of pocket for that outside of a research study, that could be quite expensive now.

Like everything else, you know, when you and I were younger, when we started with cell phones, the phones was this big and they cost $2,000. Right. Now they give them away.

So that's what happens with just about everything that is new. Okay, fair enough. So you mentioned dialysis. So could you distinguish what you're doing versus dialysis?

And there's another new kid on the block called Ibu, which is extracorporeal blood oxygenation and ozonation, in which they don't really remove the plasma, they just zap it with oxygen and ozone.

A lot of people conflate those and say they are kind of similar. What's the difference between TPE and dialysis and TPE and Ibu? Dialysis is a legitimate procedure and it is not a treatment.

Dialysis is an artificial organ. Dialysis is an artificial kidney. So what dialysis does is through filtration and these filters are designed to remove very small molecules.

These are the molecules that usually are excreted in the urine and the kidneys cannot function in chronic renal disease, kidney disease. And therefore these patients need help and they go on dialysis.

Dialysis keeps millions of people around the gas. It's blood, urea, nitrogen, and then. But there's no step where they centrifuge, right? No, it's the filter.

It's a complicated process. Right. But tell us about, what about this Ibu? You don't think that's legit? No. First of all, there is no equipment that is approved in the United States or anywhere in the world.

There is no published data that I was able to find. I'm going to teach a course about Igbo and therapeutic plasma exchange, so I recently looked for literature.

There's nothing in the literature to suggest that this thing is helpful. And if you look scientifically, it is unlikely to be helpful in any form. In fact, ozone can be very dangerous, can be toxic.

The oxygen, as good as it is, it can be toxic in certain doses as well. And its infusion in the bloodstream Lasts only so much so you cannot there's a reason we breathe and here you breathe several several hundred times per per minute and per hour Because you need to constantly supply oxygen to to the bloodstream Yeah, but you know these people who have these anecdotes with ozone whether it be IV or rectal insufflation.

What's your opinion? Are they just diluted? I'm not express my opinion because it was so negative. You can't imagine So you did your training at the Mass General.

You've seen things come and go. Let me shift gears now and say, why do you think that we're having so many immune dysfunction patients? And what I mean by that is people with Lyme, mold, Bartonella, Borrelia, Candida, autoimmune stuff, spike protein.

Like, what's happening to us? Is it the food supply? Is it the electrosmog? Is it the stress? What's going on? There are so many people with autoimmune and immune dysfunction dysregulation.

All of it. So there is something that, as of late, the last few years, we call exosome.

Dialysis vs TPE and Critique of Ozone Therapies

So this basically is everything we are exposed to, whether voluntarily or involuntarily. So it's the air that we breathe. It's the food that we eat. It's the garbage in supermarkets.

It's McDonald's. It's everything you can imagine, including exposure to toxins. exposure to bacteria, exposure to all kinds of bugs, et cetera. So all this has an effect on our immune system and the whole body.

And the immune system is basically the army of your body. So whatever you're exposed to, and I mentioned this earlier, everything that is foreign to your body will be rejected.

The immune system will react. And if your immune system is exposed constantly to a variety of different things and it has to respond all the time, sometimes it gets tired and says, hey, look, I'm not going to do it.

I think you're right. You know, I find it interesting how these philosophical discussions. So there's been this shift in the last 10 years where people are saying, Well, the reason why there's so many allergies is because the young kids are not eating dirt and playing in the mud and sweating.

They don't have the training of their biome. And there's even some fringe people say the childhood diseases, one, two, three, four, five, you know, that we vaccinated against are part of the inherent training of the immune system.

But I think that nobody can deny at the end of life, there was that Dutch lady a few years ago who was in her 120s and she only had two clonal variants of, you know, leukocytes, which means that aging and sickness are very closely aligned to depletion of the metabolic stem cells, correct?

So I went to Costa Rica a month ago to give a lecture, and they do this thing where they give GMC-SF to make you excrete a high number of HPCs, they say endothelial cells and MSCs.

Now, although they don't expand clonally, they bank them. But my 26 year old is considering doing this because as we know from everyone that's ever lived, you run out of white blood cells, you run out of hematopoietic stem cells.

Do you think, in your opinion, if this was available, this would be a way to recharge our immune system? Actually, the guy that you went in Costa Rica is a friend of mine.

So there is truth in that. And it has been tried in the United States basically to collect stem cells from healthy individuals and store them by freezing them.

and keeping them just in case they develop a certain disease that requires stem cells. But in addition to that, it can be argued of what you said, that as you exhaust the stem cell supply, as you age, you may need to add more stem cells.

And then you pull them out. The research about stem cells for for health expansion and autoimmune diseases has been limited for a variety of reasons, some of them regulatory.

There is an attempt now, I think, through the new administration, hopefully, to allow more research along these lines because without research, without evidence, Everything you said, and I agree, is anecdotal.

We don't know. So we have to have evidence in order to use it on a daily basis, as we did with the plasma exchange. We didn't know. We did a controlled clinical trial.

Now we are using it on a daily basis, and we offer it to people. Okay. How much can a person expect to pay in the marketplace? Forget about global apheresis, which is your clinic.

Yeah. In general, what is the market demanding for a treatment such as this? Such as? Like a TPE. A TPE? Well, I think that the prices we know vary. We are the cheapest, but there are people charged $10,000, $12,000, and

more.

Amazing. Okay. Wow. Well, that might make it a little out of reach for a lot of people. But final pivot. In my practice, I see a lot of strange cases where people believe and I know it's controversial at times.

Immune Dysfunction, Stem Cells, and COVID Sequelae

that a reactivation of COVID wild type or, you know, vaccine was associated with negative sequelae, either, you know, arthritic, embolic, vasculitic, nerve damage, even advanced, almost ALS Parkinson's conditions?

Are you seeing like a myasthenia gravis or a demyelinating or a neurotoxic effect from people who have COVID stories or not? Well, COVID has caused a lot of damage to some people, death, unfortunately, to many people.

And some patients who have had the infection will have residual side effects. And many of these side effects are autoimmune in nature. And it is not surprising because other infections also cause autoimmunity.

So, it is new because it's associated with COVID, and COVID is new, but the actual mechanism is well known. It's not new. So, neurologic syndromes are not uncommon.

Actually, they are very common. Many of them are because of demyelination. So, some of the things that you mentioned are demyelinating diseases. And the sem will respond favorably to plasma exchange and sem will not.

Yeah, no, I've heard positive anecdotes from patients and I had one doctor's husband who I guess they want to rush him out for the next patient so they turn it on too fast and he had a reaction.

So I think it's very important to go to a center with you have 30 plus experience training protocols that people are not just learning on you and not figuring out stuff.

I like the calcium supplementation. But yeah, if you're going to do it, do it safely, I think. But it is kind of a Wild West thing, but potentially intuitively makes a lot of sense.

So your clinic is called Global Afaresis in Boca and in Marins, Mill Valley? Correct. OK, so they can look that up, Global Afaresis. And what's next? Yeah, what's next on the agenda for you?

How are you trying to expand this? We are working with colleagues and I have a very famous physician in training here with me the last couple of days and we are expanding by allowing these physicians with our expertise to offer therapeutic plasma exchange in their own clinics.

So they don't lose anything, they keep their clinic as it is, but they offer something that is legit and it helps people. So people can be trained by you in your practice.

Yes, not only trained, but we also provide the equipment, the nursing expertise and all that. Excellent. Okay. So I forgot, I buried the lead. So tell us some of the great cases or experiences you've seen, because a lot of people wouldn't understand.

They're like, well, it's a central nervous system thing, right? How is the blood washing going to help that? That's a privileged space. But I guess you're, you're saying maybe there's an immune modulation, a total phenotypic change from cleaning out all the gunk.

Is that what you're suggesting? Yes, and when you deal with brain diseases, then the so-called blood-brain barrier is very important. And there are certain substances that are not allowed to pass through, and there are certain substances that are allowed to pass through.

And our knowledge about these substances is growing all the time. For Alzheimer's disease, Quest just added a bunch of new tests. So this allows us to see if people have more amyloid in the brain, tau and so forth, with a

simple blood test without doing, you know, CSF and so forth.

So yes, plasmapheresis affects affects the brain disease. It's not all of them, certainly Alzheimer's disease, by removing amyloid and immunomodulating the system, including the cells, the immune cells that are in the brain.

And do you have an opinion on this true binding TB003 or whatever, the Galactin-3 antibody product? All I have to say is that I know the guy who invented this.

He's kind of a neighbor here and he's been doing research mainly in cancer, but in other diseases as well for many years. He firmly believes in plasmapheresis of different kinds.

He does something that's a little different than what we do, but the same idea. I just was at a conference with him and as soon as he presents or somebody the clinical controlled trial evidence, then we're going to believe it.

Okay. Jury's still out. Okay. Fair enough. All right, Dr. Kiproth, thank you so much for your wonderful expertise and wisdom. And if people want to reach you, again, it's globalapheresis.com.

Clinic Expansion and Closing Remarks

Great. Do you have any books on these subjects of aging and immune health and apheresis? There are many books. Let me see what we have here. I know you published a lot of articles, but I was wondering if there's something for the lay person.

Yes, not myself. I don't have a book related, but if you Google Dr. Mike Royzen. Michael Royzen has written 10 tons of books. Camille, a new book. Peter Diamantis has a new book.

Just was released a few months ago. Oh, I went to his conference this year, the A360, yeah. So there is a picture of… I think Fountain Life is offering it.

Are you the consultant for them? Yes. Okay. So Peter Diamante's book is very nice. Mike Roy's book, his last book, is wonderful and has tremendous advice for everyone.

Yeah, I read Diamandis' book also. Okay, well, excellent. Thank you so much for taking the time and I hope you continue to thrive and teach us and do good work.

Thanks, Ed. My pleasure. Thank you for tuning in to Doctor Talks. We hope today's episode has enlightened and inspired you on your path to optimal health.

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