IP Biotech/Life Sciences Show 1
Growth in the Biotech/Life Sciences Segment

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 growth in the biotech/life sciences segment.

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:

Yaniv Sneor, Co-founder, Mid Atlantic Bio Angels, 01:18
Carter Williams, CEO and Managing Partner, iSelect Fund, 05:05
Maximilian Bade, Founding Partner, Nucleus Capital, 07:35
Ron Paliwoda, President, Paliwoda Group, 10:34
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Mark Groper, Chief Executive Officer, Orion Biotechnology, 29:20

I hope you enjoy this episode.

Our first guest is Yaniv Sneor of Mid Atlantic Bio Angels…..

[00:04:17] **Yaniv Sneor:** Thank you, Hall. Thanks for inviting me.

[00:04:20] **Hall Martin:** Great. So tell us more about your work and what you do.

[00:04:25] **Yaniv Sneor:** So we are a life science angel investor group, we invest exclusively in therapeutics devices and diagnostics, pretty much all over the world, but very narrowly within that focus. So we don't do any healthcare IT or digital health or things of that nature. We just try to concentrate on the deep end of the pool of the life sciences.

[00:04:46] **Hall Martin:** Great. So let's talk about the growth in the biotech life science segment. Where do you see it at today and where do you see it going in the near future?

[00:04:56] **Yaniv Sneor:** Yeah, I think that if you look at the pre-pandemic situation where, perhaps there was a consumer sentiment was not as favorable to the life sciences, and there were a lot of issues in terms of drug pricing, etc., which I'm sure some continues to this day. The remarkable efforts and achievements of the life science companies in response to the current pandemic I think has boosted the perception, the morale of the entire life science segment. You see record IPOs coming out in the life sciences, and certainly there's a lot of activity that's happening in this field right now. So it's a growing field, a lot of companies are either starting up or pursuing new opportunities or opportunities that have been presented because of COVID. There are things that the pandemic has allowed for certain things that have become faster, certain barriers that were before that have been overcome. Obviously, the production of vaccines in such a short amount of time broke barriers and still kept to FDA guidelines, etc. So a lot of work has been done, a lot of remarkable work has been done, and has been accepted now by the public and I think we are going to be doing many things like this in the future as well.

[00:06:19] **Hall Martin:** So how did the vaccine development change the process – certainly, it sped it up, but what other elements did it change that we're probably not going to go back to the old way, we're going to continue going forward?

[00:06:32] **Yaniv Sneor:** I think the entire collection and review process of applications by the FDA and everything of that sort has changed and has sped up. I think where there was perhaps a reluctance to do things remotely in the past, that has changed completely. Data collection for clinical trials, you know, a lot of – everybody's more accepting of the fact that things are being done remotely, electronically. And all of those things that have been put into place right now are going to survive this pandemic, and benefit any kind of development in the future, even teams working remotely and more cooperatively. Our groups, personally, I could never have afforded, prior to the pandemic, to be in so many conferences around the world, participating in so many places, and meeting so many companies, because I didn't have the time or the budget to fly around, etc. And now, from the comfort of my own home office, I was able to be in many different places in the world, meeting multiple companies, different countries. So some of these

things are going to become a lot more regular. So I think there are a lot of benefits that will accrue for the future.

Our next guest is Carter Williams, CEO and Managing Partner, iSelect Fund…..

[00:04:27] **Carter Williams:** Thanks for having me.

[00:04:28] **Hall Martin:** Great. So tell us more about your work and what you do.

[00:04:32] **Carter Williams:** We are a venture fund. We focus on our investments in the seed and A stage and invest throughout the entire lifecycle of the companies. We focus in and around the area of food and health. We operate sort of around the principle that we spend $1.7 trillion a year on food and we spend 1.9 trillion on the healthcare costs related to poor nutrition, and so, we really see that as the same market. And if you really want to fix healthcare, you really got to fix food.

[00:05:10] **Hall Martin:** That's a good point. So let's talk about the growth in the biotech life sciences segment. You have a front row seat there with your fund and so forth. What do you see is the growth story there?

[00:05:21] **Carter Williams:** Well, we focus very much in and around Agtech. Half of our portfolio is healthcare, half of its Agtech. The Agtech world and elements of biotech are hitting a transformal point. I mean, we certainly have seen a lot in biotech over a long period of time, but I often make the analogy that, if you look at the IT industry, circa 1980-1990, it really made a departure – AT&T got broken up, things changed dramatically, the world changed, and we ran that play for 20 or 30 years. I think in biotech, we've got a similar kind of approach. When we think about things like GMO, people were frustrated about GMO. GMO's being replaced by CRISPR, and CRISPR is being used to cure cancer and change our food. And so, I think that we were recognizing that biology will keep moving forward, and it's moving forward at an accelerating pace, and there's a lot of pressure to improve health. And so, all the planets are aligned for a good 20-30 years of really dramatic investment and opportunity in the biotech space.

Our next guest is Maximilian Bade, Founding Partner, Nucleus Capital…..

[00:08:31] **Maximilian Bade:** Martin, it's great to be here. Thank you for having me.

[00:08:33] **Hall Martin:** Great. Well, let's start with – tell us more about your work and what you do.

[00:08:39] **Maximilian Bade:** Absolutely. So I started Nucleus Capital about 10 months ago, and we are a new venture capital firm, supporting purpose driven entrepreneurs, trying to solve some of those very pressing planetary health and human health challenges that we face today, predominantly, climate change. And we are pretty much a startup ourselves, so it's a brand new

firm, targeting systemic change and biology, food and climate. And we invest super early, so pre-seed and seed.

[00:09:17] **Hall Martin:** Great. So let's talk about the biotech and the life science segments. How do you see it growing, and where do you see it going from here?

[00:09:26] **Maximilian Bade:** But to give you a better understanding of what I mean, when it comes to the intersection of synthetic biology and food, for example, and climate as well, one of my portfolio companies, called _____ is developing the very first or the world's first molecular chocolate. And they do this using side stream materials from the food industry as well as precision fermentation. And essentially, what they tried to do is, they map the key flavor components of chocolate, as well as bitterness and the kind of taste that unfolds once you have it in your mouth, and they tried to reengineer those kind of flavor components using the side streams; and then in the second step, they engineer yeast cells to produce milk proteins to come up with the cocoa butter. And eventually, what happens is you have this entirely new chocolate, that is 100% more sustainable, because – I'm not sure if you know this, but cocoa is actually, following beef and lamb very closely in terms of the environmental footprint. So for one kilogram of cocoa produced, there's about 17 kilograms of CO2 equivalent, so it has a huge footprint. And the idea here is to use synthetic biology, to systemically change the value chain. You can produce chocolate in the lab, using a fermenter, without the need for the typical supply chain that's associated with it. And the side, the very positive side effect, and this is what I mean with the intersection of food, synthetic biology and climate is obviously that you have the climate impact, you have the food, and you have the biology in there.

Our next guest is Ron Paliwoda, President, Paliwoda Group……..…

[00:04:14] **Ron Paliwoda:** Thank you for having me.

[00:04:16] **Hall Martin:** So tell us more about your work and what you currently do.

[00:04:20] **Ron Paliwoda:** Okay. We're a family office based out of New York City, and we focus using investment teams in both private equity and venture capital, primarily focused on opportunities in the United States. In the venture side, we maintain three evergreen funds targeting early stage startups, one in the digital media space; second in the green technology space looking for eco friendly ways of doing business; and the third one is in the health technology sector. Our sweet spot seems to be on ways to reduce the cost of Healthcare to consumers. In the United States, obviously, the cost savings to healthcare providers don't necessarily translate into cost savings to patients. So we don't want to cure cancer, we really want to make treatment more affordable. So that's kind of what we do.

[00:05:23] **Hall Martin:** Great. Well, let's talk about the growth in the biotech life sciences segment – what do you see going on there today?

[00:05:31] **Ron Paliwoda:** Okay. We really need to break it down into pre-COVID trends and post-COVID trends. Pre-COVID, we've seen the emergence of information technology, and advanced analytics in the health tech space. And we've seen the development of tools of insight, when they _____ applied to drug discovery applications and small molecule therapeutics, that's one trend; we've seen it in noninvasive diagnostics such as improved image analysis in radiology and pathology; and we've seen it in more personalized medicine, for example, diagnostics that match treatment to the precise molecular profile and clinical history of each patient; and these three trends are still ongoing. However, after COVID, we've seen a disruption in the traditional ways that healthcare is being delivered in the United States, specifically, the acceleration and adoption of consumer facing health technology. So, for example, before COVID, telemedicine applications, those that encourage patients to use online care options, really had minimal health benefits. There has been an increase in the number of office visits by patients, and really a reduced number of new patients – sorry. They increased the numbers of office visits, and they reduced the number of new patients that providers can accept. So there wasn't really a strong adoption of telemedicine. After COVID obviously, there was a new ways of – we needed new ways for doctors and patients to communicate. So really, virtual office visits went from a novel alternative to the primary, if not exclusive option.

Now, will that trend last? That's really still to be determined. So far, patients view telemedicine as a great way to save time and money by reducing the need for office visits. But healthcare is really complicated and patients may overreact to minor symptoms or not be clear enough in describing the situation remotely. So that may lead doctors to feel obligated to schedule an office visit in order to ensure quality of care. So we don't know exactly what's going to happen with telemedicine, but it certainly has fueled further innovation in that space in this post-COVID environment. So that's one major change that we've seen, post-COVID. Another change that we've been really excited about is greater adoption, post-COVID, a greater adoption of consumer health applications as personal diagnostic tools. Before COVID, we went through this phase where wearable gadgets like dedicated fitness trackers, such as Fitbit and so on, were in vogue, but that trend really fizzled out before COVID.

After COVID, we've seen healthcare applications on a smartphone being used more frequently. And I should take a pause here, I think, and really delineate two types of gadgets and consumer facing applications. One is what I call health applications, and those are applications that you find on the app store with respect to your diet, your exercise, yoga, mental wellness, and the consumers really were willing to pay out of pocket for these healthcare applications, and these are different from medical grade applications – those that you use to visit your doctor and so forth. We've seen resistance by consumers to pay out of pocket for those – those are really paid by insurance reimbursement. And after COVID, we've seen that more healthcare applications are beginning to move into the direction of the medical care products. So we've seen a lot of data being accumulated by these healthcare applications, and those being used to provide some medical grade insights. I think that longer term, we're going to see that trend continue and even accelerate.

Our next guest is Orrin Ailloni-Charas, Managing Partner, Global Health Impact Fund…...

[00:06:33] **Orrin Ailloni-Charas:** Hall, it's great to be back speaking with you. Thanks for having me.

[00:06:37] **Hall Martin:** Great. So tell us more about your work and what you do.

[00:06:41] **Orrin Ailloni-Charas:** Well, I guess, it would be incomplete to not start by saying, first and foremost, I'm a doctor and an anesthesiologist, and I've been in practice for over 20 years, although now I've retired from that, and I'm full time in the investment world. I am the managing partner and CEO of an emerging fund called the Global Health Impact Fund, we're a doctor centric fund, I'd say 80 to 90% of our limited partners, actually, in the first fund were doctors. And our goal was to take the worlds of medicine and the people who work in it, the physicians and the other clinicians who are credited, and the world of innovation and mix them, get the doctors to have a seat at the table early on. And it created a great strategic benefit for us with respect to investing, we had great deal flow, we had essentially insider's views into all of these companies, because they're early and they don't have market validation, things like that. So having the boots on the ground people, the doctors, helping us look at these companies, really made a difference. And then once we've invested in these companies, the ones in our portfolio, we've been able to provide them some fairly unique support to help them grow and be successful.

[00:07:57] **Hall Martin:** Great. Well, let's talk about the growth in the biotech life sciences segment – what do you see going on there?

[00:08:03] **Orrin Ailloni-Charas:** Well, there's so much, I mean, it would be wrong not to start with talking about things like telemedicine and remote patient monitoring and chronic monitoring platforms, because that's just a whole new space. It was in its infancy pre-COVID, and then the demand that COVID put on people, the doctors and patients, really blew that up. And so, there's been a tremendous amount of activity in that space that we didn't see coming two or three years ago. Usually, you see this path, as things start to happen. Although, we as a fund had been involved in that space, but the growth has just been remarkable. And I think that you're going to see an evolution, I think we've gotten our first, our 1.0 products and maybe even some 2.0 products into the field. But I think you're going to start to see a greater level of sophistication in terms of the interfaces and the goals of telemedicine, where it transforms from being a Zoom call, essentially, to something very sophisticated, and not quite as good as having somebody do a physical exam on you and be in their office, but something pretty close to that. But there are other areas that were already booming and bursting at the seams and growing, that we can continue to see growth in. You can't ignore the impact of CRISPR technologies and genomics and the interesting science around that. There's a lot of material sciences and, of course, we're very interested in the fund into the artificial intelligence and machine learning area, and there's just great, great innovation being made in those spaces. So really across the board, healthcare is just a fantastic space to be, Hall, the interesting thing I find about healthcare, if you're going to go into the real science of it, the real medical solutions rather than

consumer products, it's just really important to do that with people who understand what they're looking at, because everything seems so exciting, and if you can't have a critical eye towards the innovations, it's easy to get fooled into thinking something's going to be successful when it really didn't have the bones to be that.

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

[00:04:11] **Eyal Lifschitz:** Thank you Hall for having me here, it's a pleasure to be again.

[00:04:15] **Hall Martin:** Can you tell us more about your work and what you currently do?

[00:04:19] **Eyal Lifschitz:** Yeah, so we are a venture capital here in Israel, and we invest for more than 20 years, we invest in life science companies in Israel and around the world, we invest in pharma companies, we invest in medical devices. We invest in, what we call today, digital health. In all stages, we have our early stage arms, in which we invest in very early stage companies including technology incubator, where we invest in ideas which really just _____ which are about to start. And we invest also very late, so in _____ funds we invest at the very late stages, and this is just before IPO before M&A now, before _____ which became trendy, maybe it was trending. So that's what we do. A lot of our investments are in Israel, but also we invest outside in the States and a bit in other places.

[00:05:31] **Hall Martin:** Great. Well, let's talk about the growth in the biotech life sciences segment. What do you see happening here?

[00:05:40] **Eyal Lifschitz:** So I will divide it into three. I would, first of all, look on the pharma side, and this is on mainly in oncology, also other spaces, but mainly in oncology, which became very aggressive in the last few years, because of many reasons, also because of development tools that developed in the last decade. We see that taking a completely new oncology target, for example, which 20 years ago was a 20-year long story. Today, you can be up to five, seven years, you can be already deep within phase one, which is a huge change, which brings a lot of hope to develop and to bring new, interesting biological drugs, leading oncology to the market. It also makes the buyers more aggressive since the pharma companies, they know that they have, we need to come in and buy companies only, which makes the market very interesting, because on one side you have an IPO market, which is hungry for those interesting new technologies; and it has to be a new technology, it can't be another me-too, another technology, which was used before, it has to be a completely different angle to have to attack the cancer, but if it is a new _____ which attacks the cancer, the pharma companies become very aggressive, and they tend to buy companies at the end of phase one, beginning of phase two, which is also the stock markets really have to compete, and also be able to take those companies public rather early.

So we see extremely strong IPOs for very interesting companies, and the phase one, beginning of phase two, which we did not see five or seven years ago, which is, again, it's different of what

was before, and it's very interesting, I would say, this is on the pharma side. On the device side, we see two interesting things happening. First of all, we see IPOs are looking for companies who have substantial sales, substantial sales as 10s of millions of dollars of sales. Now, it depends what area it is, if it's an area which you expect the _____ stock of sales, then you can, sometimes you can take a company public of $10-$20 million. If it's something which is less steep, it would be more, $50 million or more. Having said that, an interesting alternative for the IPO market, there is the SPAC space, which became very hard for many in the first and second quarter of this year, literally the numbers of SPAC which went public, just in the first quarter more than the whole of last year. And also last year was quite an active one in SPAC. So there were a lot of SPACs that came out through the market.

So a SPAC is a company which goes public, which has nothing in it but cash, and has 18 months to merge with an interesting technology company, and it can be in every space, it doesn't have – by the way, it doesn't have to be a particular technology or a company, although most SPACs merge with technology companies, but it can also be in other spaces. But on the technology SPACs, what we see is companies that go public, they raise only cash, and it's somewhere between $100, $300-$400 million, that's the average SPAC, those were much bigger ones. And then they have 18 months to go and look for a candidate, a target, an interesting company, it has to be a company which is close to have all the parameters needed to be a good publicly traded company, and then merge with it. And merge with it, at an agreed value between the technology company and the SPAC.

Now, what happened was that the street, there were so many of these were happening that the street started not really to like those SPACs, and this is something like a quarter ago. So somewhere May-June of ‘21, we saw that the SPACs became less attractive, because some of these mergers between those empty companies, the SPACs and the target companies were done at very high valuations for the target companies, a bit too high or sometimes much too high for Wall Street really to agree to those valuations. And therefore, the prices of those shares went down after the mergers. Now, as it happened quite a few times, it became more difficult to make those SPACs and to make them public. What we see today is very interesting. We see two different sort of SPACs. We see what we call the purely financial SPACs, these are people from – these are bankers, mainly bankers that were able to raise a SPAC, and now are looking for targets. And there, sometimes it can be challenging to have – to bring a good deal to the street, or we have what we call the professional targets. And those are companies, and it can be in whatever area, which you have people that are seasoned managers in that space that went and raised money, and now merge that money – merge their SPAC with a company in the same space, and bring added value to the company, which they're now going public, in management, in experience, etc.

Now, in order for this SPAC really to happen, and for Wall Street to agree to the price, there has to be a pipe which comes together with the merger of the SPAC and the target company. So let's say, the target company's valued at $800 million, and the SPAC has $200 million in it, then the SPAC – the pipe, which puts all of that together has to be at least a $100 to $200 million pipe, so that which will agree this has to be smart money that understands that space, which joins now

this merger, this $800 million target company and $200 million SPAC, now another $100 or $200 million pipe comes and agrees to the price. When this happens from good investors, then those SPACs, mergers actually go very well, so we hear, we see now, an interesting difference between what we call the financial SPACs which have more difficulties versus the professional SPACs, these are SPACs in which the professional people in the certain space, which now merge with a company in the same field, and bring added value on those SPACs turn out to be more interesting.

Our final guest is Mark Groper, Chief Executive Officer, Orion Biotechnology…….

[00:05:00] **Mark Groper:** Thanks for having me, excited to be here.

[00:05:02] **Hall Martin:** Great. Well, tell us more about your work and what you do.

[00:05:06] **Mark Groper:** So Orion Biotechnology is a clinical stage company, which is unlocking really the therapeutic potential and a multibillion dollar market opportunity for one of the largest group of drug targets in the pharmaceutical industry called G protein coupled receptors or GPCRs for short. This group of cell receptors has been highly sought after by the pharmaceutical industry, because they're proven to deliver effective treatment for many serious disease categories, including cancer and neurological disorders and viral infections to name a few. And in fact, about 40% of successfully marketed drugs today achieve their effects through interaction with GPCRs. Unfortunately, the industry has really just scratched the surface of the GPCR potential, with only about 15% of the 800 receptors in the GPCR superfamily having been effectively drugged to date. And the problem really is that many attractive GPCR targets have very complex ligand structures, which have proven to be undruggable using traditional drug modalities based on either small molecules or antibodies. And as a result of that, more than 80% of this very large market opportunity remains on top. So Orion essentially has overcome this problem by developing a proprietary technology platform that enables precision engineering of small peptides and proteins, really facilitating the creation of a new class of precision engineered drugs, which can effectively target these complex receptors. Orion has leveraged this technology to create already a multi asset portfolio of drug candidates. We currently have three in development, including our lead, which is a GPCR targeted cancer immunotherapy with proven best in class potency. So we're very excited about it.

[00:07:18] **Hall Martin:** Great. Well, let's talk about the growth in the biotech life sciences segments, what do you see going on there today?

[00:07:25] **Mark Groper:** Well, the trends moving forward in our industry segment are on precision medicine, and also on the development of immunotherapy, which can successfully treat many serious disease types, including cancer, for example, and trying to make things like chemo and radiation therapy a thing of the past. So precision medicine is a key area where the industry is moving towards trying to address these diseases. And with our precision engineering platform, we're sort of at the forefront of that movement.

Thank you for joining us today.

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