

EP.195 GTV

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 break down the biggest topics happening today in BioHealth.

Rich Bendis: Hi, this is Rich Bendis, your host for *BioTalk*. We are very excited today because we have one of the leading academic institutions in the BioHealth Capital Region that we happen to be a partner with, which is Georgetown University, and we have their team who is working with Georgetown Tech Ventures to assist and grow the commercialization of intellectual property, technology, services, software, and all other things that Georgetown has that might be unique and proprietary. We have three individuals on this podcast today. This is somewhat unusual, but I think it's appropriate because we have people doing different things to support GTV, as it's referred to.

0:01:02 First of all, we have the leader of GTV, Tatiana Litvin-Vechnyak, who's Vice President Technology Commercialization at Georgetown, we also have Christon Hill, who is the Program Manager of GTV, and we have Jennifer Butler, who is an Entrepreneur-in-Residence with BioHealth Innovation, but is the lead EIR working with GTV at Georgetown, all joining *BioTalk* today. So, welcome to all three of you. What we're going to start with is that a lot of people like to know a little bit about your backgrounds, how you evolved into the roles that you have today, and why Georgetown. So, I'm going to start with Tatiana, who can do a self-introduction. Tatiana, please let the listeners know a little bit about your background.

Tatiana Litvin-Vechnyak: Sure. Thanks, Rich, and thanks so much for having all of us, really, a pleasure.

0:02:00 I have been at Georgetown for three years at this point, a little bit over three years, in the role of the Vice President overseeing the team at the Office of Technology Commercialization. My background is in life sciences. I have a degree in pharmacology from Weill Cornell Medical College in New York City. I rotated through different labs before I landed on the lab and the research area that I focused on for the years that I was there. I was at Sloan Kettering in the oncology lab and then landed at Weill Cornell. Then after that, I went on to do a postdoc at the Cancer

Institute of New Jersey with Dr. Joseph Bertino, who was in oncology and, prior to that, was at Sloan Kettering for many years. It was there that I decided to pivot into the area of intellectual property management at universities and technology transfer. The reason why that happened was twofold.

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Number one, my project involved creating an antibody drug conjugate using an antibody from a company called Eli Lilly. We were targeting prostate-specific membrane antigen, hoping that it will become the new therapy for prostate cancer. It didn't work, and we tried something else, and it didn't work, and we tried something else, and two years later, finally decided that it was time to move on with life. So, it was at that moment that, number one, I became curious, how does this work, the relationship between academia and industry? It was interesting to learn about the different timelines, priorities, IP ownership, and all of those things that at the time seemed to get in the way of research and grand ideas in the lab, but also allowed me to see into the thinking of industry, and understand better their priorities and sort of why they do things the way that they do.

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So, with that, I decided that I wanted something just a little bit more fast-paced, not two years between questions, but maybe a week or two or a month. So, moved into the technology transfer office right there. At the time, it was the University of Medicine and Dentistry of New Jersey. They were kind enough to take in an intern. I was, I think, their first intern sort of self-proclaimed. I offered to make coffee. They took me up on the offer. I did not make coffee for them. Then I moved on to Mount Sinai School of Medicine, where I was for a couple of years. The role there was to, number one, learn the licensing, IP evaluation, and all of that, but also to develop relationships with faculty, to learn to speak industry and IP speak to scientists, and then bring the science speak to IP attorneys and business development folks in industry. Then I moved back to New Jersey to University of Medicine and Dentistry, which then became Rutgers University in 2013, I believe.

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I grew through the ranks there. By the time that I left for Georgetown, I was the associate vice president for the whole operation called Innovation Ventures. That included the IP management team, the licensing team, the new venture creation team, and the

commercialization gap funding. We did lots of large public research institution with a relatively large team. We did a lot of amazing things with support of great leadership there that was very industry focused, translation, research translation focused. It just so happened that I knew of Georgetown and Georgetown Tech Transfer Operation because when I was in the lab as a postdoc of Dr. Joseph Bertino, we had a joint invention with a researcher at Georgetown University. Then when I became the licensing manager at Rutgers, I was the licensing manager managing that joint invention with Georgetown University.

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The company that we ultimately spun out through a lot of hard work and lots of zigzags just signed a sub-license and continues to live on through lots of trials and tribulations. So, a very long winded way to explain how I got to Georgetown. It's been three years. It's been amazing: amazing region, amazing people, amazing research, so an amazing team. Thank you, Rich.

Rich Bendis:

Tatiana, thank you, yeah, thank you for that. I think it's very interesting to see the career progression you've had, which would seem very natural. You're Rutgers' loss and the BioHealth Capital Region in Georgetown's gain, so we're glad we have you here. Next working also at Georgetown is Christon Hill, who's the Program Manager at Georgetown Tech Ventures. Christon, please introduce yourself.

Christon Hill:

Please and thank you. First, thank you for having us.

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I feel my imposter syndrome flaring up in full force because this is a collection of some heavy hitters, so I'm glad just to be here in the conversation. As for my background, I'll try and be as brief as possible. I'm relatively old at this point, so let's rewind 20 years. Graduate from FSU. My first undergraduate degree is English and religion. Become a stand-up comedian. From there, I go into explosives technician, unexploded ordnance, chemical weapons, specifically rendering safe; not manufacturing. Then I accept a commission as an officer in the Marine Corps, where I become a ground intelligence officer, infantry platoon commander, scout sniper, unit leader, crisis action planner, foreign military advisor, and the direct support team officer in charge, as well as program manager for unmanned technology for 2nd Marine Division. On my final deployments in the Horn of Africa, while there, I get trained as

an EMT to support one of the missions that I'm on. Fall in love with the life sciences. Resign my commission from the Marine Corps.

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Go back to UNC, where I study molecular biology and medical humanities. There I fall in love with biotechnology, because one of my areas of study is trying to increase the protein yield of grain crops in order to combat chronic underfeeding in developing nations. So, we fall in love with that aspect of it. Graduate. During this time, I also start a venture. It's a rental platform that does fairly well; have a successful exit there. Apply to Georgetown because it has the oldest biotechnology program in the country, it's the first of its kind, which is, you know, I'm a bit of a traditionalist in that regard. I want to go back to the source and learn from there. So, I apply to Georgetown. Part of the program is an internship component. I applied to intern with the OTC. Then after about three months of interning there, they set up this program, the GTV. I had some previous program management experience; threw my name in the hat. Tatiana said, "You know, you have a punchable face, so if anything goes wrong, we can throw you under the bus you're driving," which hasn't happened yet.

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It's fully stocked, with a very supportive team and some great researchers. Here we are, almost two years later, and still working, still loving it.

Rich Bendis:

Great. Thank you. Talk about a nontraditional way to get to where you are. Very good. It just shows that, basically, though, you do have an entrepreneurial spirit. Having a successful exit is very good, Christon. You told me something I didn't know, that this was the oldest bio program in the country in an academic institution. So, that's a new titbit that I didn't know about the BioHealth Capital Region that we should promote more, that we have the oldest-standing bio academic program in the United States at Georgetown.

Christon Hill:

Biotechnology, specifically.

Rich Bendis:

Biotechnology, great. Well, thank you for that. I'm interested to learn more. Last but not least, we have Jennifer Butler, who I know extremely well. She's one of BioHealth Innovation's Entrepreneurs-in-Resident, but has been spending a lot of quality time with Georgetown in the Tech

Venture in the Office of Commercialization Office. So, Jennifer, please introduce yourself.

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Jennifer Butler:

Thanks, Rich. I also love these backgrounds on folks that you get to work with, because I've learned so much about Christon and Tatiana on this call, which is absolutely fantastic. If anybody needs somebody with a high tolerance for risk, I think, based on what Christon just described, I think he's been in very high risky businesses for quite some time. My background has always really been at the intersection of business and science, and I can say that now, almost looking back on a career. Sometimes you don't realize that as you're moving forward through a career. But early on, I started with equity capital markets in Manhattan, working for a large investment bank. At that point, we were taking companies on the road. That was really my first exposure to an executive pitch. How is it that these individuals have really gotten a company—which I used to joke about these early-stage companies, they might be late-stage clinical—and getting them to raise capital? By doing that, it was just a great opportunity to see just the amount of work that's done by these teams to really go out there and raise hundreds of billions of dollars.

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At that point, about 50% of the deal flow that went over my desk as an analyst was in healthcare. Then I really at that point decided I was going to fully commit to healthcare as that having had a science undergraduate degree in the physiology and neural systems at Penn. Going from there, I pivoted into the industry. I grew up at a company locally here at MedImmune, and also some time at Emergent BioSolutions. Then when it was acquired by AstraZeneca, that really provided a great opportunity for me to work within a large organization and get all the opportunities that a large organization can provide to all the different roles, and so continued to have corporate strategy roles, market insights roles, commercial leadership type of roles. When I left AstraZeneca—it feels like quite some time ago—I was at that point the global head of immunoncology for launching that first wave of checkpoints that were coming into the oncology space at that time. What I really found was that kind of the thread for me is I'd been the commercial voice at the R&D table really throughout my career.

0:12:03 Then at that point decided that I wanted to start taking that big pharma experience and beginning to move it into smaller companies, and began taking on C-suite roles at smaller companies, moving to companies that might have only raised \$100 million, quote-unquote. Then just have been really energized by working with smaller and smaller companies. Now I've taken on roles in which I've helped in a partial capacity to fill out executive teams with small biotechnology companies, even so small where you get to the point where it's only the CEO who is the full-time employee. That really brings me to this intersection of working with Georgetown Tech Ventures is that over the last few years as an Executive-in-Resident with BHI through Montgomery County, and now working as a lead through Georgetown, is this idea of bringing all of that experience and perspective in a full circle, bringing it back to small companies such that you can meet them where they're at, accelerate them where they're going, and help them maybe make less dead-end turns.

0:12:59 We're trying to really get to the straightest path to translating this technology into commercialization. That's me in a nutshell.

Rich Bendis: Well, thank you, and it's a big nutshell, Jennifer. So, what we have is the three musketeers for Georgetown Tech Ventures, with basically all differing backgrounds, all bringing all that experience together now, which actually is like a little melting pot for Georgetown. But, Tatiana, basically, a lot of tech transfer offices, office of commercialization at different academic institutions have different missions and goals. I think it'd be good for you to give a little perspective on how you have positioned the Office of Commercialization in Georgetown Tech Ventures, based on your three years there now. So, let's get a basic introduction to GTV and the Office of Technology Commercialization.

Tatiana Litvin-Vechnyak: Sure. The Office of Technology Commercialization at Georgetown has been around for quite some time, I want to say, going back to at least 2000s.

0:13:58 Of course, the innovations that have been translated and brought into the real world came about even before the office officially existed. Some of the exciting innovations that Georgetown brought to the world include the whole-body CT scanner way back when, with Dr. Ledley; and Allegra, the allergy medication that is everywhere on pharmacy shelves; as well as

some of the critical components of the Gardasil HPV vaccine. So, those are the more well-known. Office of Technology Commercialization generally is a central university-wide unit that supports all of the discoveries, innovations, intellectual property that comes out of research activities or scope of employment activities of folks within the university. For example, we don't work with students quite as much. There's a different unit that supports their entrepreneurial aspirations. If they ever have intellectual property specific questions, of course, we help.

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But we primarily work with intellectual property owned by the university, primarily as a result of research, primarily funded by federal government or other typical ways of funding for the university. In terms of—our mission is ultimately to serve humanity, and real-world impact, broader impact. To do that, we have to provide excellent service to our internal stakeholders, our researchers, and faculty. So, that's how we view the work that we do. Ultimately, we have to make sure that our technologies and innovations make it out the door. Then we have to support our researchers and innovators in the best possible way for them to do their best possible work, doing the research and doing the innovation and ideating. We do that through educational programs, network building, strategy, advising, etc.

Rich Bendis:

Well, great. Thank you for that macro introduction to it.

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The reason we have Christon here as the Program Manager, he can go into a little more detail about the programs that come out of GTV, to supplement what Tatiana's introduction was. So, Christon, talk a little bit about the programs.

Christon Hill:

Absolutely. So, to piggyback off of what Tatiana mentioned, yes, we're there to close the gap between what could be promising research or sound science and what could be a successful venture or commercializable product. The way we go about doing that are a number of initiatives. We have, first and foremost, what was formerly called the Faculty Entrepreneurship Academy is now referred to as IMPACT @ Georgetown. There have been two modules of that—Module I—and they're both entrepreneurial training. Module I is all about taking complex scientific research and/or technology, and breaking that down into a value proposition that a non-technical audience can listen to for

about 60 seconds, where you explain the commercial value, the societal value, rather than just the scientific merit of the invention.

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That's Module I. With that comes a pitch parade, where they're given 60 seconds in one slide. These are very technical people, these are PhDs, these are lifelong researchers, who are breaking that down and translating their own research for a commercially minded audience or at least a non-technical audience. Mod II of IMPACT is all about building either your Sequoia-style pitch deck along with a rough business plan or at least path to commercialization, as well as an additional track that focuses on strategic partnerships. So, you might have a researcher who wants to co-develop their technology with, you know, pick entity. We walk them through the steps of understanding how and why those partnerships exist. That module culminates with roundtable discussions, where they get one-to-one feedback from the instructors, to interested in entrepreneurial or commercially minded principal investigators.

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Then there is our Innovation 2 Impact seminar series, which is where we invite subject matter experts, whether it be regulatory expertise, successful operators, folks that have launched companies, spinouts from universities, or they're academic researchers, or IP strategists, attorneys, etc. They come and they speak for about an hour about that. There's a free lunch, which is part of the reason it's a well-attended event. Then there's networking that occurs so that our researchers can see, oh, there are people who have this knowledge, and who have made this leap, and have done so successfully, and are willing to share that expertise with us. Then we also have our advisor program, where we have most of whom are alumni from Georgetown or have worked with the business school in some capacity. These are, again, subject matter experts, who bring facets of their expertise to the early stage technologies so that they can (1) be de-risked, (2) identify actionable next steps, and (3) begin the process of enacting said steps.

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Then, most importantly, I would argue, is our partnership with BHI, BioHealth Innovations, who helps us go through our catalog of technologies, our portfolio of technologies, decide which of those are the most commercializable in the current market, which might be commercializable 6 to 18 months from now, and which are, for lack of a better term, the ones that maybe need to be culled from the herd or put

on a back burner for a little while. Does that answer your question or did I just talk a lot?

Rich Bendis:

No, no, no, no, no. I think that was a very good summary of what you're actually trying to do to stimulate an entrepreneurial culture at Georgetown. We recognize that every scientist and researcher does not want to be an entrepreneur. That's very important for everybody to understand. Basically, it's probably less than 5% of those who are in academia that actually want to pursue that career. But you're there to help support those who have that interest in trying to progress it.

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You talk about the relationship with BHI. I'm going to get to Jennifer in a second. But she's waving at me like she wants to say something right now. Tatiana has her hand up, too. So, before we get into the next question, we're going to get some follow on, first from Tatiana and then from Jennifer. Go ahead, Tatiana.

Tatiana Litvin-Vechnyak:

Perfect. As Christon was talking, I just realized that we failed to mention one really important catalyst moment in the OTC, GTV transition and evolution. That is the EDA grant, the Build to Scale grant that we got. EDA, of course, stands for Economic Development Administration, and they have a series of grants that are aimed at spurring capacity-building expansion in different regions, aimed at creating new jobs and doing more economic development, such as startup creation.

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When I joined Georgetown three years ago, of course, before taking the job, I did a thorough study of all the metrics of Georgetown University. What's the research expenditures, number of invention disclosures, number of licenses, revenue, and number of startup companies? I immediately saw a couple of opportunities, and one of them included the startup creation. I was puzzled and surprised at how few companies were launching from Georgetown. As I mentioned, I knew Georgetown research, because we had a joint invention, so I knew the researchers were great. I realized that it's got to be a culture and perhaps a lack of support system, and that's exactly what it was. What's also interesting, there were definite—there are and were lots of entrepreneurial faculty and innovative faculty within the university. Georgetown is a private institution within Washington, D.C. Washington, D.C. is not a state. As such, there isn't the same state-level funding for economic development

initiative activities, specifically for a place like a university and the needs of a university.

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That's changing, I think, within the D.C. landscape and the way that our wonderful neighbors in Maryland and Virginia look at us and open opportunities that exist for folks and companies and universities within their state, making them available to universities within D.C. But that's what I saw, and so we applied to the EDA Build to Scale grant, with the goal of building that capacity and infrastructure to do more startups that would advance Georgetown innovations, discoveries, and research through the spin, the startup path. That's essentially how Georgetown Tech Ventures was born, and that's how Christon became the manager of that program and has done a terrific job. One other really important point that I want to mention about Georgetown and the operation that we have, and that's the alumni network.

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Georgetown alumni are amazing. They care deeply about their connection to the university and to the success of the follow-on students, and follow-on discoveries and innovations, and they want to give back through their either time or money, and so we leverage that. In fact, one of the programs that Christon just mentioned, the Advisor Network, is in fact largely staffed by folks that are alumni, not solely, but many. I have an advisory group that helps me think through the strategy for OTC, and there are a lot of alumni on that, not exclusively, but they bring that deep care and understanding to Georgetown. Then the other really important program that we have is the Gap Fund program. The Gap Fund program, which I'm sure we'll talk about later, was seeded through a philanthropic donation from one of the alumni at the university.

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All of these initiatives are incredibly important for success of programs like ours so, yes, philanthropy and very much so the expertise and care of our alumni.

Rich Bendis:

Thank you for that. I think that's some very good background. To be honest with you, if you hadn't applied for the EDA Build to Scale grant, we wouldn't be talking today as a partner with you, because a lot of academic institutions don't have the budgets that are necessary to support these types of progressive activities. That's enabled you to expand your mission and your capabilities by leveraging some external resources to complement what you've built in an internal team. For

people listening, NSF has programs, NIH has programs, EDA has programs, SBA has programs. Christon and I were on an SSTI webinar yesterday about entrepreneurial programs at academic institutions. I think, for those academic institutions that might be listening, that's a good thing to do is explore those external resources that could complement what you're doing and potentially provide some supplemental funding to you.

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Jen, I know you had your hand up about 10 minutes ago, so I hope it's still relevant, what you want to contribute.

Jennifer Butler:

Well, I want to really just build on maybe two parts. First, I want to go back to Christon's comment about where specifically BHI and [0:25:18 EIRs?] have spent initial time and maybe what has evolved from the beginning. I think that it's pretty standard within a tech office to want to have a commercial assessment done. I think one of the things that we've done over the last two years is to create a bit more structure and transparency and very specific action steps for both the Tech Transfer Office to be leading. Who's on first, type of thing? Where can the Tech Transfer Office support [0:25:45 NGTV?]? Where is the onus on that founder for a next step that's really going to move that technology forward in the most productive way toward a translational piece? Then also asking the third party, like BHI, what are the type of market assessments, networking; how to leverage our networking capabilities?

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So, I think that's really been that in a much more and hopefully very specific way. I mean, people really need to be given direct marching orders versus generic. So, I always like to say it's very easy to provide a gap analysis. Now the question is, how do you fill those gaps and do that? So, we try as best we can as a third party to be very specific. "Hey, we need this gap." That may be a very specific individual we're trying to find to support that company. It may be a very specific task. We try to do that. That's what we've done with Georgetown, creating that very structured framework. I think the second piece that Tatiana brings up to you I want to focus on is funding and resourcing, and that's been a particularly challenging environment. I mean, I think we have to acknowledge, over the last year, with all of the insecurity—we'll call it—in federal funding, and where that's been, and pauses, that's been a big question. When you have a partner like BHI, once we know about a technology, we're also

trying to proactively push funding opportunities that we see in the ecosystem. Rich, you just rattled off a few other opportunities. I mean, that is honestly what people are looking for.

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A lot of times they're like, "I don't know where to find maybe that opportunity. Where is that going to be posted?" So, having people that are really close to these ecosystems can also really amplify the opportunity, and having people maybe think out of the box of why that particular solicitation may actually be a good fit for that, or how to create a consortium around that, because we're seeing that with ARPA-H. A lot of those monies are coming through this idea of we are no longer going to—I'll say—tolerate that a single institution can provide the best outcome working in a singular fashion. So, now we have to really be thinking about how are we bringing in other collaborations, academically and through partnerships, and so you're beginning to see that. That's, I think, also a really key attribute of Tatiana and Christon, which is they have this networking mentality. Georgetown, in and of itself, can do better, spin out more companies, and they will do that both by working with enhancing their culture and capabilities and looking at others in the ecosystem.

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Rich Bendis:

Thank you, Jennifer. I think the key point—there's a couple. One, having an independent third party can help the management of the Office of Commercialization. We're going to get into this, Tatiana. First of all, you have to build a pipeline, then identify within the pipeline that which has some translational or commercial potential. Sometimes you get pressured, I would imagine, by administration, deans, researchers, or scientists, who have fallen in love with their research, but they may have no commercial potential at all. Also, it's very costly to maintain a patent portfolio within an academic institution. So, the question becomes, if you have limited resources to work with, how do you build, number one, build your pipeline and, number two, identify those things that have the greatest opportunities for success? Jennifer talked a little bit about that, but I'd like to hear your philosophy on that, building the pipeline and also some of the challenges associated with that.

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Tatiana Litvin-Vechnyak: Rich, I think this is the holy grail. How you do that, and doing it well, and doing it in an inclusive, open, and transparent way that inspires people rather than shuts them down is incredibly important and incredibly difficult. So, I think it begins with, number one, building the trust with the researchers, being responsive to them as you evaluate their technology, and understand that when they don't hear from you, it feels like a black box and, therefore, trust immediately dissipates. Then whenever we say no to somebody, we explain why. We lay it out in front of them. These are the challenges to patentability that we found. This is the lack in—I don't know—some of the experimental either design or validation that we find. With the help of BHI sometimes, they help us identify the killer experiment that needs to happen. So, we bring all of that to the researcher.

0:29:59 If there's disagreement, we listen carefully to their viewpoint, again, building trust. But most of the time, when we bring either our own valid argument as to why we shouldn't move forward or why we can't move forward, we do reach agreement and we do reach an understanding. So, in terms of pressures and falling in love with their research, of course that happens, and we have to carefully and delicately balance that also sometimes, with an understanding that, frankly, sometimes researchers are well ahead of their time, and so sometimes we have to be patient with them. If they say that they believe, and they're going to do steps X, Y, Z to prove to us and essentially the rest of the world, sometimes we go out on a limb, and we let them do it, and we carry the expense of that. But there has to always be a specific strategy and accountability.

0:31:02 If we say that we're going to do something—provide a report, identify a contact, help with funding—we have to do that. That's how it builds trust. If they say that they're going to bring us the data and the result, validating experiment X, Y, Z, then they have to do that. So, it's a two-way street and it's trust. It's the same with leadership. Luckily, in my career, I've had very little sort of unreasonable pressure to file on something that would be potentially ridiculous. I've never had to do that. Some patience and some trust, long-term trust is good.

Rich Bendis: Thank you for that perspective, yeah, patience, persistence, and trust. Christon, I know you're going to have a hard stop, but Jennifer and Tatiana are going to be able to stay on a little bit longer. Talk about a

little bit of those things that you would like to relay to the listeners related to continuing on the program theme and some of the other activities that you're engaged in.

Christon Hill: Absolutely. To add to what Tatiana was saying, the important thing is to build that founder education into the officer's core work.

0:32:02 That is a foundation of what we do. It's not ad hoc advising; it's repeatable programming that shows them what they need to do, what the next steps are, what questions they need to answer as researchers looking to commercialize. In addition to that, we create practical founder tools. We're drafting a startup guide for university researchers that are looking to commercialize their research, whether that be through new venture or otherwise, pathway map, milestone checklists, simple decision frameworks, stuff that [0:32:32 gated?] decisions that let you know which path, whether that be licensing, optioning, strategic partnership, co-development, or new venture creation. We're not trying to push people towards any one of these options; we're trying to show them which is the best option available to them.

0:32:53 Part of the way that we do that, yes, is providing that feedback, building that trust, but also bringing in—to Tatiana's point—those outside operators early so that they get that exposure to people that have actually built, have actually secured funding, have scaled companies, and not just—and this is not to dunk on what our office does—administrative guidance. It's better to have that actionable insight with steps mapped out in front of you, and that's what we try to do. In that, we build coordinated handoffs. So, yes, IP evaluation happens with the OTC, and then decide on the commercial potential of that. Then whether it be licensing or optioning, it stays mostly with the licensing managers at the OTC. But if new venture is a potential, then it comes to the GTV pipeline, and then it goes and gets handed off to BHI's EIRs, such as Jen, specifically Jen in this case. Then from there, we start introducing them to those ecosystem stakeholders and players so that they progress. Nothing is in a silo; it's all in the same process.

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Rich Bendis: Thank you. That's a nice progression. You mentioned handoffs, so I'm going to hand it off to Jennifer, because once it's handed off to a BHI

entrepreneur-in-residence—of which we have 33 now throughout the United States—that doesn't mean, even though that Jen, Jennifer, is the lead EIR at Georgetown, we have access to take advantage of the knowledge and the networks of all of our team to help support what's going on in Georgetown, whether they're in the region or not. Jennifer, talk a little bit about this handoff or where the intervention with BHI begins and the process continues.

Jennifer Butler:

Absolutely. There will be—let's just take a very specific example that we're in the middle of helping do an assessment on a technology that GTV has put in front of BHI. There is such a breadth of technologies that come forward. Some at times will be, I'll say, within more my wheelhouse. I did direct development. So, those are things where I may feel more comfortable managing a lot of the questions and working with our analysts at BHI to do the work.

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There will be some technologies that immediately I go, "This is outside of my wheelhouse." This is exactly to your point about why having 33 EIRs and the multiplier effect of their network to be able to tap in because, this is the thing, and Tatiana mentioned this earlier, some of these technologies are really on the cutting edge. The likelihood that my prior experience, if I'm trying to leverage it versus a framework, is going to help that person, you do need to be able to go and particularly find those folks who can really understand that. But I also think you also want to find folks that have that entrepreneurial spirit, I'll call it—I don't even know if that's the word—the ability to be really creative about where these potential IP could go, and how to get it there in a fast way. So, what's the first place that you can put a technology that can get its foothold to generate revenue? Then you can begin to see lots of revenue stacking behind it.

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All of that, though, to your point, is leveraged through people, the network, the experience. But I see myself as either a person who will contribute in that moment to the assessments and the work and my network or a clearinghouse in which I'm going, OK, this is where I think we need to go. How do we bring in those individuals? I think that's most important is just to know that I know what I know, I know what I don't know type of thing, but that we've got an incredible bench behind us.

Rich Bendis:

Let's talk and, Tatiana, please add on to that.

Tatiana Litvin-Vechnyak: Obviously I want to be careful. As much as I love BHI, I don't want to turn this into a commercial for BHI. But here we go; we'll add some strong positivity here. I want to mention two specific, incredibly helpful outcomes from this relationship. Number one, we have a com...so, we're actually going to have a research and innovation showcase on April 22nd, for our listeners, at Georgetown University. If you want to see what's going on in some of the exciting research and new venture output, please join us. The information is available on our website: otc.georgetown.edu.

0:37:02 One of the companies that will be featured there is called PushCART Therapeutics, which is a result of the relationship between Georgetown and BHI. We are absolutely thrilled about the mission of the company, the science behind the company, the people behind the company, and how BHI specifically helped us launch that company. One of the EIRs is a CEO of the company, and moving it forward through a variety of ways, including fundraising, actively fundraising right now. Then there are several other examples, but another notable one is a medical device technology that we were advancing and still are advancing through Georgetown. It's not yet a company, but I strongly believe it will be soon. BHI was incredibly helpful in terms of looking for funding opportunities, and helping us draft the best application for the funding opportunity.

0:38:00 Just going through that process, number one, drafting the application, and receiving feedback, and digesting feedback, and taking it for actionable items back to the researcher is incredibly helpful. So, yes, I just want to second the fact that the bench of EIRs that BHI has is responsive to the breadth of research that we have at the university, which is incredibly helpful, and just the network reach is also incredibly helpful. That's exactly why we're thrilled to be working with you.

Rich Bendis: Well, thank you, Tatiana. I'm not going to relate my next comment only to BHI, but in listening to people in university tech transfer or offices of commercialization throughout the United States, one of the biggest challenges that they have identified is what we call the talent innovation gap. We always talk about the capital innovation gap, but the talent innovation gap is sometimes even bigger because once you've identified something that has commercial potential, but you might want to form a company around it, you're very rarely going to find an individual at the

academic institution—the scientist or the researcher—that has the entrepreneurial experience to start up a company.

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Thank goodness Tatiana has an alumni network that they might be able to tap into, which a lot of institutions do. But finding somebody who can be the startup CEO, the CTO, the CBO, all of these C-level people, having a fractional person come in, when you don't have a lot of resources, that can help package the company, and get it positioned to actually become a real company, is really one of the challenges that most tech transfer offices have. We learned that throughout the United States, we understand the need, and thank goodness we have a team of people that we might be able to tap into. If it's not our team, there's other people around in the network or in the United States that might be able to be brought into this to start being that fractional startup role.

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More importantly, if you don't have a lot of money, one of the ways you can incentivize these people is to actually give them equity in the company to be on the initial cap table, because you can't pay them a lot of money. But then they get motivated to help grow the value in that equity within that company. I'll stop there. But I think that's just something that I'm seeing as a common need throughout the United States, through all academic institutions, no matter how sophisticated you are or not and something that, as Tatiana had mentioned, there are many different creative ways to address that. So, let's talk a little bit about the BioHealth Capital Region, which is Maryland, D.C., and Virginia. If any, what are the benefits for Georgetown University residing in Washington, D.C.? Then having a robust Virginia and a Maryland on either side of D.C. and Georgetown, what benefits there are to Georgetown to be a part of a region like that? I'm going to ask Tatiana first.

0:40:57

Tatiana Litvin-Vechnyak: Well, first of all, lots of benefits. Number one, obviously, our researchers, faculty and staff all live either in Maryland, Virginia, or D.C. Our students frequently end up in Maryland, Virginia, or D.C. Of course, the region itself is embedded in a place that has things like NIH, FDA, BARDA, a growing biotech and medtech base in terms of companies, etc. So, I think, in terms of the expertise that is in the area, it is fantastic. Tapping into that is fantastic. As we discussed, there are some challenges

specifically for Georgetown being a private institution in Washington, D.C., and not quite having the organizations like TEDCO and programs like MII support the early emerging technologies. But the opportunities are there. The collaboration is very strong.

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Maryland is very welcoming to our companies. Virginia is very welcoming to our companies as well. We have several in both. But we really also do want to contribute to D.C. This is the city where we are. Georgetown is one of the universities, obviously, of many in Washington, D.C. There's a lot of research happening, there's a lot of output that's happening, and we could really contribute more to the economy of the city of D.C., and diversify the economy of the city away from some of the usual government items. So, all of those initiatives are currently underway. D.C. launched a fund that is working to attract companies. They launched a funding opportunity called Tech Ecosystem Fund that we're thinking about how to position ourselves for. So, lots of opportunity. It's a wonderful place to be. With that, I'm going to let somebody else comment.

0:43:01

Rich Bendis:

Go ahead, Christon, go ahead.

Christon Hill:

First, to echo everything that Tatiana said, I think, to put it succinctly, it's about making the ecosystem part of the program. If our office is going to be more entrepreneurial, more commercially successful, not to say that it hasn't been, but if it's going to increase those successes, you can't just stay on campus. It's not a campus-bound activity. You need to actively build relationships with successful and unsuccessful founders, with successful funders and some questionable ones, so you have that litmus test. Well, "questionable" might be the wrong term, but some less reputable or less experienced, less seasoned. That way, you have that dichotomy, you have that frame of reference, so you start to understand more facets of the entrepreneurial journey. Those partnerships have helped us not only shape and direct these companies, these technologies, where they're going to land or at least settle, but it's helped us combat one of the major issues that D.C. has, which is leaking scale.

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Yes, D.C. spins out a lot of companies, starts a lot of companies, but at a certain point, they tend to leave. Part of what OTC, GTV, BHI, and to a

certain extent the Mayor's Office are doing now, is attempting to put a lid on or a net—what pick metaphor or analogy—around the ecosystem so that that talent is retained and those companies scale here so you do see those economic impacts. Part of the way we're going about doing that is partnering with all these ecosystem stakeholders.

Rich Bendis: Thank you. Tatiana, yeah?

Tatiana Litvin-Vechnyak: I just realized that we also should absolutely mention a couple of our local partners within Georgetown. Within the business school, we have Georgetown Entrepreneurship Initiative, or I think they go by Georgetown Entrepreneurship, with Jeff Reid leading that team. They do a lot of work and activities supporting the student entrepreneurs and alumni entrepreneurs.

0:45:00 So, they contribute to the BioHealth Capital Region in that way through some of the activities and educational programs that they have and the networks that they have. Then we plug into them as well. There's a new initiative under them called Business of Health, and Dr. Sandeep Dahiya is leading that effort. So, they will also be contributing in a major way, through convening, education, network, advisors, etc.

Rich Bendis: Thank you. I'm sure there's many more, as well as you work with everybody. I mean, one of the things that's happened with the creation of GTV and your entrance into the region, Tatiana, is Georgetown wasn't as visible in past years. Now, you and your team network everywhere, you put on events, and actually let people know about what's going on within the institution in the Tech Ventures office, which I think that outreach is extremely important to make people aware and create greater awareness within the region about what the priorities and what the strengths are of what GTV is building.

0:46:04 Jennifer, anything you want to add about the region?

Jennifer Butler: Having worked in Maryland essentially for all of my career, because that was where MedImmune was and AstraZeneca, and then also in Montgomery County, which had that pilot program in which they were supporting Montgomery County companies, I will just say that when you look at the Maryland side, and we just recently know that they're really looking to, I'll say, double down in the investment in that BioHealth quarter along 270, I mean, there's a long history in Montgomery County

and in Maryland, doing that more broadly. You're seeing that with the investments in Baltimore and then on the other side with Virginia Catalyst in Richmond. I would just say that companies, whether they're choosing to be in Maryland or they're choosing to be in Virginia or—to your point, Tatiana—opportunities that D.C. begins to provide to these companies, there are funding opportunities, there are incentives for companies that want to do that.

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So, as an extension of when technologies leave Georgetown, they have to go somewhere. Knowing where it makes sense for them to go, from a facility standpoint, from a talent standpoint, and for all those types of things, I think that there's opportunities to place that still within the encatchment area of the DMV, which I think we would argue is up to Baltimore and now all the way down even into Charlottesville and elsewhere, so you can catch that. Everyone's still trying to [0:47:27 invest?] in the area.

Rich Bendis:

Thanks, Jennifer. This is going a little bit longer than a typical podcast, but I think there's so much information that, rather than cut it short, I have two more questions we're going to ask for everybody. I'm going to start with Tatiana. What does success look like for GTV? What do you see as short-term success and long-term success for Georgetown and the GTV program?

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Tatiana Litvin-Vechnyak: Number one, a more durable pipeline; more engagement, internally and externally; researchers who see entrepreneurship as a viable path, whether for themselves or in collaboration with an external entrepreneur, and trust OTC and GTV as a partner; of course licensing revenue ultimately increasing and being reinvested into the research enterprise, because that's what happens under the IP policy that the revenue that we get gets reinvested; and Georgetown known for producing companies and contributing to products that matter in areas of scientific strength; and, of course, the broader impact, discoveries that improve lives, and faculty who feel supported in making it happen.

Rich Bendis:

Thank you. Christon, how about you? Anything to add to additional success goals?

Christon Hill: Absolutely. First, I want to echo the betterment of society. That's number one, top of list is why we do what we do. I have some pretty specific metrics that I'm supposed to hit under the EDA grant, so I won't go into those.

0:49:00 But increasing the number of startups and spinouts coming out of Georgetown clearly is of importance to me for its ability to contribute to the economic development of the region. But I would say the biggest thing would be measure the system quality rather than just the volume. Busy is not necessarily productive, so it's not just counting—I'm not saying that these metrics aren't valuable, they are, but it's not just about counting disclosures or startups or spinouts. Tracking that increased researcher participation, very important. Seeing demonstrative evidence of increased founder readiness, having more advisor engagement along the way for those gated decisions, as well as having follow-on progression, whether that be funding, hiring folks, C-suite or otherwise, and then also just the decision quality that is a result of the process. Once we're able to repeat and scale these decisions and iterate faster—or maybe not faster but more efficiently for the companies that are coming out and the technologies that are coming out, that for me will be a very key indicator of success.

0:50:09

Rich Bendis: Thank you, Christon. Then, Jennifer, as an independent, third-party supporter of GTV in the Office of Commercialization, what do you see as your personal goals to help them achieve their goals?

Jennifer Butler: I'm very much aligned with this idea of—I would say culture I think is an important component to it. I think, in speaking with Tatiana and Christon, some of the more interesting things that fall off of the very technical aspects of productivity is about how do you begin to change an organization in that way? Although that heavy burden is on Tatiana and Christon to do that in that organization, I think that's something that sitting as an outsider to figure out where to contribute that is also a really key thing in service of having these big societal benefits, and these technologies going into the hands of patients and the people that can really benefit from it.

0:51:02

Rich Bendis: Thank you. This has been very educational and thought-stimulating for me, and I'm sure for some of our listeners. But I want to close now with a takeaway for the listeners. What about lessons learned? You created GTV two years ago. You've had the EDA grant. You've got a little more time going in the future. Tatiana, you've been there three years now. Let's talk about lessons learned through this whole experience around the Office of Technology Commercialization and Georgetown Tech Ventures that might be takeaways for others who are trying to do some of the same things that you're doing now. I'm going to start with Christon, and I'm going to let Tatiana close at the end, but we'll start lessons learned from you, Christon, first.

Christon Hill: Man, lessons learned? Early and continued engagement with the OTC is only going to benefit researchers so that they're thinking about commercialization left of the research pipeline, rather than right.

0:51:58 I would say, again, to echo what we've said earlier, the community engagement, the ecosystem engagement is absolutely vital. Taking feedback from folks as to how to improve your programming or how to position your technologies to appeal to funders and entities in your ecosystem is also important. Understanding what industry is looking for in certain verticals or sectors, and explaining that to your researchers relatively early on, is also important. But the main thing I would say is flexibility on both the part of the researcher and of the OTC and those trying to advise them for their technology. What do I mean by that? One, you mentioned earlier falling in love with your technology or your solution without fully comprehending the problem and/or who is going to pay you to solve it. Answering that question early on, very important. Helping researchers understand that that is a question they need to answer is also very important. Outside of that, I would say the main thing is—and this is going to be a very micro application—is create templates.

0:53:00 Everything you do, create a template so that you can reuse it so that you're not constantly re-chiseling that wheel. You can just go [laugh] to the shelf, take it off the shelf, and adapt it however you need to. That has been invaluable.

Rich Bendis: Thank you, Christon. Then Jennifer, as a BHI EIR supporting Georgetown, what are the lessons you've learned?

Jennifer Butler: When we've been interacting with these founders, you do have to recognize that there is a certain momentum when we do some of these engagements that really can help that engagement be very successful, and so really recognizing, are you catching these folks and they understand that we need to keep moving, moving forward. We've got these action items. I think that we've really seen a lot of success when we find that right moment in which they see value to the program, they stay engaged, they help move things forward, momentum is so critical.

Rich Bendis: Great, thank you. Then, Tatiana, last but not least, lessons learned from the leader of the Office of Technology Commercialization?

0:54:01

Tatiana Litvin-Vechnyak: I'm going to take it slightly in a different path: storytelling. Storytelling is so critical. You mentioned that Georgetown was not as visible in the BioHealth Capital Region, for example. Obviously, everybody knows Georgetown University, and it has an amazing brand and an amazing name and amazing alumni and all of that. But in terms of research and innovations and the impact that has had on society over the years, I think not many people fully appreciate. I think that goes to say, not just for Georgetown, but across the board, with the recent insecurities in funding, as Jennifer mentioned, we in our tech transfer world and research world realized just how—I don't know—the general population of society underappreciate the life-saving innovations that touch their lives every day, where they come from.

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So, telling those stories over and over again, and celebrating innovators over, and bringing them front and center at different events, and on the Facebook page of the university, and the LinkedIn page of the university is so critical. I'm very pleased to say that OTC has actually played a major role in that. We've spearheaded several research stories that ended up on the front page of Georgetown University's LinkedIn and Facebook and the main university page. So, we need to do more of that, and that's going to help the wheel spin. People learn, people get inspired, people come back to do it more—to Christon's point about repeat and scale—very important.

Rich Bendis: Great, thank you very much. I think I want to congratulate you, Tatiana, and Christon, Jennifer, for all that you've been doing right now with GTV.

The job is just beginning, it's not done, and there's a long way to go. The road to success is always under construction, and we're in that construction period now.

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But I want to thank Tatiana Litvin-Vechnyak and then Christon Hill, Program Manager, and Jennifer Butler, Entrepreneur-in-Residence with BHI, for being on *BioTalk* today. I look forward to seeing everybody on April 22nd at your annual event, to showcase everything that's going on at GTV. I know that we can help promote that through our social media, and you're doing it with your social media. That event I think is open for the public to come and observe. Is that correct?

Tatiana Litvin-Vechnyak: That is correct, yes.

Rich Bendis: Very good, great. Thank you, all three. We're going to come back a year from now, and see if you've accomplished everything that you told the EDA that you were going to do for them in three years. Thank you very much for being on *BioTalk*.

Tatiana Litvin-Vechnyak: Thank you.

Christon Hill: Thank you. Happy to talk bio anytime.

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

End of recording