Oxford Biomedica - 2022 Interim Results

15 September 2022

Transcript

Roch Doliveux: Good afternoon and good morning and welcome to Oxford Biomedica half year results. I'm Roch Doliveux. I'm the chairman of the board and interim CEO, and I'm joined today by Stuart and Kyri to share the update on Oxford Biomedica and then also with Sophia who will help with the Q&A later on and all the questions you will have after this call. So, if I start with the first slide, I'm really pleased and excited about the momentum with Oxford Biomedica. Can I have slide three, please? And that momentum is really, if I had to pick one KPI for you to remember, and we'll come back to this, is our increase in customers by 70% over a year ago, and that's probably one of the best predictor of future revenues.

The more fundamentals is you know that we had set up a new strategy, much more focused of becoming a leading innovative global viral vectors across all viral vectors for cell and gene therapy companies. And we have delivered on the first half on this strategy. And the reason why I'm excited about the potential of this strategy is that we all agree that cell and gene therapy will bring the next wave of breakthroughs and medicines. Almost several hundred of companies in biotech and big pharma are active in the space. Viral vectors, we all know, will play a critical role for cell and gene therapy. We all know the strong double digital plan forecast for both the AAV and the Lentiviral vector outsource supply market. And there's still many more gains to be gained through innovation, and Kyri will come back to that.

Oxford is indeed uniquely positioned to solve our customers' and the industry problem in this manufacturing challenge around viral vectors, and we are doing that through proprietary technology, continuous innovation in viral vectors. Once again, Kyri would share some of the updates on this leading position that Oxford Biomedica has. And only are we leading in the innovating space, but we also have a track record of delivering on the manufacturing, as we demonstrated through the Oxford Biomedica unique ability to deliver the adenovirus-based COVID vaccine from AstraZeneca and also by the long-term relationship which we have with Novartis as the sole global supplier of Lentiviral vector from Kymriah.

And last, but not least, I think we've taken really the windfall of this positive impact on the company of the vaccine business to invest into the largest viral vector of the market, the AAV platform, the AAV market. And we acquired and completed the acquisition of Oxford Biomedica solution for our AAV platform based in Boston. Can I have the next slide, please, slide four?

Beyond the ability to integrate our Boston business and our AAV business, we've also started to completely transform that business to make it a truly innovative CDMO. And the testimony of that is the new customers that we have announced yesterday, in addition to Homology, and more to come on that front. As I mentioned in my intro and my excitement about the momentum of Oxford Biomedica is the impressive customer base that is expanding by over 70% in the last 12 months. You know that it takes a long time to finalize a deal in this space. It's a very important decision for any biotech or any big pharma company when they hand over the key of their viral vector to a third party. It takes a long time. The good news is that we retain them also for a long time, and it will take some time before the 70% generates revenues, but the important thing is indeed that metric and the dynamics in our customer base.

We also expanded existing agreement, an important one with BMS, or a subsidiary of BMS, Juno Therapeutics, their large viral cell and gene therapy company. We signed four new U.S. based agreements from four U.S. customers, including a new AAV customer since the beginning of the year. And we provided clarity on the future of our relationship with AstraZeneca through an expanded supply and development agreement. If I go to the next slide, slide five ...

The acquisition of our AAV business in Boston is running very well. Just to remind you of why we did that, as I mentioned, the AAV business is even larger than the Lentiviral vector business. It's growing even faster at very strong double-digit rate. We were not present in this market, and now, since the beginning of the year, we are present with a unique platform and

proprietary IP, a unique plug and play platform that has convinced already one customer, as I mentioned, in addition to Homology, and is in the process of convincing many more. And just to remind you, we have manufacturing capabilities there with proven capability all the way to 2,000 liter for commercial supply, and we expect profitability to be reached in the first half of 2025. If I go to the next slide, this just summarizes, again, the innovative service updates that we had since the beginning of the year. And once again, I'm thrilled with the momentum that is provided by an impressive team at Oxford Biomedica. And I'm handing over now to our CFO, Stuart Paynter, to put a few numbers behind this momentum. Stu.

Stuart Paynter: Thank you very much, Roch. If I can proceed to slide eight. As Roch said, and I'll reiterate, and good morning to everyone and good afternoon. We really do have good momentum, and that's borne out in the first point on slide eight, which is around the core business growth. So, the opportunistic work through the COVID vaccine, which was vitally important to saving tens of thousands of lives, has really given us the firepower financially to execute on the AAAV strategy, which Roch has outlined, and got us strategically into a market growing more than 20% CAGR. Now, as that revenue goes away, you can see the reduction in revenues overall, we are pleased to report the core revenue growth in the cell and gene therapy is growing very nicely at double digits. So, that is momentum on which we build our core business, as the vaccine work is essentially winding down.

The operating losses you see there, it's 5.8 million pounds for the first half of the year, compared to a profit previously. Again, we've taken that profit made previously and made a very smart investment for the future, as Roch has said. And the loss we're carrying, of course, is representative of the new business in Boston, and it's going to be loss making, as Roch said, profitable in the first half of 2025. So, at the moment, we are utilizing the latent capacity to add new customers as quickly as we can in order to build towards that profitability, but we would be carrying an element of loss for that business for a number of years. Now, you can see that, incorporating

that loss, the underlying core business, again, is around that break even mark. So, we are intent on making the core business sustainably profitable going forward, and that's a key goal of the organization as we currently stand.

As you can see, look, the operating expenses have increased to reflect the skills, capabilities, and costs of doing business in the AAAV field in Boston. And we are super committed to continuing to build that exciting business with a platform that is already starting to prove itself in some of the data that's being released and the first customer through the door, as Roch said.

Cash used in operations, of course, that reflects the transformational deal, which was done in the first half of the year with an equity raise, a debt raise, and the acquisition of the asset.

And then capital expenditures, you can see there the ongoing amount includes Oxford Biomedica solutions, and it's pretty much down to rates of maintenance. And of course, there are some other strategic goals we have in terms of building out the fallow area at Oxbox going forward, but that really is in the planning stage. The next slide please, slide nine.

So, we've included a slide on cash, which we've not done before, but we think this is a representative of the marketplace and the macroeconomic and geopolitical situations in which we find ourselves. And we want to highlight the robustness of the business model we are running and the relative strength of our balance sheet in terms of its liquidity. So, cash at the half year was 118 million pounds, just short of 116 million pounds the 31st of August. So, you can see that, again, we reiterate we're not a traditional cash burn type business, very sustainable. We are in the process of refinancing and part repaying the Oaktree one year loan facility that was taken out as a bridging facility to get the deal done back in January. And we have made really, really good progress on that, and there'll be more news to come in this calendar year. And then we have an ongoing process that's the sale-

and-leaseback of Windrush Court, which is our GMP and analytical laboratory suite here in Oxford that is being marketed in the high 50 millions of pounds, and we expect to achieve in excess of 55 million pounds in terms of the cash generation from that asset.

So, we think this is a good time to make sure that all the assets are working for us in terms of solid liquidity into the business. At the same time, the review of gene therapeutics, which Kyri will go through a bit more detail on in a few more slides, is progressing nicely. And I'll remind you that the goal of the organization is to take these exciting assets, retain a long-term interest in them, but not carry the burden of the burn on these internal products on our own P&L, and really good progress is being made. Kyri will take you through a bit more of those later.

And cost control initiatives. So, currently we have a headcount freeze within the organization where we are strategically making sure that we are appropriately sizing the business for a world in which the vaccine revenue is going to wind down and to make sure that this is a sustainable, robust, and strong business in terms of its underlying skills and capabilities and the opportunities it sees in front of it, of us, for the next 12, 18 months, whilst maintaining very, very strong robust liquidity. Next slide, please.

So, here's the very familiar slide. You can still see strong growth in the underlying revenues on the top table in the darker color. Every half year as well, there are some of the lumpy licenses, incentives, royalties and grants that come through, which is good for liquidity. And we really like that sort of revenue, but it's less predictable. And you can see that there's been a significant uptick through the vaccine in the last three halves. And as we've been at pains to say, we've utilized that momentum to build strong robust pipeline in the underlying business and to make the play in the bigger market of AAAV. And as you can see on the bottom chart, this is operating EBITDA. You'll see there are one off acquisition fees in this half, just over 5 million

pounds, to do with the transaction, and of course, we've added in significant costs in the Oxford Biomedica solutions business.

So, I hope you can see there that, as we progress, we are looking to do this very sustainably. We're looking to continue to fund the innovation story, which Kyri will take you through, which is key to our offering to the marketplace, both in AAV and Lenti, and we're in a really, really strong position to continue to fund the innovation and the investment in the right areas in order to make the best opportunities and use of the market, opportunities in front of us, not just in terms of the core business, but, obviously, as we progress, our talks are ongoing about collaboration opportunities with other vaccine providers as well, including the Serum Institute of India who made the investment of 50 million pounds into the business this time last year. Next slide, please.

So, here's the P&L for you. For those of us who love a good P&L, this is the output of all the things I've been talking about. The couple of things to highlight on here are obviously the revenue. We've talked about vaccines coming off, core business growing very nicely. The bioprocessing costs are going up. That's a utilization issue. Heavy utilization was done last year around 24/7. Obviously, the core business is a slightly different profile of cadence.

And then on the R&D and admin expenses, we've added some in Boston, but, as I've alluded to, these are being reviewed in terms of making sure that we are the right size and suitably, have the suitable and correct capabilities, and invest in the right areas going forward, is key to the success of the business.

The one other thing to mention is the finance costs. Finance costs there are interest on the loan. That's not the whole piece of it, of course. There's some increased leases that have gone through from our acquisition of Oxford Biomedica solutions, and there's an FX loss in there as well. So, at this point,

and I'll proceed to one more slide, please, I'm going to hand it to Kyri to take us through some of the innovation we are making and then take us through some of the innovation we are making and then I'll hand back to me to finish off the presentation.

Kyriacos Mitrophanous: Thank you, Stuart. Good morning everyone and good afternoon. First, I will share with you some of our recent innovations around the platform. These are focused on realizing the potential of viral vectors to revolutionize medicine by enabling lifesaving cells and gene therapies. Then I will describe the exciting product areas we're working on and our plans there.

Now let's first take a look at the platform innovation. So slide 13 please. Our goal is clear. What we're seeking to do is to industrialize the production of viral vectors. Our expertise, IP and investments make us world leading producers of viral vectors, particularly of lentiviral vectors. And through our Boston expansion, experts in AAV production as well.

By increasing the amount of vectors we can produce, we can improve vector quality and thereby enable new therapeutic possibilities. Let me show you an overview of the platform on this slide. First, we have capability on the top right of the slide. We develop vectors that allow optimal expression of the gene of interest to fine tune the therapeutic effect. And we're developing targeted vectors to genetically modify specific cell types. Both of these are key to the future of lentiviral vectors as they allow their use in new ways and to enable new therapeutic indications.

Second, we have scale, and that's on the bottom right. We have a number of innovations which we're implementing in our bioreactor processes to improve yield and quality. For lentiviral vectors, we have now implemented process C, which includes perfusion that increases tighter and removes impurities before they enter downstream purification. We have U1 and U2. These are additives that increase the tighter, but also improve the number of

active particles. And we have an optimized downstream process to further improve vector quality.

For AAV, our Boston colleagues have developed a novel dual plasma AAV system that leads to superior productivity and quality. We're continuing to evaluate other types of enhancers and additives and process improvements and we will discuss these in due course. We are seeing an increasing interest in process D. That's the one on the bottom here. That's making vectors using producer cell lines. We announced one new project in July this year.

Producer cell lines have better scalability and productivity and we're looking at ways of improving the speed of their generation for lenti and extending this technology to AAV production. Finally, we have analytics, automation and AI on the left hand side. The secret to innovation, as we have said before, is understanding what happens inside cells and vector particles during production.

Technologies such as transcriptomics, proteomics give us a window into the bioreactor as well as the cell. We're using automation to internalize more samples and to enable faster batch release, and we use AI and machine learning to take full advantage of the huge datasets that are generated from these kind of analyses. By understanding vector production better, we can increase components that boost yield and quality and reduce those that don't.

And now let me give you some more details about some of our recent innovations. Next slide please. So process C for lenti has been successfully implemented to GMP as planned and we have seen the expected gains in productivity and quality. We have a number of customers evaluating process C and have already made processing material to add GMP for each customer.

Our colleagues in Boston have now exemplified the novel geoplasma AAV system at 2,000 litre scale and seen their expected gains in productivity and quality attribute. We have made great progress with our fourth generational antiviral vectors, which we expect to launch in 2023. These vectors enable higher expression, have additional safety features and a larger capacity, so can deliver greater amounts of DNA.

This last point is critical as we are seeing increasing demand for vectors to deliver multiple genes or more complex expression cassettes. Improvements in analytics have also been realized with the successful transfer to GMP of automated cell-based assays. These allow for much greater productivity and reproducibility. Let's move now onto products. Next slide please.

Our current focus for product development is the application of systemically administered lentiviral vectors to treat disease. Our focus initially will be in two main areas: in vivo CAR-T generation and length lenti targeted liver therapies. In vivo CAR-T bypasses the need for costly and limited GMP cell engineering facilities by directly administering the vector into the body to generate the CAR-T cells and is necessary if we are to realize the full potential of CAR-T therapy for both liquid and solid cancers.

We expect to be able to treat many more patients, treat them as first or second line therapy rather than third or fourth and this should give better clinical outcomes. Our work on developing therapies by genetically modifying liver cells is progressing well. The liver is a continually dividing organ and because lentiviral vectors integrate in target cells, a one off treatment is all that may be needed to give lifelong benefit.

A lot of high quality vector is required for both in vivo CAR-T and liver imaging therapy, which we are particularly good at making. Dr. Ravi Rao joined us in April this year and he's leading a review of the therapeutic product strategy and how we best ensure that the great promise of these

products is realized. This work will complete by the end of the year and will be executed on in 2023.

Our aim here is to maintain long-term economic interest in a number of therapeutic products with a potential material reduction in annual operating expenditure, which was 5 million pounds operating EBITDA loss in the first half of this year. I'll stop here and hand back to Stuart. Thank you.

Stuart Paynter: Thank you Kyri. If we just progress to the next slide to the financial outlook. We're expecting similar levels of revenues in the second half as the first half and more than 90% of those are booked in. It's a pretty solid forecast. Obviously continued growth in the underlying core business. The vaccine's revenue is going to reduce the aggregate revenues of around 30 million pounds from AstraZeneca in this full year, but the bulk of the revenue's been recognized in H1 2022.

So broadly speaking, the EBITDA numbers are going to be around breakeven in half two, 2022 with a very similar amount of CapEx. And all of our spend profile and everything you've actually heard is in service of the target, which is obviously to enhance our position as the leading viral vector outsourcing player in this marketplace across these two vibrant markets, with the long-term goal to grow our revenues at faster rates than the market's growing and the market's growing very, very quickly.

Last slide please. Just on some of the catalysts. Obviously Oxford Biomedica continues to be a deal generating company and we expect new deals through the end of '22 and into '23 for both OXB Solutions in Boston and the core business in Oxford, the lentiviral vector business. We've made a public statement that we expect two new customers in the AAV field this calendar year and we're bullish on that.

The therapeutic strategy is, as Kyri said, we're looking to have that finalized by the end of this calendar year and executed in 2023. So we would expect to see some news on that and achieving that goal of keeping that long-term

economic interest and minimizing the internal spend on the programs. And then the part payment of refinancing and the sale and] lease back, we expect to be complete discount in the year and put us in a very, very strong and robust cash position with a well thought out capital structure for the business, including an element of debt moving forward for the next period of time.

I'm going to leave you with our initial strategy slide and I'll hand over to Sophia who's going to kick off the Q and A process.

Sophia Bolhassan: Thank you Stuart. We have a number of you queued up on the phone lines. Operator, can you please open up for the first question.

Call Operator: To ask a question over the phone, please press star one. Please ensure the mute function on your phone is switched off to allow your signal to reach our equipment. Star one to ask a question.

We will take the first question from Joe Pantginis is from HC Wainwright. Please go ahead.

Joe Pantginis: Hi, good morning everybody. Thanks for taking the question. Good morning and good afternoon. Couple quick questions if you don't mind. So first, Stuart, with regard to the debt refinancing and repaying, any guidance with regard to the amount of what will be refinanced?

Stuart Paynter: Hey Joe. Great to speak with you. So we're currently working through that. Hopefully we won't have too long before we can fully share the details with the marketplace. But at the moment we're still talking to various providers about the profile of how that looks. So no specific guide right now, but you're not going to have to wait too long to see that.

Joe Pantginis: No, I understand. And then, look, it's great to see the business grow, especially out of Boston. And I guess, look, as you make these announcements, you say that the terms are undisclosed and I can

understand that because there's a lot of, the competitive environment is quite wide, so I can understand that. Can you give us some level of baseline expectations with regard to the types of the deals you sign with regard to maybe some minimum terms that could be expected from these types of deals?

Stuart Paynter: It's an interesting question, Joe. The reason that we have done a few undisclosed deals recently, both on the lentiviral vector side and the AAV side is because some of these smaller biotechs are in the process of raising funds through series A, series B, and obviously we're respectful of that process. So not talking about anything in particular, but the way that we view early stage agreements is that we can take someone from a very early stage effect construct and work on through PR&D people, both in Boston and Oxford to get them something very viable.

And then you're talking about potentially tox studies and other things. So each deal is slightly different, but it will involve producing them material for viability, maybe animal studies, tox studies, those sorts of things. But they are all different so it's difficult to give guidance. But what they are is essentially a gateway with the customer to take them onto a journey and help them solve the issues that they're undoubtedly going to face that we've seen before, which enables them to progress through that early stage development and then through clinical stage development and ultimately our goal is to support the customer all the way through to commercial where we have obviously our OxBox facility, which is already approved for commercial manufacture.

So it's [inaudible]finish now. So it's a real suit to nuts offering. And this is one point we can capture the customer and hopefully provide them with access to the technologies and the solutions, which will make them a happy customer and stay. We've got a great track record of keeping customers for a very, very long time. And Novartis has been with us for a decade now with

us helping them all the way along from first stage production for Kymriah all the way through to launching in 30 countries.

Joe Pantginis: Sure. No, I appreciate that answer. And it certainly talks to the variability of the types of clients that you bring in and the maturity levels and what have you, and almost providing an end-to-end process. So thanks for that answer, I appreciate it. And then of course I'd be remiss if I didn't ask about the gene therapeutics pipeline because look how as Kyri described your different initiatives with regard to tech improvements and what have you, how a lot of that could potentially translate to your gene therapeutics pipeline and what we could potentially look towards with regard to any potential news flow. Thanks.

Stuart Paynter: Yeah, so I think Kyri took through what we're focusing on, which is liver based lenti treatments and in vivo CAR-T, both systemic treatments with lenti, which require higher volumes, which puts us in that unfair advantage position as a producer of high quality, high volume, high title lentis. And we are looking to essentially push forward the agenda with the latest technologies. Kyri mentioned process C, fourth generation lenti, all these other things which could form part of the offering here and looking to attract external sources of funding there.

So we are super excited by the value that can be created. We are just aware that there's a different risk profile to that area of business than the underlying innovative CDMO business. We're looking for that external funding in order to make sure that they're well funded, pushed forward as fast as possible because patients need these treatments. And the call on capital between an innovative CDMO and a product business is very different. So yeah, the timing remains that we should be in a position to execute our strategy in 2023, but progress is being made very, very rapidly now coming up towards the end of this year.

Joe Pantginis: Got it. Thank you very much for the caller, Stuart.

Call Operator: The next question comes from Miles Dixon from Peel Hunt. Please go ahead.

Miles Dixon: All right. Thank you. Afternoon all. If I could just maybe ask Joe's question a little bit differently. So the license milestones and royalties in first half grew by 18%. Can you comment how much of that was from existing or legacy work versus new partners? And are you seeing a change in the profile of the economics that you can now ask from what looks like quite significantly increased cadence of new partners? Thanks.

Stuart Paynter: Would you like me to take that Roch?

Roch Doliveux: Yeah, that would be great. Yeah, I think it's targeted to you.

Stuart Paynter: Yeah, so hi Miles. I think it's a great question and we see milestones licenses come from various customers at various times depending on the maturity of the relationships. Sometimes they're licensees when they sign on and sometimes they're milestones in some element of.

Stuart Paynter: ... when they sign on, and sometimes their milestones is some element of commercial development. But we've a got particular tighter milestone, et cetera. So there's a very good spread and it forms part of the core of those licensing deals we do.

In terms of the economics going forward on platform deals, actually we are seeing and we are targeting in fact, early stage biotechs as well as big pharma. And what we try and do is be as customer-centric as we can. So there'll be various economic pressures on our partners, and they'll be very different if they're big pharma to small biotech. And we try to really apply our increased, robust balance sheet to help them get on board and start solving their problems. Because the long-term economic value of these deals is very similar. Whether there's a big license fee and less milestones, or whether there's a smaller license fee, big milestones. And we just need to get them through the door.

We essentially are not seeing any difference from the market, except for the fact that the small biotechs are under some pressure from the funding of course. And we see that as an opportunity because what we do know is that there are very few small biotechs now springing into existence who are going to create their own manufacturing solution.

We see the market growing for small biotechs coming to proven CDMOs. Which we are. We've proven that we can take someone from early stage all the way through to commercial, which is one of our USPs, as Rob talked through earlier. So, in that sense, the market is very, very vibrant for us. We have a very strong pipeline in both Boston and Oxford. And that gives us the confidence to be pretty bullish about new deals. And the economics are remaining strong.

Roch Doliveux: May I add my answer to the second part, especially of your question, add to what Stuart said. In addition to the early stage biotech and the big pharma, there is another trend that we are seeing more and more, and in the month and years to come, we'll reveal more as we can. But it's late stage biotech who are getting poor service from their CDMO, who cannot deliver, and are turning to us in panic. And so we are seeing clearly a momentum there of large companies who can't really deliver given the sophistication and the complexity of what needs to be delivered in our space.

Miles Dixon: Great. Thank you. I think you've answered my second question there about the pipeline of opportunity. But if I could go on from one USP to another. And perhaps for Kiri. Obviously there's the yield and quality of virus manufacturing you talked about and your reputation in Lenti and Adeno speaks for itself over the last 15 and two years respectively. You mentioned dual-plasmid AAV. How do your Boston AAV capabilities compare to the competitors out there? Thanks.

Kyriacos Mitrophanous: Thanks for the question, Miles. So when we looked to bring in AAV expertise, we looked at a number of different companies, a number of

different opportunities. And what we found in our Boston colleagues, as they are now, was an expertise in a large scale AAV manufacturing using HK293 cells at very large scale. They had used these materials in a number of clinical trials with a particularly good safety record. And had considerable experience in terms of making many batches without any failures. So I think they compare very well to what's out there for AAV. And as we get to know more about their capability, we are more reassured that they're industry leading in their knowledge, vector system processes, and also IP.

Stuart Paynter: Kiri, would you like to comment on the posters from ASGCT that Biomedica Solutions produced on their tightener. And then maybe something on the full flip captive ratio please?

Kyriacos Mitrophanous: Yeah. Thanks, Stuart. One of the key aspects with regard to AAV is the particle to infectivity ratio. So how many of your particles have got genome in them, and how many particles don't? And the more empties you have, then the higher the dose you have to administer. And that means more empty particles going into the body that may elicit unsatisfactory outcomes, inflammation and so on.

And although AAV P to I ratios are not shared by everyone. From the knowledge that we had from talking to the KLs, the KOLs, the P to I ratio that the Homology Medicines process generated was at the cutting edge.

And in addition, the overall productivity of the 500 liter, the 2000 liter process that they had developed, was again at the higher end, if not the highest we had seen.

Another aspect that is critical is, how do you purify your AV? Do you use methodologies that are industrialized or are using things such as centrifugation and so on that are okay for small scale, are okay for one off batches, but are not really going to solve the industrialization of AV manufacture.

Ideally you'd want to use more robust systems. And that's what the Biomedica Solutions team now has. So the downstream process that is being utilized is scalable, robust, and again, fit for purpose for commercial and beyond.

Miles Dixon: Great stuff. Thank you, Kiri.

Call Operator: The next question comes from Natalia Webster from RBC Capital Market.

Natalia Webster: Hi there. Can you hear me okay?

Roch Doliveux: Yeah. Perfect.

Natalia Webster: Perfect. Thank you very much for taking my questions. I have two please. So firstly, we're hearing that the impact of more limited biotech funding is leading to prioritization of pipeline assets. I realize that you discussed having a mixture of pharma and smaller biotech customers. But are you seeing this impacting any of Oxford Biomedica customers, particularly on the early stage side?

Roch Doliveux: Do you want take that, Stuart?

Stuart Paynter: Yeah, I mean, it's a very good question. We're still seeing very robust funding in the venture stage. I think the real pressure's on the publicly listed companies in terms of their abilities to raise funds. But we have a nice mix of both venture funded biotechs, small public listed biotechs, like Homology is a customer for example, and then big pharma. We know that big pharma doesn't stop. We know that the small companies are well funded.

The interesting piece is that middle group. And actually what we are seeing, because we are working with customers who, their very existence depends on progressing their products, and the sort of stage the element they're in, they need to produce data, whether that's clinical data or pre-clinical data in order to get to their next value inflection point.

So we as a service provider are on their critical path. So if they have a dollar to spend somewhere, they're going to spend it on their ability to produce data. Which is going to be something they can do to move their share price. Because typically those companies are pre-revenue.

So we benefit from a very close relationship with our partners and solving very tricky issues for them. And frankly, being on their critical path to producing the data they require to push forward.

Natalia Webster: Yeah. That's great. Thank you very much. That makes sense. Just my second question is more specifically on the deals that you've announced. Just wondering if you could provide any further color on the two new BMS programs and how important these are for your near term growth expectations?

Roch Doliveux: Yeah. I don't think we can reveal much there, Natalia. Because we're providing a service to our customers. We want our customers to be happy. But when we can, we sure will release more.

I think the great news is that you see a BMS who made a significant acquisition and really has a significant stake in the cell therapy space and leading now is expanding their partnership with Oxford Biomedica significantly. So I think that's the take home for you at this stage. And we'd like to provide more color, but we have to respect our partners and customers wishes.

Natalia Webster: Of course. Thank you very much.

Call Operator: The next question comes from Julie Simmons from Panmure Gordon.

Julie Simmons: Thank you very much for taking the questions. Just a couple of questions on the cost side. I know you've talked about getting your levels of personnel down to a sustainable level I think was how you described it. And just looking at the increase in number of people you had versus last year, it's I think 716

to 920. Firstly, I was just wondering what level is sustainable? And then secondly, along the same lines, the cost presumably of the additional US personnel was more expensive than the UK and just are we going to continue to see that balance?

Stuart Paynter: Hi Julie. Yeah, no, I did use the word sustainable. I think sustainable/appropriate is the right messaging. So when you quoted those two head count numbers, of course, a 120 plus people came into the organization in that timeframe from Oxford Biomedica Solutions. And you are correct to say that there is a premium to be paid for the scientific expertise that you get in Boston. But that premium is well worth it because some of the best operators in cell and gene therapy are in that hub. Which is why the premium is there. And of course you're very close to a whole bunch of biotechs, which are being spawned all the time from academic institutions and venture capitalists. And it really is the center, especially the AAV world. So it's the right place to be to attract the best talent and to be close to customer.

Our commitment is to move forward in a sustainable way in both parts of the business. The Boston business of course has its own plan, which we've outlined. And the Oxford business, the business that remains the core, we are committed to making sure that that is sustainable and has appropriate staffing levels in order to meet the demands, both from our customers and to continue to innovate in a way which keeps our lead. Because we're an innovation-led CMDO and this is the lifeblood of the business.

So we are working hard on internal measures to make sure that we are fit for purpose to face into the market with the revenue opportunities we see in front of us in 2023 and beyond.

Julie Simmons: Thank you.

Call Operator: We will now take the next question from James Osborne from Stifel, please go ahead.

James Orsborne: Good afternoon. And thank you for taking my questions. I've got three if I may. Firstly, now you are four months into the OXB Solutions venture, I understand you have 25 million guaranteed in the first 12 months from Homology. I just wondered, looking forward into next year, what are your expectations from Homology going forward? And is there any commitment from Homology on the revenue side at this stage?

Stuart Paynter: Hi there. Yeah. I mean, you're correct to say that those revenues are contracted for the first 12 months post-acquisition. And that was the commitment that was made at the time of the acquisition.

I mean, when we look forward to our partners at Homology, what we can say is that the team at Oxford Biomedica Solutions are uniquely placed to serve that customer, having worked for them and with them for the previous five or six years. So in terms of the ability to serve that particular customer, there is no one in the world like it. So we are very confident that Homology as an organization are moving forward under new leadership now. And we expect it to be a considerable customer for the foreseeable future.

James Orsborne: That's great. And just following on from that. I just wondered if you could give any more color on the initial demand you've had with the AAV platform coming online. I know you've mentioned about having two deals by the end of the year. Are you remaining confident in that or even perhaps exceeding your own expectations?

Roch Doliveux: Yeah. James, I remain, we all together, remain very confident in the ability to achieve that goal and that commitment. And then we always welcome if we can do more, but at least what we want is to be able to deliver on what we have committed. And that's what we have committed to new customers by the end of the year. And we have already one, as you mentioned, four months through this transformation from just a manufacturing operation for a company into a state of the art innovative CDMO in the AV space.

James Orsborne: Great. Thank you. And then just finally on CapEx with the expansion of the Oxbox facility. How's best to look at that going forward? You mentioned around having maintenance CapEx for this year. Will it be ramping up significantly in the years to come?

Stuart Paynter: Yeah, I mean, it's obviously a fully funded project through the investment with Serum Institute. And we are continuing to collaborate with Serum on a number of different topics, including taking best practice on the design of flexible large volumetric advanced therapies manufacturing space.

But of course the board need to be in control of that as an investment. And the board will pull the trigger when the market demands that it should do that.

So I think we're in a great position. We have a world class facility, completely up and running with full finish. We have the ability to extend that facility as we see the market ...

Stuart Paynter: ... We have the ability to extend that facility as we see the market extend out in front of us. We are funded to do so. It's a pretty enviable position to be in. But for the rest of this calendar year, we don't expect last chance of CapEx on that program.

James Orsborne: Great. Thank you very much for answering my questions.

Call Operator: We will take the next question from Joe Pantginis from H.C. Wainwright. Please go ahead.

Joe Pantginis: Hey guys, thanks a lot for taking the follow up. So earlier, Rock, you made what I think is a very compelling statement with regard to CDMO scheduling, not only in the US but abroad as well. And that is the issues with CDMO scheduling and clients turning to you in panic. So how I want to ask the question is the following. So first, obviously that's a very compelling way of customer acquisition, and I was hoping you can comment with regard to the

back end with regard to customer retention. Because it's not like they can just turn away from you because a slot opens up at their current CDMO. So I think that's actually pretty promising. I'm hopeful that you can confirm my thoughts.

Roch Doliveux: I think your thoughts are broadly ... I mean, our customers are free, but I think it's a good KPI of the robustness of our ability to deliver and satisfy our customer's need, is indeed customer retention. And I'm pleased to look at the almost 10 years with Novartis is not too shabby. And they're clearly a large and demanding customer, as they should be. And the key job behind that is again the fact that we innovate all the time, and it's both in the LV and the AV space.

Stuart mentioned and Gary commented, the fact if you continue to perform better than your competitors ... And the posters from our colleagues in Boston on AV at the American Society of Cell and Gene Therapy mentioned that there was a poster from a competitor that was bragging about a titer and our titers were higher. So if you continue to innovate and beat the competition from a performance standpoint in terms of the innovation, customer retention follows and of course, if we deliver for that customer. So I completely agree that the customer acquisition is probably the best prediction. That's why I'm so thrilled and excited about this 70% increase over a year ago, because that's the key. It takes a while, takes a long time. But once you have them, you have them.

Kyriacos Mitrophanous: Rock, perhaps I can just add

Roch Doliveux: Gary, go ahead.

Kyriacos Mitrophanous: Yeah, so I was just going to add ... Joe, one of the issues that we have found is customers with other companies when they hit a wall, when there is an issue, maybe they're not getting the ... looks good on small scale, then they go to larger scale and they don't get the titers or the quality that they're after. Unlike others, we are able to dig deep, use the technologies we

have developed to and try and understand what the issues are and how to fix that, these various problems. So we often find it's not just a sort of lack of slots or availability of analytics and so on. It's also having that ability to solve the problem that clients are encountering.

These are complicated therapies. I think we're at the beginning of turning cell and gene therapy into a routine manufacture and manufacturing process, those are a few years away. So we're still at the stage where each new product has its own idiosyncrasies that we have to deal with. And Oxford Biomedica, because of its expertise in other areas, is able to provide a lot of that analysis and solutions. And then when we do get a customer in because of that and hopefully they're pleased with the outcome, they as you say, they don't move on.

Roch Doliveux: Thanks, Gary for clarifying.

Joe Pantginis: Much appreciative of the added color. Thank you.

Call Operator: We will take the next question from Alistair Campbell from RBC. Please go ahead.

Miles Dixon: Morning. Can you hear me okay?

Roch Doliveux: Perfect.

Miles Dixon: I got three questions, if that's okay. First of all, just on Novartis. Obviously still a very important partner, and I'm very encouraged to see you talk about a continued strong relationship. But just obviously that's a company where we've seen significant changes in the research and development organization over the last six months. So just kind of a confirmation that you still have a very good, strong relationship post those changes and perhaps post some reprioritisation at Novartis R&D unit.

Secondly, in terms of your strategic options for externalizing funding. Just to get a sense of what you're hoping to achieve, is this simply getting some

expenditure off your P&L? Or are you actually hoping to get partners, or a partner who's willing to invest much more than you're currently investing, while maximize the value of that portfolio. And then finally, they're not an area of expertise for me at all, but in your early discussions on sale lease back, if had any kind of initial indications of what we should be thinking about in terms of rental yield?

Roch Doliveux: I'll answer the Novartis question, then let Stuart answer the two other questions. So yes, I'm pleased to say that the relationships with Novartis continue to be very strong at all level. And yes, there is change. But over the last 10 years there have been quite a bit of change in the company. And the key is to continue, I think, some of the people based in Boston, leaders there remained absolutely the same. And Gary, maybe you want to provide also more colors, since you are much closer than me. I'm quite close at the top, but we are not doing the job at the top, just make sure that things go smoothly. That's all.

Kyriacos Mitrophanous: Yeah. So we've worked very well with Novartis. We carry on working with them. We've worked on multiple programs and we have an excellent relationship with them. There's a lot of synergy, there's a lot of co-development. The teams know each other very well. So yeah, that relationship is going very strongly.

Miles Dixon: Brilliant. Great to hear. Thanks.

Stuart Paynter: Okay, Alistair. Hi there, great to speak to you again. So on your second and third questions on the product side, in terms of the external funding, I think we are ultimately flexible. The goal here is to significantly reduce the level of spend that we're putting through our own P&L, to make it clear to the wider community, the market, what an innovation based CDMO looks like. We've doubled down obviously on that part of the business with the investment of Oxford Biomedica solutions. And so that's not to say ... I hope we made the point clearly in the presentation, we're super excited about the potential of

those products. And actually, there's some really, really strong funding going into things like in vivo CAR-T and LED delivers a really interesting systemic approach here, that Gary outlined could be potentially curative, where some of the AV approaches are sort of re-dosing regimen. Think of it in such a way that we want to retain that long term economic interest through maybe some sort of investment vehicle, but really not be carrying that P&L burn ourselves.

We're not frightened of making a commitment to that investment vehicle, both in terms of technologies, people and potentially a share. But we are looking for great partners to be able to accelerate both the funding and the time to push these forward. Because like I said in the presentation, the calls on capital between innovation based CDMO and product just means that there's always going to be a call on capital between two very different risk profiles. So if you have a special purpose vehicle which has that at its core, developing those programs, then it gives them the best chance to succeed. And we need to give them the chance to succeed for patients.

On your third question, sale and lease back, we are pretty progressed through a process. We are very confident that we can get offers in excess of 55 million pounds going forward. And of course, what that will mean is an owned asset that becomes a leased asset. And we've made sure that we are going to end up with a market rate which is appropriate for paying rent at a new owner of our leased asset essentially. But it will retain full flexibility to do what we need to do in that facility. So it should be completely invisible to staff and everyone else, but it should just be a nice way of generating income on a one-off basis, of course. But in these markets, making sure we're maximizing the capital structure of the business is very important.

Roch Doliveux: I think we're running out of time. I will take one last question.

Call Operator: We will take the last question from Soo Romanoff from Edison Group. Please go ahead.

Natalia Webster: Hi, thank you for including me here. Congratulations on the first half performance. I just have a quick one. I think we've touched on this a little bit, but I believe your close partnerships with your customers really highlights your specialized expertise and key assets. As you increase engagement and stickiness, perhaps this offsets any funding concerns and maybe can add some context around that on the engagement, or differentiated sophistication? Thank you.

Roch Doliveux: Stuart, you want to take that?

Stuart Paynter: Yeah, sure. So we are always looking at making sure that we are optimally structured for facing into the market and being able to invest in those areas which need investing in. I think in this presentation we've made sure that we've pushed forward that innovation is key to us. Customer acquisition and making sure we've got capacity for our customers is key to us. And obviously, cash and funding is key to us. And we are in a very privileged position in that we have four available sources of funds. We have debt and equity, which is available to anyone who's listed, of course. Then we have customers, which can form a key part of our capitalization strategy, both in terms of license fees and ongoing revenues and income.

And then we have the ability to produce income in a one-off basis on things like sale and lease back. So I think the bottom message here is that we will continue to make sure we're optimally structured for capital, and to progress the mission and the strategy. And we will keep on being customer centric and making sure that we capture and maintain customers, so that we can share the economic benefits of their programs and what we bring to the party in the most optimal way.

Roch Doliveux: Thanks Stuart, and thank you Sue. And again, Stuart mentions that we are probably much less capital intensive than other CDMOs, but more R&D intensive than other CDMOs. This concludes our presentation and Q&A for the half year result of Oxford Biomedica, and I thank you for your interest.

And hopefully, you can share the excitement about the potential of Oxford Biomedica in making the difference in the cell and gene therapy space, and hence for you and for shareholders superior returns and long term profitable, exciting growth. So with that, looking forward to updating you in the second half. Thank you.