

EP.125 – Luis M. Alvarez

Narrator: You're listening to *BioTalk* with Rich Bendis, the only podcast focused on the BioHealth Capital Region. Each episode, we'll talk to leaders in the industry to breakdown the biggest topics happening today in BioHealth.

Rich Bendis: Hi, this is Rich Bendis. I'm your host for *BioTalk*, where we interview and chat with entrepreneurs within the BioHealth Capital Region in the nation and internationally, and we're lucky to have an entrepreneur today who's built a successful business within the BioHealth Capital Region. But also, I happen to be talking to him, even though his business is in Frederick, Maryland, he's in San Francisco today, so we're talking across the country to Dr. Luis Alvarez, who's the founder of Theradaptive. Luis, welcome to *BioTalk*.

Luis Alvarez: Rich, thanks for having me. It's great to be here.

Rich Bendis: It's great to hear—I've read a lot about what you are doing, some exciting things, and some new funding that's come into the company, which the listeners are going to be very excited to hear about, and also your background.

0:01:06 Generally, what we do, Luis, is, rather than me introduce you, nobody can do it better than yourself, so we're going to let you do a little self-introduction about those things that were a little earlier in your background and history leading you to where you are today as the founder of Theradaptive, and really what the inspiration was for that. So, Luis, take it away and give us a little of your biographical background.

Luis Alvarez: Thanks, Rich. This is a great opportunity to share a story. As you mentioned, I have a career in the military, so I served 20 years in the army, and midway through that was serving in Iraq, and based on some of the injuries I saw coming out of there and conversations with doctors at Walter Reed, decided to refocus my work on tissue regeneration. So, I went back to MIT to work on this problem, and in the process developed a platform technology that, years later, I would spin out and start Theradaptive based on.

0:02:00 Since that time, I've been working on building the team and the process

to get a therapeutic into the clinic to help any cases where you have tissue regeneration needs and that sort of thing, so it's been an interesting trajectory to start from the military problem, now leading to a very commercially significant solution set that we developed within the company.

Rich Bendis: Thanks for the brief introduction. Let me drill down just a little bit. You basically spent 20 years in the military and saw a lot of different things that a lot of us probably would not care to see, but at the same time, after that 20 years in the military, you made a decision to get involved at MIT. How did you make that decision to get involved academically and go to MIT?

Luis Alvarez: Well, that really was something that I had always enjoyed doing and was drawn towards tech and entrepreneurship, so before I went into what you would call the normal army assignment, I did do two years at MIT that the army allowed me to do. But at the time, the army didn't allow you to complete a PhD, so I waited until I had further years in the service, and then at that time, I went back to finish a doctorate.

0:03:05 But the desire to go back, and actually the specific problem that I worked on in the PhD program, was driven by what I saw in the military, so in some sense, it was a blessing in disguise to have to wait to go back because then I had a problem in my hands that I could say I can actually focus on this.

Rich Bendis: MIT is world renowned for what it does for people in the entrepreneurial world. How did you find that experience at MIT to help support your idea for creating a company?

Luis Alvarez: It's a fertile ground because you're surrounded by people who are also trying to solve important problems. You have access to resources and experts, and really, a community. I think, really, the aspect of the community of technology thinkers is the most valuable thing, so in that context, you can find the things you need to develop and solve the problem that you're working on. For me, it was: How do you regenerate tissue, specifically? And more specifically, actually, how do you regenerate bone tissue when it's injured in combat and not able to heal itself, which

ultimately leads to amputation?

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So, the original problem was to solve this problem of delayed amputation by coming up with a way of regenerating bone tissue, and MIT really provided a fertile ground for that.

Rich Bendis:

You had a PhD in this area of research, but you probably didn't have much of a business background, so how did you come up with the idea to form a company? And with the scientific background, how did you marry that with the business skills that were necessary to create a business?

Luis Alvarez:

It's actually interesting, because after starting this work at MIT, then in the army, I continued in service, and in this case, in R&D—research and development in what's called acquisition—medical acquisition—and there, what I experienced was—well, I managed many pharmaceutical development programs up to managing the regenerative medicine program for the DOD, and was able to see the good, the bad, and the ugly. In a sense, it was a kind of a business school for regen-med tech.

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I was able to basically make notes of whenever I saw something and I thought, “Well, this is good,” or, “This is something I should avoid,” and I processed what I needed to start a company, with that type of information.

Rich Bendis:

Talk a little bit about your intellectual property. Where did it evolve from? Were there any licenses involved? Or is it all something that's your own innovation? Talk a little bit about the history of the science.

Luis Alvarez:

The intellectual property for this was a side project from my original thesis, and because I was on active duty at the time, the army owned the IP, so the original IP that formed the company was something I was able to license from the army. Since that time, we have much further expanded the IP, and the rest of it, about seven patent families worth, is actually wholly owned by Theradaptive now. But it was a good experience to actually go through a licensing process with the US Army.

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Rich Bendis:

A lot of people don't—they know about licensing from NIH and other institutions, but we haven't had many people on *BioTalk* who have

licensed technology from the DOD or the army. Talk a little bit about that process. What is the expectation of the DOD and the army from this license that you have negotiated with them? Are they expecting any returns, or do they just want to see that science get in there and do good to help people in the military?

Luis Alvarez: That's a great question. Anybody in uniform who invents something—that was the case with me—that IP is assigned to the Department of Defense or the US Army, so if you want to take a license on that, it's a very easy process. I would say it's even easier than some university technology-licensing offices. They are motivated by a desire to get new capability into the hands of war fighters to make capability available, not so much to see a return or have any financial terms. There are some, but I would say they're favorable—highly competitive compared with the rest of the market.

0:06:56 Also, because it is so, in a sense, not as well known, I would say there's a lot of tech that the army has on its shelf that probably would benefit from somebody looking at more closely, because there is a lot of IP that's not been licensed yet.

Rich Bendis: Based on your experience, we did this with the NIH a long time ago and created something called Entrepreneurs in Residence program because they have all of this IP sitting on their shelf, but they're reactive. They wait for somebody to knock on the door, rather than being proactive, so it's similar to you. You are being proactive, addressing them, rather than them going out and searching for people to commercialize technology that was on the shelf.

Luis Alvarez: Well, in my case, because I was a lead inventor, I knew what I wanted, so I would say that was easier. In the case of companies maybe looking for new tech in other areas—diagnostics, other therapeutics, for example—the army does have an active outreach out of Fort Detrick. I'll call out Barry Datlof, who leads some of their efforts. They're actually going to be at the BIO Conference in Boston this summer, and we'll have a booth there, so if people are interested, they can go out.

0:08:00 The army does some outreach, but perhaps the industry is not as well

versed or familiar with that particular source of IP, but it's out there.

Rich Bendis: Since BioHealth Innovation is based in Maryland, we've interacted with Barry and Fort Detrick, and we know it's a very good program, so we'll also be in Boston, so maybe the three of us, Barry, Luis, and Rich can have a beer or something up in Boston during BIO this summer.

Luis Alvarez: We'll have Barry pay for that. [both laugh]

Rich Bendis: That sounds good to me. Well, it's interesting; I thank you for getting us up to speed as to how the technology evolved. Let's talk about earlier, about the formation, early days, and how targeted biologic delivery led to your platform and how it's evolved to where you are today.

Luis Alvarez: The platform really started as an idea. As I said before, this problem that service members face when they have an extremity injury, they come back to the states, the limb is maybe salvaged because of the medical care they received en route.

0:08:56 But if they have a condition or an outcome where the tissue does not heal, for example, the bone, then eventually the doctor will come to your bedside and say, "Hey, you have two choices. You can keep your limb, but you'll be bedridden or in a wheelchair for the rest your life, or we can amputate, fit you for a prosthetic, and you'll walk again. So, which way do you want to go?" Imagine having that question. So, that's the question I wanted to eliminate. The original problem really was, how do you deliver therapeutics with precision—anatomical precision—so that you can regenerate the tissue and not have to worry about this? In doing so, that platform actually applies to any case where you want to deliver any recombinant-protein biologic with precision, so now we've actually started an oncology program using the same technology. Because really, the question is, there are therapeutics out there that are quite powerful, but they have to be administered systemically, and you have unwanted side effects. If you had a way to deliver it with targeted attack, like what we have, you can get away from the side effects and actually have the therapeutic effect locally.

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Rich Bendis: So, you're talking about sort of a targeted effect. There are many challenges in delivering biologics into the site, a very specific site, and from what I'm gathering, your technology helps address that problem about targeted delivery.

Luis Alvarez: Exactly right. When you make a protein therapeutic, you really don't have a way of telling that protein—or controlling that protein—where it is going to go in the body, because you administer it systemically. So, we have a platform that lets you now say, “I want to deliver this only to the tumor, or to a lymph node, or only to an injury site around a bone,” and now you can do that without having to worry about how you're going to do that.

Rich Bendis: Basically, you're talking about oncology now, which is a little bit different than regeneration—bone regeneration. So, with your platform technology, one of the most difficult things for entrepreneurs is, how do you balance your pipeline or your portfolio of science and technologies?

0:11:00 And you're in two distinct different areas that might be on the same platform. How do you manage the difference in what you're trying to do in your regeneration area versus the oncology area right now?

Luis Alvarez: That's a great question. As a small company early on, and since really the very beginning, we focused on one problem, and that was bone. So, that gave us the ability to raise capital to also get the non-dilutive funding from the Department of Defense and advanced that program to the point where we're going to be entering the clinic in a few months here. Once you're at that stage as a company, you've exercised the discipline you need to advance the program, now you can begin to think about how you extend your platform, so that's what we've done. Our oncology product is much earlier stage, but we're at a point now where we can, without a lot of risk, begin to the diversify.

Rich Bendis: As you mentioned, it all takes funding, and as a first-time entrepreneur with a new business, how did you get the company funded initially?

0:12:00 And then, talk a little about the different, various stages of funding that you've had over the last six to seven years to get you where you are today in your most recent DOD award.

Luis Alvarez: I would say the road for us has been quite bootstrappy-difficult because we started off with grant funding from the Department of Defense and a career development award through the congressionally directed medical research program which are highly competitive grants, so in the early days, that's what we did. We competed for grant work. Now, we had a very small team. We were looking for deals on the Internet for lab equipment, just like a normal startup trying to get things off the ground, and as we gained momentum, then we started attracting private financing, so venture financing, and we found early investors to come in as well. So, to date, we raised something like \$20 million in equity financing and about \$24 million between the State of Maryland and the Department of Defense, a majority of that being Department of Defense, but the State of Maryland had an important role to play in the early days through the Maryland Stem Cell Research Fund programs.

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Rich Bendis: Super. Yeah, a lot of people aren't aware of that. You want to talk a little bit more about that Maryland Stem Cell program, Luis? Because I think their budget's around \$10 to \$12 million a year, and it's competitive, just like what you had to go through for the military funding. So, explain a little bit about that for other people who we have in the BioHealth Capital Region who might be interested in trying to apply for some of that funding.

Luis Alvarez: Sure. It's a great program, and I think it's one of the best in the country when you look at state-run programs. The Maryland Stem Cell Research Fund has a number of sub-programs that focus on commercialization. We got two commercialization awards from them. They have early-stage scientist awards. Now they've created a new program in manufacturing, so we are in the process now of going through the evaluation for that process. It takes you through the whole lifecycle, from early-idea stage, through commercialization, translation, through to manufacturing, so that's one aspect of it. There's a whole series of programs under that that I would encourage folks to look at.

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We also receive investment from the Maryland TEDCO Venture Fund twice, so those two kinds of funding really have helped enable us to, one,

stay in Maryland and grow the business in Frederick. We went from a two-person company; now we're approaching 30 people, and all in Maryland. So, I think for a relatively small investment, now that investment has paid dividends locally by creating an ecosystem and a new company that's going to grow within the state.

Rich Bendis: I would imagine TEDCO and Maryland look at you as a poster child and will be glad that they see this as a commercial for the state of Maryland in what you've done with Theradaptive and growing your business here.

Luis Alvarez: I don't want to let the secret out of the bag, but I think anywhere from Frederick to, call it Bethesda, there is a corridor there of talent where the ratio of the cost of space and equipment that people relative to the talent is just unique and not found anywhere else.

Rich Bendis: Tell me a little bit about why Frederick was selected as the location and the headquarters for your business.

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Luis Alvarez: I was assigned to Fort Detrick during the last few years of my service, and it was there that we started incubating the concept of the company, and then Frederick has an incubator run by Kathie Brady called FITCI.

Rich Bendis: FITCI?

Luis Alvarez: FITCI, yeah—the Frederick Innovation Technology Center. And that incubator was very important for us, because it gave us several years of growth in a low threat, low risk environment, and did what an incubator does. That allowed us to graduate out, and we just found a space nearby there in Frederick. People love Frederick. It's a reverse commute, so everyone has been happy, and thankfully, we've not had any departures from the company. They all want to stay and work.

Rich Bendis: That's great. My CFO, Lynne Brisbane, lives in Frederick, and she's going to love this because she's very proud of the Frederick area, so she'll be one of your ardent listeners to this, Luis. The thing that I really admire is that you have been very resourceful taking advantage of those programs and non-dilutive funding programs to get your company to where you are today; probably being able to preserve a little bit more equity because of

the non-dilutive funding than what a traditional company would have gone through to have raised about \$44 million, where you're at.

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So, congratulations on that. One other thing I'll ask you about Maryland programs: Since you have raised some equity capital, did you take advantage of the Maryland Biotechnology Tax Credit program at all for any of the seed investment that you raised?

Luis Alvarez:

Yes, actually, we're looking at that now and conducting a study on how to leverage that. That's another great program.

Rich Bendis:

Excellent. Once you do that, then you've almost done full circle. The other thing is, have you gone after any SBIR grants in addition to the DOD funding that you've received?

Luis Alvarez:

Yes, we received one SBIR grant as a prime, and that was also very helpful in the early days. I would say that the SBIR program [has been] extremely successful in its entire history. In some sense, I think it could be slightly revitalized to increase the number of topics that are available in this area of regenerative medicine or targeted therapeutics, so if there are any listeners out there that can impact policy for the SBIR programs, I would encourage more and more topics in this space.

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Rich Bendis:

In addition to the listeners, BioHealth Innovation has a team to help early-stage companies apply for SBIR grants, and we've helped over 200 companies and have a 50% success rate. I see you making notes right now, Luis, because that's one of the benefits of doing a podcast, is that I'm learning things from you, and you might be learning some things from me, but you've been so resourceful, there isn't much I can teach you about those kinds of programs available in Maryland. But hey, we just identified another one that might be beneficial to you.

Luis Alvarez:

I'll be calling you, Rich.

Rich Bendis:

[laughs] That's okay! Let's talk a little bit more about where you are in the status of your science and your technology moving forward. Let's talk a little bit about the clinical stage and the regulatory approvals, and there's breakthrough technologies and breakthrough regulatory approvals that

you can get. Where are you with your core technology around your bone regeneration?

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Luis Alvarez: Yeah, so the original problem that we were going after is, of course, bone regeneration to prevent amputations, but we found that spinal injury and disk degeneration was another area that could use the same product at the same dose, so our lead indication now is spinal fusion to treat disk degeneration. Actually, the number one problem for removal from military service is just intractable lower-back pain during times of peace, so it's also relevant for service members. In that indication, the FDA has granted us three breakthrough-device designations, more than any other company for spine, and the FDA has also given us guidance that we can enroll directly in a phase II, so that has saved us a lot of time on the clinical path.

Rich Bendis: Congratulations, there; that's very difficult. Because of your relationship with DOD, have you been able to leverage any of the medical institutions DOD has, like Walter Reed or anything, to look at some of your clinical trials?

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Luis Alvarez: We have counted with a number of physicians at Walter Reed to serve in our physician advisory board, and we would look to them for our phase III as a study site. That's all driven by the number of procedures for that specific surgery that are done there, and I think there are a fewer number of spinal fusion procedures, but my wish and goal is that if there were ever a conflict—and nobody really wants this—and there is a need for regeneration of bone resulting from extremity injury, that we would make this available to the entire military medical-system, including Walter Reed.

Rich Bendis: Well, probably the VA would be a major area for this, right?

Luis Alvarez: Absolutely, VA is an important one.

Rich Bendis: Great. I think that there's some things that the listeners will be interested in learning about: the engineering and the manufacturing of material-

binding protein variants, which might not be traditional engineering and manufacturing, and some of the challenges and complexities that go with that. You want to talk to our listeners a little bit about that, Luis?

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Luis Alvarez: Sure. Let's say you have a protein that you know has a function that you want to exert in the body. The question that we ask is: How do we re-engineer the sequence of that protein so that it retains that original function but gains a new function? And that is to bind to a carrier material, whether it's a scaffold that you implant, or injectable microspheres, whatever it is. That part of the engineering really falls within a field called protein engineering. We do a lot of protein engineering, both in silico and in vitro screenings, and we've developed our own method to combine the two to create an informed process to drive evolution of new variants that allows us to find ones that adhere to both: 1) preserve the original function, and 2) gain this ability to bind to materials.

Rich Bendis: Based on these being unique processes, how has it been that you've been able to grow your company to 30 people now? How difficult is it to find the specialized expertise that you need? And are you able to find most of that expertise in the region? Or do you have to go national or international to get some of the expertise you need?

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Luis Alvarez: Ninety-five percent of the people that have exactly the expertise we need already lived and worked within 20 miles of where we are, so it's remarkable.

Rich Bendis: That is amazing. What an advertisement for building a talent pool around a very sophisticated technology-based company and being able to find all of that talent almost all within Maryland.

Luis Alvarez: Absolutely. If you really look at it, if you take a drive from Bethesda to Frederick, you're going to cross several federal institutes—NIH, NIST, you'll have the FDA, you have all the biotech companies along the way; so, it's a very rich corridor.

Rich Bendis: Yes it is, and we promote that. Since you have experience in Boston, you

understand what the cost dynamics and quality of life are in Boston, and then one of the things that we talk about in the BioHealth Capital Region is really the quality of life as well as the affordability of trying to build a technology company versus being in San Francisco, Boston, or New York City.

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Can you give a little perspective on that in how you're growing your business and understanding the differences in the dynamics between the different life-science regions in the country?

Luis Alvarez:

Yes. Boston, of course, has Kendall Square, which is like the Fifth Avenue of biotech, and it is very appealing in that you have a lot of other companies nearby, major universities, and so on. But it's a difficult calculation when you actually sit down and say, "Is the benefit I'm getting from being here worth the additional cost, not just in real estate, equipment, and salaries, but taxes and other things?" For some technologies, that may not be the case, and I think the same applies to San Francisco or San Diego. For us, it made more sense, and we were able to actually find people more easily in Frederick, and of course, I don't want to say anything bad about Kendall Square. I go there often. I have a lot of friends who actually work there and have started companies, and it works for them, but I would say for us and technology similar to ours, I think it would be worth the look to stay in Maryland.

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Rich Bendis:

I'm sure that the Maryland Department of Commerce and Frederick Chamber of Commerce would love to have you be a testimonial for them, which you are, and I'm sure they'll promote this *BioTalk*.

We're talking to Luis Alvarez, who's the founder of Theradaptive, an emerging technology company located in Frederick, Maryland, but has been very successful in his last seven years in advancing the science and actually growing the pipeline of technology.

One of the other things that I'd like to address is the indications and the areas you think your platform is going to be able to address. You mentioned spinal. You mentioned potentially oncology. Are there specific oncology areas that you might focus on? Are there other ortho areas?

Something I read might be related to dental. I'm just trying to figure out what that would be. But, talk about what the diversity of your platform is and the potential areas it might impact.

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Luis Alvarez: Yeah, that's a great question. We look at it two ways. One is within molecule diversity. We can, for example, take our lead product for bone regeneration and actually use it in spine, in orthopedics, in joint repair, and in dental at the same dose, same product, everything the same, except the kids' size might be smaller. So, for the investment that you make for a single therapeutic development, you actually can just do label expansion sideways, in the sense that you go to new indications as diverse as dental. Dental and spine, you would think are not connected, but that's what we're doing. Actually, we have a second program in dental, which I didn't mention, using the same molecule. So, there's diversity within molecule, so you get label expansion, and then there's diversity across the material-binding characteristic. For example, in oncology, a lot of applications where you want to stimulate the immune system locally without having systemic activation of the immune system, and that systemic activation in the immune system is really what has caused many drugs to fail—drugs that would have been promising.

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So, we're diversifying in that direction where you want to have a very local effect—local immune effect, for example—and that's what our lead program in oncology is focused on, is local immune stimulation.

Rich Bendis: One of the things that you mentioned earlier is how you would like to see them improve availability and diversity in some of the SBIR funding. But as you're aware, there's 27 different research institutes, and each of those has a disease-specific area that their mission is focused on, so when you list all of these different application areas, there are many different institutes that you might have the ability to discuss funding or partnerships with. Have you actually explored any CRADAs, or Cooperative Research and Development Agreements, with anybody within the NIH, or the DOD as well?

Luis Alvarez: You're right, Rich; there are opportunities to collaborate. We did have, for

a time, a collaboration with the Institute of Surgical Research in San Antonio, Texas, which is a Department of Defense laboratory, and that went very well for us and actually is what kick-started our bone-regeneration program.

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We are going to look now to establish similar ones in oncology and with the NIH. We have not had a lot of interactions with the NIH. That's a gap area for us that we're looking to fill, so we're looking to the future to do that with those agencies.

Rich Bendis:

Well, one of the things I'll offer to you is we have 15 Entrepreneurs in Residence that reside within the NIH, but they're on our payroll. They work with small businesses throughout the United States that the NIH funds, and in order for you to get exposure to them, we have something called EIR Day on April the 19th. We do it once a month and let three or four companies get an hour in front of them, no charge, and they give instantaneous feedback to the entrepreneurs and the companies about ideas of what they can do clinically, regulatory, reimbursement-wise, or actually fundraising, or non-dilutive funding, so you might mark that down. We'll do some follow up on this, but I think we can give you some exposure to some people who know NIH extremely well.

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They know it probably as well as you know DOD. You could probably educate them on some of the DOD areas for entrepreneurs to pursue while we try to give you a little more insights into the NIH.

Luis Alvarez:

It's a deal. I'm there. [both laugh]

Rich Bendis:

I'm glad that Marcus McCabe, your PR firm, introduced us to one another, and we probably should have met many years ago, but at least there's no time like the present. If you had to go back and do it all over again, Luis, is there anything you would change in your journey that you've had to get to where you are today?

Luis Alvarez:

Great question. I think about that often. If I were reincarnated, what would I do? I wouldn't change the journey, but I would accelerate the points in time when I made certain decisions, and I think, of course, the delays that we experience in our life, important decisions when you say to yourself, "Oh, why didn't I decide to do that sooner?" is due to either lack

of knowledge, uncertainty, or lack of confidence. So, I think if I had to do it again with the knowledge I have now, I would accelerate certain decisions that I thought might be risky or I wasn't certain about.

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Rich Bendis: One of the things that is almost past us now, but did the pandemic have any negative effects on your ability during that couple-year period where we were going through the challenges of the pandemic?

Luis Alvarez: Yes it did, especially on the supply-chain side. We were just kicking off our scale-up for manufacturing, and that's where the pandemic really had an impact for us, so it was hard to source a lot of materials. That set us back maybe about 12 months.

Rich Bendis: One other thing that just happened recently was the Silicon Valley Bank fiasco, and as an entrepreneurial company that has to manage its cash as it's growing, has anything that's happened over the last couple weeks changed the manner in which your cash management will be managed over the next couple years?

Luis Alvarez: Fortunately, we used a different bank, but we did have some cash there close to the insured limits, so it was really not any real exposure, but that disrupted our operations that we were running through the bank, so now we're shifting over to JP Morgan.

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Rich Bendis: Who might also be able to help you from an investment banking perspective, or an IPO perspective, or fundraising capital. I'm sure you might be aware of it, but they just created a \$750 million venture fund, and we have a JP Morgan representative located in Gaithersburg, which we could make an introduction to you. He's out there looking for companies within the BioHealth Capital Region to work with, so that's another thing we can connect on as a follow-up here.

Luis Alvarez: That would be great. Thank you so much. Yeah, sometimes calamities have a way of actually uncovering treasure on the other side.

Rich Bendis: [laughs] You're right. What is it that you would like to convey to our

listeners that I haven't asked you, or other entrepreneurs out there related to Theradaptive and your company at this stage, Luis?

Luis Alvarez: I would say that we're very excited about this idea of targeted and localized delivery, and that traditionally the field maybe has not been along those lines, so if there's a way that you think that this technology could enhance or transform a therapeutic that right now is not ready for the clinic, that we would be very open and willing to explore that with you.

0:30:03 We're a highly collaborative company. We have a number of partnerships, so we're very much supportive of the ecosystem and want to see if we can add value. Whether or not there's anything in there for us, we just want to advance the technology forward.

Rich Bendis: Well, I think this has been, really, one of the more informative *BioTalk* podcasts I've had an opportunity to do, Luis. I compliment you on what you've done to leverage all the resources available to grow your company right now, and also what you've done in Frederick and in Maryland that take advantage of the great programs. Isn't it amazing to have Fort Detrick as a resource right in your home headquarters in Frederick, Maryland, which you evolved out of, or graduated out of, basically, and found a way to grow business in your own backyard after your military experience. I mean, it's really—a book should be written about this.

Luis Alvarez: I agree with you, Rich, and happy to start on that project together, right away. [both laugh]

Rich Bendis: Well, you got—your PR guy is Marcus. He works on books. We don't do books. We just try to help entrepreneurial companies like yourself grow, Luis.

0:31:00 I want to thank you for being on *BioTalk* today. We've been talking with Luis Alvarez, the founder of Theradaptive, a Frederick, Maryland based emerging-technology company that's on its way to becoming very successful. We wish you the best of luck, and we're going to stay in touch. I know that there's a number of follow up items that we're going to continue to talk about after this podcast, Luis.

Luis Alvarez: Rich, thank you so much, and I really look forward to the continuing conversations.

Narrator: Thanks for listening to *BioTalk* with Rich Bendis.

End of recording.