

IP Biotech/Life Sciences Show 3

Participation in the Biotech/Life Sciences Segment and What Investors Look For

This is Investor Perspectives. I'm the host of Investor Connect, Hall T Martin, where we connect startups and investors for funding.

In our new Investor Perspectives series entitled "How to Solve the Biotech/Life Sciences Problem", you'll hear about participation in the Biotech/Life Sciences segment and what investors look for.

As the COVID pandemic passes, we emerge into a new world. The biotech space is now undergoing tremendous change as we shift back to a normal way of life. The process for designing and approving vaccines demonstrated a new protocol. Biotech now moves into a new era. We have investors and startup founders describe the changes coming up.

Our guests are:

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We hope you enjoy the show.

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Our first guest is Yaniv Sneur of Mid Atlantic Bio Angels

[00:12:33] **Hall Martin:** So what is your participation in this segment so far – you've been very active for a while, but can you tell us more about it in detail about the investments and other activities you have?

[00:12:45] **Yaniv Sneur:** Well, we invested _____ specifically in therapeutics devices and diagnostics. Our ratios are the therapeutics are usually the majority of the bulk of our investments, we do about 60%, and growing of our investments in therapeutics about 30% in diagnostics actually and growing _____ in devices, and diagnostics, it used to be 10%, we are actually shrinking right now, diagnostics have proven to be more challenging in terms of returning returns to investors. It's just been a very difficult field for investors to receive good ROI. So therapeutics and devices are the segments that we focus more on and where we tend to focus our investments in.

[00:13:30] **Hall Martin:** Great. And so, what's your criteria for making investments – what exactly do you look for to go forward with the deal?

[00:13:38] **Yaniv Sneur:** So the first criteria, as I mentioned, is quality of management. You need people who understand the road ahead and have a realistic overview of really what to expect and what their road ahead should look like, and what the possibilities are. The number two thing we look for are products that will change the standard of care. So we're not looking for things that are going to be incremental, a little bit better or a slight improvement, we're hoping for things that will change the way the doctors practice medicine, completely a brand new tool, a brand new way, a brand new drug, etc. We're looking for products that address very large market segments, because only then will it justify a purchase by a large company. Usually, we prefer an M&A to an IPO; and if you are in an attractive – if you have these quality products that will change the standard of care in large markets, a large _____ device company will want to purchase you because of the additional upside that it will provide them. Also, one of the things that makes us unique is we think that there's a clear differentiation and delineation between the kind of opportunities that are appropriate for venture capital tool to VCs to invest in, and for angel investors to invest in. With angel investors, every individual writes a small check of \$15, \$20, \$50,000, whatever it is, and those add up into larger rounds, and in larger amounts from the group, whereas VCs, especially now that they've been raising larger and larger funds, they look to deploy larger and larger sums as they invest their funds of capital. And so, they would rather invest amounts that are 40, 50 or 100 million and more in a company, whereas the total that you can probably raise from angels in multiple syndicated rounds, which is where angel groups all get together and invest together, you can probably raise maybe \$5 million in a syndicated angel round with multiple groups participating; and maybe you can do three, four or five of these. So if you look at the dollar amounts, angels can provide approximately \$20-\$25 million in total, in crunched amounts, depending on milestones met, whereas VCs would prefer to deploy amounts 40-50 million and greater. So I think that there's a

clear differentiation there. And so, we look for companies that will not require the future VC funding, because if you do, then the potential for dilution is a lot higher. And you have to understand that in this industry, where the costs are very high, and when the timing to exit is usually longer than tech type companies or other companies, you want to make sure that you don't subject yourself to too much potential dilution. And so, we try to stay away from investments that would require VC funding in the future, and can reach the end of their runway, depending on their criteria to reach _____ one way with angel only money.

[00:16:43] **Hall Martin:** And do you look for certain milestones – do they have to have any clinical trial or any data or anything that shows potential promise or do you consider everything?

[00:16:57] **Yaniv Sneur:** We would consider everything. Most of the companies that we deal with on the therapeutic side or, at least, when we look at them, are preclinical. When you look at device companies, you will expect, or, before they will be acquired, you should expect some form of traction in the marketplace. Usually acquirers want to see those device companies have some adoption to confirm the fact that the marketplace really does like and wants this product. So there are different things that we look for, and obviously, we want to invest until there's some reasonable data to support the hypothesis by the company that this should work and why it does work, etc., given whatever models or other things that we can use to be convinced of the efficacy or potential future efficacy of the technology.

[00:17:46] **Hall Martin:** Great. So what else should we know about this segment that we haven't talked about so far?

[00:17:52] **Yaniv Sneur:** investing in these early stage life science companies carries a higher technical risk than it does to invest in other perhaps sectors. And investment in early stage healthcare companies are more sensitive to dilution, as I mentioned to you, because of the high capital requirements. Also, we have to remember that generally these companies are going to take longer to reach an exit. So because of all of these things, the amount, the valuation at the time that we make an investment is very critical for us, even more critical and more sensitive than perhaps investments in different, in other types of sectors.

[00:18:42] **Hall Martin:** Great. And so, how do you come to that valuation, you're using comparables or do you have some other methodology?

[00:18:50] **Yaniv Sneur:** So we look at comparables but also you have to do an analysis of what is the potential exits and how much time, and then work your way backwards. And you have to build in different milestones and expectations for how much money the company will need to raise in the future, beyond the round that we invest in. We like to invest in companies that will require angel-only money. So we're prepared to participate in all rounds until the exit. So we sort of – we say that we invest in the first, up to the last professional round, and so the first professional round up to an exit of that company. So we expect there to be – the company will come back to us, we expect it to be reasonable milestones. Sometimes when a company pitches

to us, we say, you're too early, but come back to us when you show us X. We got companies who just, we paused diligence and we said, we think the premise is great, we think the team is wonderful, we think the technical risk is a bit too high. But once you do this, which is your plan, once you get there, we'd love to see you again. So the milestones sometimes are the gating to an investment, and sometimes there are simply the gates to the next level of investment.

Our next guest is Carter Williams, CEO and Managing Partner, iSelect Fund 08:50

[00:15:56] Hall Martin: So what is your participation in the Biotech sector so far, what have you guys invested in?

[00:16:02] Carter Williams: So we've invested – we tend to invest at the B2B level. We focus on the Agtech side, so half our portfolio is self-care, but on the Agtech side, we're focused in and around the how to boost protein production, how to biologics, so can we come up with mRNA that can kill bugs, or just as we've done for COVID, but we're thinking about how to do that on the farm to eliminate small molecule chemicals, and both reduce the costs, improve performance and reduce the waste, we've looked up and down that value chain to try to improve some of the financial services to make it, in many ways, so that we can boost yield, boost the quality of the products we're developing, speed-time to market in terms of new seeds, and make it so the farmer economics are improved, so that the farmers can invest in the newest technology and continue to grow and build. And so, we've been doing that since '14, they're really a cohort of us and about five other emerging managers, they really have. We are fairly collaborative, really quite collaborative, and really have some of the leading companies, the Geltor _____ Benson Hill, companies like that I think people will see coming to market. We are upstream, so we build the products to go into Impossible Burger or into Beyond Meat, so you really don't see us at the storefront. We have our first IPO that I think will be publicly listed _____ sometime soon, within a month or so maybe or maybe along Benson Hill and we invested in '14, we invested with about five people and worth 8 million bucks, and it's gone public for 2 billion, which is sort of cool.

[00:17:54] Hall Martin: That's great. We talked a little bit about what's in your portfolio companies, but can you tell us a bit more about the criteria you look for upfront in choosing deals to invest in?

[00:18:05] Carter Williams: So the typical things, certainly in terms of, is the team strong, do they have experience, is there some predictability in the business. We're very specific about our sectors. So certainly it's somebody comes with, if someone came to us with Impossible Burger, or even if we thought it was going to be great, we probably wouldn't invest. We focus on companies where we can add value. So in terms of our add value component, we really think of two components, three things: do we have the network, a network very specifically being early adopters. So we, for example, are best friends with 4 million acres of row crops. We know the farmers, we know their kids, we see them on a regular basis, we send Christmas presents, we know them. And so, when somebody comes in and says, I've got something that helps farmers, we've got a 100 of them that we can go reach out to _____. So that's network, but we also

focus very much on what we call systems view. We want a return on investment. We also want to reduce cardiovascular disease, diabetes, improve soil health. And our companies, we might invest in Benson Hill, which builds new seed, they've got to get the farmers, and they'll work with _____ which is a trading platform for commodity crops, so we're invested, and those two will work together. So we want to invest in things that fit within our system of companies so that they can lean on each other, one plus one equals three. And then finally, we want to be able to, as they continue to grow, help them grow from a capital formation standpoint. So we have – our fund structure's novel, it's open-ended, it allows people to come in at will. And what that means is, as a company starts to mature, we can sometimes lean on, go and find other corporates or downstream partners that want to be part, and bring them into that investment in a way that gives them some skin in the game and helps accelerate the product line of the other portfolio company. And so, we are really trying to lower the cost of capital for companies as they grow, so that the CEO can spend more time working on their business and less time monkeying around with a cap table. So that's what we, in a sense, that's sort of what we do, but also what we look for. When we invest in a company, we're going to be married to them for four or five, six, seven years, and we really want to be able to contribute to their success. So it's not a lot of value, we can't put a lot of money into it if they don't see that we're adding value.

[00:20:56] Hall Martin: So we've talked a lot about Agtech and the technology, the business model, the data, what else should we know about this segment that is relevant?

[00:21:07] Carter Williams: It's fascinating, I mean, my career started in aerospace. I've been involved in, you know, people talk about hypersonic missiles now. I was working on hypersonics in the late 90s. People talk about Havana syndrome and directed energy weapons, and I was working on that in the 90s. I mean, in aerospace, we were working on the most cutting edge of everything, and this is as cutting edge as that. You get into the innards of it. I think it's fascinating looking at when we look at Generation Z and the degree to which they are influencing their parent diet. So COVID hit, kids came home from college, they told their parents they got comorbidities, they got to change their diet, and all of a sudden, 55-year-olds are all out getting better exercise, and kids are persuading to do it, and the doctors are persuading to do it, and the politicians couldn't persuade – no one else could persuade them to do it, but the kids coming home could persuade them to do it. But that's opening up just a real fascinating array of how people are changing their food choices and things we're learning about health and how does the gut biome affect depression, and I think we're, you know, if you go back to the Spanish flu, we thought it was a bacteria, we didn't even really know what a virus was, and then we understood what a virus was. And had we not had the Spanish flu, we probably couldn't have figured out how to do the vaccine for polio. And so, I think we are just in a really fascinating point in time where we're going to unlock this, like, a secret box of stuff that God has given to us that we haven't yet unlocked, and it's opportunity to unlock that and see what's next.

Our next guest is Maximilian Bade, Founding Partner, Nucleus Capital 15:31

[00:13:45] **Hall Martin:** And so, what's your participation in the segment so far?

[00:13:50] **Maximilian Bade:** So we've invested in a couple of companies at the exact intersection, so, for example, Orbillion Bio which is out of Berkeley, California, and Patricia Bubner who is the CEO originally from Austria, I think, actually the only European investor in the cap table, and she's producing the first heritage meats in a cell cultured way. So she uses lab grown or lab cultivated, you know, she's producing lab cultivated meat, and doing so for Wagyu as well as bison and elk, so what she calls heritage meats. Another company that we're involved in is called Hoxton Farms which is based out of London, UK, and they produce _____ fat. And fat might not seem as sexy as you think, but it's essentially one of the most important ingredients in meat so to speak. Fat is responsible for the taste, it's responsible for the structure. And so, that's the other part of the spectrum. And then, last but not least, I recently announced our investment in a company called Yuri, and Yuri is a company out of Germany, which is operating at the intersection of synthetic biology and space tech. What they are doing is they have developed a hardware device, which is essentially a very, very tiny bioreactor that they can shoot up to the ISS, to the space station, where they can conduct research experiments as well as product developments in microgravity. And they leverage, so to speak, microgravity, and to produce entirely new materials and do some research on the life science as well as material front.

[00:15:34] **Hall Martin:** Great. And so, when you look at these companies, what is your criteria for deciding to invest or not to invest, what's your thesis there?

[00:15:43] **Maximilian Bade:** We first of all, look, whether there's a fit with our investment thesis. Right? So whether the company has a positive impact on planetary or human health, and that's probably the easiest filter to go through, like, with classical ecommerce company wouldn't make that cut probably. And then, second step, at this early stage, and I mentioned beforehand, the team is obviously the most _____. So if I had to give it some kind of weighting, between the criteria, I would say, 70% as the founding team really like, and just trying to understand what is their DNA, what drives them, why are they intrinsically motivated to do this, and are they capable of executing upon their idea. And the second part is, obviously, the market opportunities, so we're very interested in, is there or will there be a demand for what the company is building, the product has to offer. And then, of course, what does the ecosystem look like, what other investors are involved, is there a credible lead investor who was also working with the company very hands-on, because in our role as kind of a super angel, we are hands-on but only very punctually, so we need to know that there's a good support ecosystem inside the company. And lastly, of course, the business model, as well as the, whether there's, you know, from a business perspective, whether the unit economics will make sense, and what are the regulatory environment as well.

[00:17:14] **Hall Martin:** Great. What else should we know about the synthetic biology space, what do you find is really unique about it?

[00:17:22] **Maximilian Bade:** Well, look, I think it's still a market in its total infancy, right? So we are at the very beginning of synthetic biology applications. And my thesis is that synthetic biology will actually touch every industry in the world, and within the next 20 years. So we really just started out on this decade of the so-called bio revolution, and I fundamentally believe that the way that innovation will accelerate is something that is currently still misjudged most of the time. I think it's going to go really, really quickly. Right? One year ago, people were thinking that cultured meat is only going to be a reality in maybe 15 years' time. I think it will be way faster. I think it will be five, six, to maybe seven years until we see the first product on retail shelves. And I think we fundamentally underestimate how much the intersection of these meta trends or fighting climate change, having technological innovation, fundamentally shifting technologies, underlying technologies, how quickly this all can happen.

Our next guest is Ron Paliwoda, President, Paliwoda Group 20:15

[00:15:25] **Hall Martin:** And so, what is your participation in the life sciences segment so far, what have you invested in or done in this space?

[00:15:36] **Ron Paliwoda:** Okay, we've been really excited over the last more than 10 years now about the application of tools of insights to large scale data. So we've been focusing on data rich applications in the health tech sectors and other sectors as well, and we've been excited about domain specific AI engines, for example – so engines that analyze personal biomarkers to track the experiences of disease, and to accelerate treatment breakthroughs. We've been excited about molecular diagnostics, so we have long term investments in genomics and precision medicine. And we're really looking to augment those in the next few months.

[00:16:36] **Hall Martin:** So when you look at those tools that you're considering to invest in, what exactly are you looking for, what's your criteria there?

[00:16:45] **Ron Paliwoda:** What we look for in a team in a project is can the team execute, like I said before, how do they respond to change, especially now in COVID, how do they respond to change when a competitor comes in, that is maybe much more better funded. So can you execute in challenging environments? The other thing is, is that team trainable, okay? In other words, can we provide insight to them, and can they accept that insight to allow them to be positioned for the next tranche of capital support, a follow-on support. Okay? So that's really important for us that there needs to be an understanding that you might be an expert in whatever you're doing, but we've been around for over 25 years now, we have a certain knowledge that allows us to help you grow, especially when it comes to follow-on investments with other investors.

The other thing is very simple thing is what is your reputation in the field, are you able to attract new talent, are people excited to work for you, do they want to come and work for you. That's a

very simple question – do you want to work for this guy? And that kind of gives us a kind of holistic understanding of what the team is, so we're able to jointly go through challenging times. And finally, I think it's important to – we're a family office, okay? So we've been around for a long time and we are going to continue to hopefully to be around for a long time. So the other thing is, how does your solution fit within our existing portfolio, because we want to provide more than just capital. We want to provide things like expertise when it comes to certain technical aspects of your project, expertise with your business growth. So we look for more than just an investment relationship, we want to look for longer term relationships. What we found was that we might invest in one team in one project, and then later on, they might come back to us with a follow-on. So we look for those serial entrepreneurs, people that we already know. It's really a lot easier to work with somebody that you know and you like and you can communicate in shorthand. So we look for developing longer term relationships with teams. So that's kind of what we were looking for. I _____ give you specific items that we were looking for today.

So based on some of the experiences that we have within our team, in our portfolio, we've identified specific segments that really – are really excited about looking for new opportunities to enhance our portfolio. We look for data rich applications, one of which, for example, is genotypes – genotype diagnostics. So we look at sequencing databases, sequencing DNA, so we generate huge amounts of data in our databases. I don't know if you know, but when you sequence one whole human genome, you generate one terabyte of data. Now, just for one person, one terabyte of data is about 500 hours of high definition video, that's about 250 movies. So if you stream 250 movies, it's going to take you almost a month just to download that. So one terabyte of data is about a month's worth of streaming in a typical household, depending, of course, on whether or not you have a teenager in your household. So moving that information around, logistically, is really difficult; and some people, what they do, literally is, they download it onto a USB stick, and they mail that. That's the cutting edge today. Obviously, that's not sustainable with data privacy and other issues. So we're looking at solutions that allow for large amounts of data to be transformed from point A to point B. Okay? And so, that's a solution that we're looking for, and that transcends health tech, for example, which makes obviously a solution like that much more appealing to investors. And I know other investors are looking for opportunities as well. So that's one area that we're actively looking at right now.

Our next guest is Orrin Ailloni-Charas, Managing Partner, Global Health Impact Fund 26:00

[00:13:09] **Hall Martin:** So what is your participation in the segment so far, what have you invested in?

[00:13:15] **Orrin Ailloni-Charas:** Well, in our first fund, we have 10 companies in our portfolio. I have several additional individual investments, and we're really looking at the intersection in our fund between healthcare and technology. So we have a couple of telemedicine solutions, which are really interesting and having some growth, but that's a very competitive space. And then we have some more unique solutions, one is a B2B, Blood Pressure Monitoring System,

which, as an anesthesiologist, I see a tremendous potential value add to hospital stays and safety. We have a company that can monitor fetal oxygenation while the baby's in utero, and provide a safer birthing experience for both the mum and baby, we think that's a really important innovation. We're invested in sleep medicine platform that's had a great traction with the VA and Kaiser, and we think it will continue to do very well. So to name a few, those are some companies, one other one is an artificial intelligence company called Elucidbio that is able to determine the consistency and the makeup of plaque in arteries to assess whether those are vulnerable plaques or very stable plaques, and that's something we look at for cardiac risk and stroke risk. So that'll be a very important innovation. So really what we're looking for ultimately, and what makes me very passionate about this space is that these innovations, yes, as investments, they're great, because they can be very successful, _____ but they can really change medicine, they can help people, and I think that's really exciting.

[00:14:58] **Hall Martin:** So what do you look forward to invest here, what's your criteria and thesis?

[00:15:04] **Orrin Ailloni-Charas:** So we typically invest somewhere between the Seed and the Series B, typically more Series A, Seed and Series A. We like to invest about 10 to 15% of the company to own 10-15% of the company. We like to lead rounds, and we like to be active investors. So we like to sit on the board, and we like to really participate with the company in their early days to help them move them along and utilize the value of our network to help them be more successful. It's really important, of course, to have information rights, but that's kind of a non-starter if we don't get them. But yeah, we'd like to just be really involved, so we've made 10 investments, our average investment size is \$1 million. And so, the company valuation is somewhere between five and 15, typically, maybe up to \$20 million even.

[00:16:23] **Hall Martin:** So what else should we know about the life science segment that is important today?

[00:16:29] **Orrin Ailloni-Charas:** So we're speaking strictly with the investor hat on, one of them is that life sciences applies potentially to everyone in the world. So you really have a global market that you can that you can sell to. And so, that makes any real solution, a very big potential company. So that's one thing in terms of ultimately how these companies get valued, and where they exit, and what your returns could look like. They can be really impressive. The second thing is that we talk about life sciences or healthcare investing, and we also talk about social impact investing and social impact investing, I think, which is wonderful, has become a very important goal for many investors, particularly family offices. And I would suggest that life science investing is a form of social impact investing, because it really does help society. We're trying to help people live healthier and longer lives, so I think about it as a social impact investment, and I would encourage other people to as well.

Our next guest is Eyal Lifschitz, Co-Founder and Managing Partner, Peregrine Ventures 30:05

[00:20:41] **Hall Martin:** So what's your participation in the life science segment so far, where are you investing in these days?

[00:20:48] **Eyal Lifschitz:** So, on the pharma side, as I said, we invest mainly in oncology and rare diseases, not _____ diseases, this we don't do, but rare diseases, and a lot of oncology, and also in oncology we try to _____ to go into the very new things. On the device side, we invest in the stage they call therapeutic spots, therapeutic single product use devices. So that's either implants or catheter based procedures, so there's a catheter which goes, and it can be a simple catheter or it can be a very complex catheter, which is an arm of a robot. But the idea is really to have procedures which every time that you treat the patients, you either implant or you use a disposable of a few thousand dollars to treat the patient. So we do less diagnostics, we do less different sorts of bandings, we do less simple disposables. If therapeutic single product use devices which we do on the devices. And on the digital health side, we do software which are real, almost medical device by themselves, so it's less taking a database and a chain of hospitals together with insurers and put that together. It's more that the software itself is like a medical device. For example, for heart failure patients, the six-seven million patients in the States alone, which will die at the end not because of a heart attack, but the left ventricle become so weak that the kidneys will not get enough blood and water will get into the lungs and adults patients will get lung infections, go in and out of hospital at the cost of tens of billions of dollars. So the different sensors that are implanted in the heart are wearable sensors that look into the lungs _____ which patients don't like to wear. So for example, we do software that analyzes the voice of the patient on a phone or on a Siri, and according to changes in the voice, it knows that there's water in the lungs, so you have here the software, but it's like a device. So things like this, and it can be for pulmonary edema, it can be for diabetes, it can be for different areas, so that's on the pharma side, on the medical device side, and on the _____.

[00:23:15] **Hall Martin:** Great. So what do you look forward to invest in these startups – you've talked about the team and the technology and so forth, but more specifically, what criteria are you looking forward to make a decision to go forward with one?

[00:23:29] **Eyal Lifschitz:** So, the main input which we look for is really interest from the strategics. So a company like J&J, they have to say, look, okay, this is nice, if it will work according to this and this and this spec, and it has to be a very clear spec which they will give, the different parts which they want to see in the device, the regulatory route has to be that and that way, the reimbursement has to be such and such way. And then, if we can come with something which they like, that they say, okay, this meets our criteria, is novel enough, is interesting enough, fix the basket of our sales reps, which we have in that space, then we go and we invest in those technology. That's the main input which we look for, and then of course,

also, we _____ we always listen to the doctors and to our regulatory people, and reimbursement advisors, which we also want them to be all in _____.

[00:24:30] **Hall Martin:** Great. So what else should we know about this segment, for example, what impact did COVID have on the space for cancer therapeutics and so forth, if any?

[00:24:43] **Eyal Lifschitz:** Yeah. I think, if there's something which is really an important takeaway, and this is something which we will see enough for the next decades. The Medtronic, the Johnson and Johnsons, the Abbotts, from beginning of COVID, if we looked at their share price, we saw how their share price went up through this whole period; and the reason for that is really that we see now, in the whole Western world, we see now, through COVID, we see how the medical infrastructure of all of the hospitals, just the medical infrastructure in general, number of beds, number of equipment, nurses, doctors, everything, we starved those systems in the whole Western world in the States, like in Israel, like in Europe. We saw what happened in Italy at the beginning of the pandemic, that there were just not enough beds, and we saw that. And now in the next decades, governments will have to put in more money in order to have a better infrastructure in the whole world. Now, still, after such a crisis I covered, it's not the governments who will be able to put all of the money just in the medical infrastructure, there will be some – there will be more money in those infrastructures. But we, as patients, will not accept that there won't be an ECMO machine in a hospital when someone from my parents will come in. So there's going to be more money in the system, but we will expect a much better service.

Now, to gap between this additional budget and this much higher service or much better service that we will expect, the only way to gap between those two is through technology. And this is having every procedure that is done now in the hospital, be it the brain surgery or heart surgery or knee surgery that you want the patients to be in hospital instead of five or six days, just one night. So the procedure has to be less invasive, you have to be more percutaneous, procedures which are done now in the hospital, you want them to be outside in the clinic, you don't want patients, you would try to have as much procedure as possible outside of the hospital, in the clinics outside so that the patient comes in the same day and goes out; and procedures which are done today in outside of clinic, you would like the patient not to come at all and to stay at home. So we will see now this trend of having less invasive procedures, less patients in the hospitals for a shorter period of time, having less – having more procedures in the outside clinics, and having the patients go in and out the same days. We would see those trends more and more and monitoring the patient from home, from _____ and not having to go out at all, we'll see also this trend go more and more. We saw that already since the beginning of COVID. These were all trends which were around, but now really they boomed, and we will see how those trends will continue and grow. And so, there's going to be a lot of demand for less invasive technologies through all stages. So this is going to be a very interesting _____.

Our final guest is Mark Groper, Chief Executive Officer, Orion Biotechnology 37:23

[00:10:39] **Hall Martin:** So what is your participation in this space so far?

[00:10:44] **Mark Groper:** You mean, me personally or the company?

[00:10:47] **Hall Martin:** The company would be fine.

[00:10:49] **Mark Groper:** So Orion is focused really in – our primary area of focus is in oncology, and the treatment of cancer. And we basically are developing novel new immunotherapies to treat cancer, our lead candidate is targeted initially for colorectal and gastric cancer, and it has proven to be a first in class and best in class cancer immunotherapy. So we've had very strong preclinical results with this drug candidate, and we're very excited about moving it forward into the clinic.

[00:11:31] **Hall Martin:** Great. And what do you look for in this space for investment, what do investors look for, I should say?

[00:11:40] **Mark Groper:** Well, I think the key thing is that our shareholders have found attractive about Orion's investment opportunity, number one, that we have a unique scientific approach that has the potential to open up a very large and in high demand market. So it provides a unique value proposition. They do look for demonstrated success. So the fact that we have progressed, for example, our lead candidate through to successful completion of a phase one clinical trial, demonstrates that Orion has the ability to successfully execute clinical studies of this type, and I think, as I mentioned, they also look for risk mitigation, and we are very fortunate at Orion to have benefited from shareholders that are very experienced biotech investors. So we have some very high profile investment groups in our shareholder base, including, for example, the Wellcome Trust, which is a very large UK based biotech investment fund.

[00:13:00] **Hall Martin:** Great. So what else should we know about this segment that we haven't discussed before?

[00:13:05] **Mark Groper:** Well, the really unique thing is that you may be aware that in the industry, there's also a trend to move away from small molecules. So most drugs you take today are small molecules, and the reason for that – to move away from them is that they are highly toxic, because they're chemically synthesized and they're metabolized in your liver, and they are not very specific. So when a small molecule targets a specific receptor, they're somewhat – they can be indiscriminate and target all kinds of other receptors that they're not intended to target, which causes safety problems. So what we've seen is the emergence of antibody based drugs, and the benefit of antibody based drugs is that they are natural, so they're not metabolized in your liver, much lower toxicity, and they're highly specific. So when you know an antibody

targets a receptor, it typically only attaches to the receptor that it's targeting. The problem with antibodies is that they're very large in size, and, as a result of that, they can only really block receptors. They sort of sit on top like a big blob, and what the research that is emerging is showing that what we really want to be able to do is not only block receptors, but we want to be able to activate them in order to modulate your immune system and potentially route cells to disease areas and create the signaling associated with that. And the really exciting thing about Orion's technology platform is that we have the ability to develop precision engineered biologics that can not only antagonize or block receptors, but we've shown that we can develop the full spectrum of agonists and activate the receptors from superagonist to biased agonist, and it's really unique to Orion and it's super exciting. So we're quite excited about it.

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