EP.158 - Alex Philippidis

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 had a little preliminary chat with our guest today to let him know he's our most frequent guest we've had on *BioTalk* because he basically has relevant news that's interesting to all of our listeners wherever you may be in the United States or internationally. I think actually, Alex, this is the fourth appearance you've had on *BioTalk* and probably will continue on an annual basis based on what you bring to our listeners. We have Alex Philippidis, who is the Senior Business Editor for *Genetic Engineering and Biotechnology News*, with us today. Alex, how are you?

Alex Philippidis: Very well Rich, thank you for having me on and thanks for the bit of history.

0:01:01 I'd lost count after three. [Laughs]

Rich Bendis: Yeah, well, when you have good things to say for people that are interesting to them about what the state of our industry is—which everybody's interested in these days—it's great to have you back. Really you're back a little bit earlier than past years because we always bring you back when you do your *Top 10 Biopharma Cluster* ranking in *GEN*. It might be a couple weeks earlier but that's why we're doing it earlier with you because we want it to be fresh news for everybody rather than old news. Like we do traditionally, Alex, you might give the listeners a little background on your history so they know how you got to where you are today with GEN.

Alex Philippidis: I guess when it comes to what I do, I've always wanted to know how the world works and to share what I've found out with others. My father was a big newspaper reader growing up so I gravitated toward writing for various local newspapers where I live.

0:02:00 Then almost 20 years ago I shifted to writing about biotech, first for a biotech economic newsletter that was published at the time by Genome

Web, which actually has a whole online service and a lot of very good tools and technology writing. Since 2011 I've been covering biotech business news for my current employer, *GEN*—or *Genetic Engineering and Biotechnology News*. *GEN* is the oldest publication devoted exclusively to biotech. It was founded in 1981 by Mary Ann Liebert, who built an eponymous company around *GEN* and now has more than 90 biotech and medical and technology and law and even policy journals. We have a monthly print magazine and dozens of articles that we publish online on our website which is GENengnews.com—G-E-N-E-N-G-N-E-W-S-dot-com. A couple years ago we launched our own peer reviewed journal, *GEN BioTechnology*.

0:03:03

Rich Bendis: Wow, great history and really you've been tracking the growth of biotechnology for over a decade now. We made the transition to call it BioHealth; I don't know if you're ever gonna go to *BioHealth News*, Alex, but I'm sure there's a reason for keeping it biotechnology. We're seeing the conversion of technology and bio coming together these days, which I know you're reporting on as well. The other thing that I'll tell the listeners is for those who haven't seen Alex live, he comes to our BioHealth Capital Region Forum every year to discuss what's going on in the industry and talk about the *Top 10 Biopharma Cluster* ranking. We'll talk about this again later in our interview with him. But I think he has been to at least four BioHealth Capital Region Conferences, Alex? Is that correct?

Alex Philippidis: Let me check. I was in person in 2019, virtual during the COVID years, and then back in person in 2022 and '23.

0:04:04

Rich Bendis: Yeah, so three in person and two virtual.

Alex Philippidis: Yeah, that's right. So I guess that's five?

Rich Bendis: Five, holy cow! [Alex Laughs] It'll be the sixth appearance this year. My goodness! You haven't overstayed your welcome and we're gonna welcome you back again.

Alex Philippidis: Well that's good. Thank you!

Rich Bendis: And the reason we're chatting today is that you just released the 2024 *Top 10 Biopharma Cluster* ranking yesterday. For the listeners we're taping this on Thursday July 25th and actually it was released on Wednesday July 24th 2024. So before we go into the ranking, talk a little bit about the origin and why you're doing this annually, Alex.

Alex Philippidis: About ten years ago we saw at *GEN* that there were several biotech news outlets that attempted to figure out where the hotspots were for the industry. Each attempt had its own criteria, its own read, its own results quite frankly.

0:05:03 We attempted it because I had the background in covering biotech economic development and the key sticking point, which took a while, was to figure out what the criteria would be. I wanted things that were numerical, that could be duplicated, that would be less subject to question than if you say, "Well, here's my take of what's up and coming," because everybody's got a different opinion and they're gonna clash over it. About 2014 was my first effort and the cluster lists have been annual since then. What's interesting about that first list was that in the first list, San Francisco was the top region. There was still a sense back then that Boston/Cambridge were playing catch-up. Now that flipped around the following year—2015—so that Boston and Cambridge were on top and it stayed that way for nine years until last year where we had that flip at the top and San Francisco coming in.

0:06:14 I can go into a little bit of why now or wait til later.

Rich Bendis: Go for it. You're on a roll, Alex. [Alex Laughs] So continue on.

Alex Philippidis: Okay, sure! Last year coming out of COVID the San Francisco Bay Area saw more venture capital financing activity and it was largely on that that San Francisco nosed out Boston/Cambridge when we did the list last year. This year it's a little bit back to what we've seen in recent years with Boston/Cambridge clearly on top. Just to show you, for San Francisco we had a figure of roughly ten billion dollars in this past year whereas Boston/Cambridge was close to eleven billion dollars.

0:07:06 The figure—we had 10.71 billion for Boston/Cambridge, 10.38 for San Francisco Bay. That's still fairly close as these things go but it was enough

obviously for Boston/Cambridge. Now, so far in the first half of this year, we're seeing San Francisco slightly ahead. It's like a horse race. [Laughs]

Rich Bendis: Yeah, well really between the two, you basically have the highest concentration of venture capital and they represent, oh, I don't know, 70 to 80% of the venture capital that we have in the United States in two large markets, which continues to be true. But the interesting thing about the rankings, which you're gonna get into—and the other criteria, which you can tell the listeners about—it's not just about the money. It's about a number of other things that go into the criteria that really help build a biopharma ecosystem and a cluster, correct Alex?

Alex Philippidis: Yeah, actually there are five criteria we've held to where you can get objective numbers where you can find them either publicly accessible or if you ask nicely, you can find it from a private source.

0:08:12 The latter would be true for example of lab space, even venture capital funding. When we first did the lists a decade ago, PWC had a public database that anybody could plug into. But as it turns out the regions are even closer watchers and trackers of their own activity in that. I tend to defer to the regions on venture capital. Although, as a backstop, I'll also reach out to PitchBook, in this case, which partners with the National Venture Capital Associate to put out quarterly reports and that's—the *Quarterly Venture Monitor Reports,* they're called. The criteria in addition to venture capital funding—I've been talking about that a lot—are NIH funding, because it pays for basic research and that's a big funding source for the universities and institutions that do biotech research.

0:09:12 Patents. Now the US Patent and Trademark Office redid their database a year and a half ago so you can now drill into patent families, so those are sets of related patent applications. Because many times a patent filer will look to have the same application in several countries. There may be different versions as they revise an application. So patents are another criteria. Lab space, because companies that are growing need to move into a place where they can do business. And then jobs. Again, the source for—the NIH has a database available called the *NIH Report*. They update that every week. So you can get pretty up-to-date numbers for the current fiscal year and you can go back several fiscal years.

0:10:02 For the venture capital funding, as I mentioned, the regional groups usually have their own numbers but if they don't you can rely on PitchBook and the National Venture Capital Association. In some cases commercial real estate brokers may have numbers but I find them to be even better at their forte, which is lab space figures. The number of jobs, that number would come from regional life science groups, although sometimes commercial real estate firms have numbers as well. We figured on five criteria that you can use to compare the health of the top regions and some up-and-coming regions if you choose to drill down into those. Now you mentioned biotech versus BioHealth and I thought it was interesting: we have a sister publication called *Inside Precision Medicine*, which is the migration of omics technologies into clinical practice whether by healthcare providers or by research hospitals and that certainly gets into more of the health issues.

0:11:09 *GEN* doesn't cover that as much which is why you see either biotech or biopharma being used. But the company realizes it and in fact *Inside Precision Medicine* has grown over—what is it—11 years that we started under the name *Clinical OMICs*. And it's become a solid publication for us and it serves a little bit of a different niche but one that needs to be covered as well.

Rich Bendis: Right, well you've answered the question that always in the audience when you come to our Bio Forum someone always asks from the audience about the BioHealth versus the biotech. You've just given an explanation for that. I don't know if they will be listening to this podcast [Alex Laughs] but basically you've answered their question in advance. But I'm sure they will ask again. So you already have your answer.

Alex Philippidis: I'll answer it again!

Rich Bendis: You'll answer it again! [Laughs]

0:12:01 The other thing that was interesting last year is we had you and Pete Briskman from JLL at the podium at the same time. I think we'll do that again because the dynamic was very good between the two of you having a commercial real estate developer that focuses on the wet lab space and someone who's tracking all of the other indicators within the industry

and it created some very good interplay between the two of you at the podium.

Alex Philippidis: Pete does a really good job with the regions' lab space pictures. He's got some very good solid information. I get interested hearing his presentation as well—

Rich Bendis: As listening to yourself.

Alex Philippidis: —as exchanging—yeah! [Laughs]

Rich Bendis: Without further ado, I know our listeners are anxious to hear: what are the current trends, what's the rankings this year and what are you seeing as any major regional shifts or major trends occurring within the regions, Alex? I'll turn it over to you.

Alex Philippidis: Sure. As I mentioned I'll start again with the biggest change, which is the change on top—Boston/Cambridge retaking the top spot on the cluster list over the San Francisco Bay Area with the biggest factor being Boston/Cambridge regaining the lead in venture capital financing.

0:13:09 But there was another factor as well in that San Francisco, even though it finished on top in terms of number of jobs, that number went down by about 2,000 jobs. And we've seen this year at least eight companies cutting jobs in that region this year. They range from homegrown BioMarin Pharmaceutical and Senti Biosciences and Tenaya Therapeutics to biopharma giants that have a presence in that region. Bristol Myers Squibb cut an unknown number of jobs but they did shut down their Cancer Immunology and Cell Therapy Thematic Research Center in Redwood City. Genentech cut more than 400 jobs, Pfizer, Sanofi and Thermo Fisher Scientific also eliminating jobs. In the case of Sanofi, they have a subsidiary called Amunix Pharmaceuticals and that operation now will be absorbed into the broader Sanofi, which accounts for that cut.

0:14:10 And beyond one and two, the BioHealth Capital Region, which is Maryland, Virginia and Washington DC, still at number three—and I'll have a little more on that or I can talk about it now. Let me go down the list first—New York, New Jersey remaining fourth. And when I say New Jersey, that's Northern New Jersey, suburbs of New York City because

parts of Southern Jersey are in Greater Philadelphia, which is number six on the cluster list. That's actually up a notch. San Diego is fifth this year, and that went up a couple of spaces. Los Angeles Orange County down to seventh position this year. Actually, most of the biggest activity, at least in the first half of this year with Los Angeles and vicinity, taking place involving the University of California System as opposed to publicly traded employers. I found that interesting.

0:15:04 Number eight, North Carolina. Number nine, creeping up a space, is Chicagoland, which is Chicago and vicinity. And Seattle rounding out the list at number ten. A couple of things in that list—San Diego increased by two spaces to number five and there are really two reasons for that. One, they've seen huge jumps in venture capital, especially in the first half of this year. There were two mega financings. Element BioSciences in July closed on a 277 million dollar series D. Well, we'll see that it's just representative of the trend. But here's a bigger one: Mirador Therapeutics, which is a precision medicine developer which focuses on immunology and inflammation, attracted $400 million in one shot. And that was in March. The second reason is a huge boom in lab space. Two mega projects, one being completed in the downtown coast where IQHQ is building the RaDD, or Research and Development District.

0:16:06 And then further inland in Sorrento Mesa, Sterling Bay and Harrison Street are building a half-million-square-foot campus. The key challenge there is even though there's more space being built we haven't seen anything about biotech *tenants* taking large amounts—or any amounts—of space in these two campuses. We saw it on a smaller scale though where Pfizer Oncology agreed to lease 230,000 square feet in Torrey View at the Torrey View Campus of Breakthrough Properties. But the challenge going forward for San Diego is gonna be finding companies to fill all that space that's being built. They're not the only region with that but the issue seems most pronounced focus there. Greater Philadelphia went up I'd say because of its sharper focus on one niche within biotech, which is cell and gene therapy development, as well as a jump in venture capital.

0:17:03 But on the cell and gene therapy front the biggest example of that is Spark Therapeutics building their Gene Therapy Innovation Center on the

Drexel U Campus in Philadelphia's University City. That would be 500 jobs when it's completed, which is projected at 2026. Although Spark also made news this summer—earlier this summer—because they began to lay off an unspecified number of staffers as they pivot to fewer but faster pipeline development there. Looking elsewhere, on the Los Angeles Orange County front the biggest story there was UCLA buying a vacant shopping mall and making it the California Center for Immunology, which is supposed to open in 2027—[Laughs] talk about a ways away—and for which the state announced 200 million dollars in funding for that.

0:18:00 While UC Irvine got a 50 billion dollar donation from Charlie Dunlop, the founder of Ambry Genetics. However, there's a possibility for a comeback in LA because Amgen saw its biggest stock gain in May after CEO Robert Bradway said the company is planning a phase three trial of a weight loss drug called MariTide and they hope to be the third big competitor to Novo Nordisk and Eli Lilly in that. Novo Nordisk and Lilly have both stayed a growing presence in North Carolina with Novo Nordisk announcing a four million dollar project a second fill-finish plant in Sanford and Eli Lilly also building a new facility there as well.

Rich Bendis: Interesting trends that you're talking about, and actually it really changes from market to market based on who the major engines are that are potentially growing or basically downsizing as you mention. There's a lot of movement within the big pharma and the big bio area these days and it really relates to reorganizations, acquisitions, downsizing, deciding to spin off different technologies or disease groups from their companies where they don't really fit their long-term strategies.

0:19:16 What are you seeing really as the disease or therapeutic areas that appear to be the growth areas that you're observing, Alex?

Alex Philippidis: I think it's more than cancer at this point. I am seeing a lot of activity on two fronts. One is immunology and inflammation, so things that are pain related for sure. The other is, as I mentioned, weight loss. The GLP-1—glucagon-like peptide-1 drugs have really reshaped and created a whole set of blockbuster medicines. Novo Nordisk's Semaglutide, which is marketed as Ozempic and Wegovy. Eli Lilly has their own GLP-1 drug as well.

0:20:04 And earlier this year I visited Framingham, Massachusetts because Novo Nordisk grew further a research hub that they have established in the Boston/Cambridge area. And what they did there was open roughly 80 thousand square foot space in Lexington, Massachusetts for Global Nucleic Acid Therapies—that includes the RNA based drugs that we hear about—and advanced drug delivery R&D groups. And they have at Novo—it's not a huge number of new jobs with that expansion— 75 is what they're planning for this year—but it goes to show that they're in a steady mode of growth there and in other regions, like North Carolina for example. And Lily is as well. There's a scramble within biopharma among companies to try to be the third biggest weight loss drug developer.

0:21:04 That's where Amgen comes into play. A smaller company Viking Therapeutics is trying as well. And that indication has been taking off, why? Because it's a lot easier to take a pill than to try other means of losing weight in many cases. But of course one must be careful and make sure it applies to the individual. But we've seen where those are having an effect on the list for example, as well as for the BioHealth Capital Region, had some thoughts on that as well.

Rich Bendis: Yeah, we didn't mean to skip over the BioHealth Capital Region since that's the primary focus of my responsibility. So why don't we drill down even further on us holding the number-three position that we got last year for the first time and were able to maintain that in 2024, which we're very proud of.

0:22:00 Alex, talk a little bit about your perception of the BioHealth Capital Region.

Alex Philippidis: Sure. I would say the BioHealth Capital Region has one complete strength because it leads the nation in patent activity. I counted 73,000 and change patent families. There's one clear area of challenge, in venture capital. Even though the BioHealth Capital Region went up in terms of rankings from eighth to fifth in venture capital year over year and the amount of funding is 2.9-and-change billion dollars since the start of 2023 into the first half of this year. That total 2.93 billion that I counted, is more than double what was tallied last year: 1.437 billion dollars. That's a 104% increase. So at least that's going in the right direction, although

that still lacks the other criteria. Now, on why that is, venture capital activity is something you just don't see as much of because the region is blessed from having both institutions that are large, that are anchors for the region.

0:23:10 And I'm thinking of Johns Hopkins University when I say that as well as the big regulatory agencies, the FDA and the NIH, but also larger companies that have built. I think of Kite Pharma for example. More recently the announcement of AstraZeneca building a manufacturing facility in Rockville, Maryland and planning to create 150 jobs when that opens in 2026. The most recent opening as a deadline was when QIAGEN completed a 40,000 square foot expansion in Frederick, Maryland resulting in—well, actually it's a more than doubling of their space. The total combined is 75,000 square feet focused on next gen sequencing, genomics, clinical health care and forensics. So again, these are larger, these are not startups or early stage companies depending on gobs of venture capital funding, which is why the VC numbers tend to be lower.

0:24.09 But as I mentioned, looking at the other three criteria the BioHealth Capital Region is a solid third in NIH behind Boston and New York. Looking also at lab space, a solid 35.9 million square feet of lab space counted. That includes the NIH lab space—which I remember when we first started doing this list I remember you and some of the people at the event would ask, "Well, why isn't that counted?" Finally the real estate firms started counting it and at that point I felt comfortable enough to include it as well and we've made that change over the years. Then jobs are still a solid third, which is really good to see for the region. So, yeah, it has become a solid part of the country and one that has been recognized I think beyond just the region or just the Northeast.

0:25:02

Rich Bendis: One of the things that we like to talk about also is how things that have developed or emerged there have grown and then morphed into something much bigger. One of the biggest examples of that is MedImmune, of course, which was acquired by AstraZeneca, but they had created an internal spinoff called Viela Bio. Viela Bio spun out and then was acquired by Horizon Therapeutics from Ireland, and then

Horizon was acquired by Amgen most recently. So if you look at that and what happens that's sort of like the Hybritech dynamics that you saw occurring in San Diego which had all of those spinouts that emerged from it and created a lot of things to occur in the San Diego area. We're seeing the beginnings of some of those things—with the spinouts and the serial entrepreneurs happening within the BioHealth Capital Region, which took a long time for us to get there. But the other thing that's exciting is when you had Horizon and Amgen come in looking at these assets they made the decision to keep the companies there rather than acquire them and move them to other locations around the country.

0:26:11 So, that's something that we also think helps contribute to the growth of our region in the last couple years Alex.

Alex Philippidis: Yeah, that's a good point. I wonder how much of that reflects any particular retention strategy. A lot of regions have a big emphasis—understandably so—in attraction, drawing companies, drawing jobs. It would seem the challenge is keeping what you have and doing that. I don't know how much of that is either efforts by the BioHealth Capital Region or the individual states—Maryland and Virginia—focused on that. How is retention accomplished?

Rich Bendis: I think that's a great comment because there's a recent report that came out by CBRE on talent in the United States. I don't know if you've seen it but they do a ranking every year on talent and research and development talent.

0:27:00 We consistently in our region are ranked in the top three for talent. If you look at what's going on to grow a company or if you're looking to acquire assets in a certain region you want to make certain that they have the talent necessary for the growth that would be needed to grow these companies. We have a plethora of PhDs and scientists because you mention NIH and FDA and Johns Hopkins, University System of Maryland, and Georgetown and UVA and Virginia Tech. We have great talent within our region. I think that has helped contribute to our growth in your rankings as well. Because if you don't have the people you're not gonna be able to support the existing companies, grow new ones or protect those who want to acquire assets within your region.

Alex Philippidis: Sure. You have to keep people in the region. Because that comes up in areas that are more expensive. The issue is that people migrate and they go away.

0:28:00

Rich Bendis: Yeah, I think that's another trend you might be seeing but San Francisco, Boston and New York are extremely expensive, both in lab space and wages. I think that helps contribute to some of the other regions and cities that you have on your rankings that might offer more affordability, so you can get a greater return on your investments you're making. But, I think what they've also learned is that if you don't have the talent to build your companies in this region, which you might have to pay a little bit more for, you're not going to be able to focus on the growth that you're anticipating within those companies. It's a delicate balance. It's not just about the cost. You've got to have the right mix of all of the ingredients to grow your businesses. But talent, cost of living, quality of life, affordable lab space, access to great research, partnerships, all of those things I think are important dynamics, which the BioHealth Capital Region has focused on over the last ten years for its growth.

Alex Philippidis: The CBRE Report was interesting because basically it's a report of three mini rankings.

0:29:05 They looked at biopharma talent, they looked also at medtech talent, and also biomanufacturing talent. They found differences between the regions which makes sense because different regions have different strengths in that. But it was good of CBRE to recognize that and drill down a little bit into that in their study, which makes it more valuable. And over time—and he would be a good guest one of these days for this podcast, Matt Gardner at CBRE.

Rich Bendis: I'm glad you brought that up; we just did a podcast with him.

Alex Philippidis: Oh, good!

Rich Bendis: Yeah, so if you check your *BioTalks* you'll see that Matt Gardner was just last week's *BioTalk*—

Alex Philippidis: Oh my gosh. [Laughs]

Rich Bendis: —talking about that study. Thank you for the suggestion but you know, my goal in life, and Andy Eckert's goal in life, our producer, is to try to stay one step ahead of Alex Philippidis.

Alex Philippidis: [Laughs] Okay!

0:30:00

Alex Philippidis: That's funny!

Rich Bendis: There's another term, when we talk about venture capital—and this isn't really on the script that we were gonna talk about but I wanna get your perspective—if you look at investment right now and also the integration as I talk about technology and bio coming together, artificial intelligence—everybody's talking about it right now. So whether it's clinical trials or looking for pipeline development or how to incorporate it into services within the healthcare industry, AI is sort of like biotechnology's name when it came out. It's like nanotechnology when it came out and everybody was hot on all of these emerging trends. So what's your perspective on AI and the implications within the bio industry, Alex?

Alex Philippidis: Boy, has that become one of the most talked-about specialties, and I think it's because of the promise that at least those who practice AI will say, which is that it will cut years from the development and thus millions if not billions of dollars from the development of new therapies.

0:31:01 We have to wait and see because the key question for me is how well will AI-designed drugs do in clinical trials. Now there are several that have reached at least phase two, if not phase one. And it's interesting, just yesterday a group of colleagues shared with me a top ten list floating around on LinkedIn of artificial intelligence in drug discovery, sort of their top ten companies. I can't figure out what the criteria were but what surprised me was that at least half the companies on the list were big time tech companies—Microsoft, IBM. I was in a panel earlier this year with some other journalists who specialize in biotech and it seems some of them were jaded and faded on AI from now but a lot of that's because a heavy PR hype from individual companies. But I'm still waiting to see how well the candidates do and whether AI leads to hype or leads to

hope.

0:32:07 There's a lot of different directions companies can go. If it isn't straight out drug discovery AI, you have companies like NVIDIA, which have made chips that are used for drug discovery as well as broader healthcare applications. And, waiting to see how the field shakes up. We haven't gotten that sense yet but it's something you see a lot of discussion about and a lot of concern as well. Will AI be able to cut the cost of drug discovery? Also Recursion, a company that has a lot of activity in drug development with an AI focus. The field will shake itself out over the next couple of years.

Rich Bendis: Well, thank you for your perspective. I think it's something we're all anxious to monitor and watch. I know we have a couple of CRO companies that we work with closely and they're using that in some of their clinical trials development working with big pharma around the world.

0:33:07 And if you look at talent, that's another talent area we're seeing is the computer scientist and the people who have AI and quantum machine learning experience is also in more demand now by the biopharma industry. So, a trend worth watching but too early to determine what it's going to end up being in five to ten years from now, Alex. So thank you for your perspective. Is there anything that we haven't covered in trends or in general related to the biopharma industry that you cover that you'd like to have our listeners learn about or hear about from you?

Alex Philippidis: Sure, I wanted to promote *GEN*'s flagship virtual event, The State of BioTech and that's a virtual conference taking place September 11. It's sponsored exclusively by Cytiva and we'll have a very outstanding group of research and business leaders from industry and academia discussing research developments, innovations, and regulatory changes.

0:34:07 We have three keynoters: David Altshuler of Vertex Pharmaceuticals, which made history in December when they won the first FDA approval for a CRISPR based therapeutic. We have a keynote by Sonia Vallabh who co-leads the initiative to develop preventive drugs for prion disease at the Broad Institute. And a keynote presentation from the new President

and CEO of BIO, the Biotechnology Innovation Organization, and that's John Crowley, who for a long time led Amicus Therapeutics. We'll also have a CRISPR therapy discussion with leaders from the Innovative Genomics Institute and Danaher, which is based in DC right in the BioHealth Capital Region.

Rich Bendis: Great! It's great that we have your program the week before we have the BioHealth Capital Region Forum, which is September 17th, 18th and 19th. This is our 10th annual by the way, Alex.

0:35:00 So you're gonna get to be at our 10th annual BioHealth Capital Region Forum. So you can get a primer to things happening in the industry by going to the GEN event virtually on September 11th and then in person the listeners can come to the BioHealth Capital Region at US PharmaCopeia September 17th, 18th and 19th. We've been talking with Alex Philippidis, who is our expert on emerging and existing biopharma clusters, who's the Senior Business Editor with *Genetic Engineering and Biotechnology News*. We want to thank Alex for appearing on *BioTalk*, and this will not be the last time Alex. We know it'll happen again at least next year. We're also looking forward to seeing you in person on September 17th as you give one of the opening remarks to our audience related to the trends in the top ten biopharma clusters again. So Alex, thank you for being on *BioTalk*.

Alex Philippidis: Thank you, Rich, for having me here and thanks for inviting me to the forum as well, it's an honor.

0:36:01

Rich Bendis: Thank you!

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

End of recording.