



Select Committee on Science and Technology

Corrected oral evidence: Life Sciences and the Industrial Strategy

Tuesday 28 November 2017

11.10 am

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Members present: Lord Patel (The Chairman); Lord Borwick; Lord Fox; Lord Griffiths of Fforestfach; Lord Hunt of Chesterton; Lord Kakkar; Lord Mair; Lord Maxton; Baroness Morgan of Huyton; Baroness Neville-Jones; Lord Oxburgh; Lord Renfrew of Kaimsthorn; Baroness Young of Old Scone.

Evidence Session No. 21

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Questions 180 - 196

Witnesses

Erik Nordkamp, Chair, American Pharmaceutical Group, and UK Managing Director, Pfizer; Mark Hicken, Vice Chair, American Pharmaceutical Group, and UK Managing Director, Janssen; Louise Houson, UK Managing Director, MSD.

USE OF THE TRANSCRIPT

This is a corrected transcript of evidence taken in public and webcast on www.parliamentlive.tv.

Examination of Witnesses

Erik Nordkamp, Mark Hicken and Louise Houson.

Q180 **The Chairman:** Good morning, lady and gentlemen. Thank you very much for coming today to help us with our inquiry. You represent pharmaceuticals and other healthcare companies that are American but are partly based in the United Kingdom. It is very helpful to take evidence from you relating to the life sciences industrial strategy. In particular, Louise Houson, you are big news since yesterday. Maybe we will hear such big news more and more every day. Please can you introduce yourselves and tell us who you are, for the record? Then we will move on to the questions.

Erik Nordkamp: My name is Erik Nordkamp. I am the managing director of Pfizer in the UK. I am also the chair of the American Pharmaceutical Group. I am Dutch by nationality.

Louise Houson: Good morning. My name is Louise Houson. I am the managing director of MSD in the UK and Ireland. It is nice to meet you.

Mark Hicken: I am Mark Hicken. I am the managing director of Johnson & Johnson's pharmaceutical business in the UK and Ireland. I am also vice-chair of the American Pharmaceutical Group.

The Chairman: It is good to have you. One is investing and you are not investing.

Mark Hicken: We can discuss that.

The Chairman: You are sitting on the fence right now. Is it not true that Johnson & Johnson is holding off its investment?

Mark Hicken: If you are referring to the reports in the *Telegraph*, they are not true. The reality is we have 13 sites in the UK, four of which are research based. We have located our innovation centre here in London, which is a fairly recent decision. We have three other innovation centres: two in the US and one in China. Our hub in Europe for innovation is London.

The report was referring to JLABS, which is a concept where we provide incubator support for other businesses. We are in discussions with a number of sites. The UK is one of those sites and those conversations are continuing. They have not been stopped.

The Chairman: To start off the questioning, you represent American-based companies. You are the president of the American-based company and you all represent American healthcare companies. Is our strategy something that you welcome? Do you see opportunities for investing in the United Kingdom?

Erik Nordkamp: First, let me say we are pleased to be giving evidence today as an American pharmaceutical. We just checked on this: we represent about 30% of the global pharmaceutical market.

The Chairman: After the number of emails I got from you, I had no choice left.

Erik Nordkamp: At least email still works. We are different in size and we are different in terms of our portfolios. We have the same interest, though, that we want to serve patients in the end. If you look at our clinical trials, we do about 500 clinical trials at the moment in the UK, benefiting about 24,000 patients. We have a lot of collaborations with the NHS, universities, small and medium-sized enterprise, et cetera.

Despite all the slight differences we have, there is one thing that unites us though. We see a huge opportunity with the life sciences industrial strategy to make sure that the UK enhances its competitive position globally. We hope to see that happen through a following sector deal. As somebody who has worked in six countries, I have seen that countries do this in various ways. It would be good to discuss what we can learn from them as well.

The Chairman: We will come to that.

Louise Houson: We were members of the Life Sciences Industrial Strategy Board. It was wonderful to see the whole of the life sciences sector get together and talk about what is needed in the UK for the future of life sciences. We welcome the report. There is huge opportunity to continue to have the UK as a key market for life sciences. It is now the time to capitalise on this report and start to implement it, so that we can reap the benefits moving forward.

Mark Hicken: Similarly, Johnson & Johnson has been part of the life sciences strategy advisory board. We have been involved in the conversation from the outset and have a long history of partnering with the UK in delivering new innovations in healthcare. To the questions that were asked earlier about the NHS, the UK has a unique opportunity with a single provider system to position itself as a leading light in life sciences. This document addresses many of the areas that we need to discuss and put into place in order to realise that.

Q181 **Lord Kakkar:** I would like to turn to the question of implementation of the strategy. I would particularly like to hear your views on what will be required to ensure successful implementation, to achieve the principal objectives laid out in the strategy. Who should be responsible for that implementation?

Erik Nordkamp: As you rightly say, implementation is key. Strategy is just a document on the shelf at the moment. How we are going to do that will be really important. Having clear accountability at a Cabinet level, both in BEIS and the Department of Health, will be important. Having a governance body that manages the implementation in the various parts of the life sciences industrial strategy will be important.

What is also important is that we change the nature of the way that we work together. I have worked in various countries and taken advice from some of my predecessors; they would describe the relationship between the UK and the industry as a transactional one. In many countries, the ones that are most successful, they are working more in partnership, always acknowledging the fact that there is government on one side of the table and industry on the other. That requires joint working and joint

decision-making at some point, always taking into account who in the end makes the decision. That will be important as well.

Lastly, it will be important to recognise that there are some areas where the UK is doing particularly well. We can enhance those areas, and they have been highlighted in the report. There are other areas where we need to work harder to improve the position. When we make decisions on a global level, the decisions are always based on similar conditions. As an American company, we have commissioned a study that highlighted that there is a relationship between investment and the environment we find ourselves in within a country. All those things need to be looked at.

The Chairman: Pfizer moved out its R&D a couple of years ago. Has the environment changed to make it attractive now?

Erik Nordkamp: The site where we reduced our activity, Sandwich, in Kent, is still very active. It is a good example of how we collaborated with the Government to make the best out of a bad situation. At the time, for global reasons we decided to move some of our scientific activity elsewhere. 800 scientists remained in Sandwich, which is still there today. In fact, there are now 160 start-up companies working on the same site, employing over 3,000 people. It is an example of how, if you work well together, in partnership, you can make something positive happen.

To answer your question, there is a spectrum of companies, in terms of how they view investment decisions. They are going to be based on the portfolios that they have, the particular situation and how they view the factors that make up those decisions. For us, more decisions have turned away from the UK than positive decisions have been made to invest in the UK. That is right, and that has been different for other companies. It is important for the UK to look at its overall market share of relative investments, and whether it is gaining more investments than it is losing. I do not think it is right for me, as only a company, to comment.

The Chairman: Sorry to get that in; let us go back to the question that Lord Kakkar asked about implementation.

Louise Houson: I will build on Erik's points. Having high-level sponsorship is important. When I look at it as a whole, life sciences is a really broad sector. If we are going to move forward with the implementation of this, there needs to be an understanding that there is interdependency between all the various different parts.

For example, there is a huge opportunity with data, because we have a single payer and patient records in the UK that go from the time somebody is born until the time they die. That is unique, but that dataset is only valuable outside the UK if, for example, the most recent products are being used. Then you have a comparator dataset that is valuable to research and other organisations above and beyond the UK.

Decisions on whether you want to do clinical research in the UK depend on the ability to use the data here, but also on the products that are being used. For me, the implementation governance is key, making sure that you have the broadest people involved who are experts in their own

sector. There needs to be an understanding that this is a broad ecosystem and it is all very heavily interrelated. We can make great advances in one, but unless all elements of the ecosystem are moving forward it will be very hard to make advances in one area in particular. That would be my comment.

Mark Hicken: To build on the comments, we have to have the full support and the energy of the NHS behind this. It is important to think of the NHS in this context as an engine for innovation, diffusing new innovation into the system and improving health outcomes for people living in the UK. It is only going to serve to act as a beacon attracting further inward investment for innovators where we see rapid diffusion and deployment into the system.

As laid out in the report, that is also going to require some changes around the routes to market. How do we get innovations into the system? There are opportunities for some improvement there in terms of the way NICE appraises new innovations and the NHS's decision-making around that.

Lord Kakkar: On the point made about the need for collaboration between industry and government with regard to the implementation of this strategy, how should that—and can that—be achieved? How might the issues around sufficient transparency, and therefore broader public confidence in that degree of collaborative working, be secured so as not to undermine broader confidence in the life sciences strategy?

Erik Nordkamp: You can look at some other countries and what they have done, and use that as an example. The most successful ones have a governance committee, often Cabinet led.

Baroness Morgan of Huyton: Can you be granular about where?

Erik Nordkamp: There is something like that in Belgium, as an example. It is a small country but, if you look relatively at the number of biotech companies that were there 20 years ago and now, there were a handful and now there are over 120. If you look at other aspects of the life sciences industrial strategy, it has also done particularly well.

To get back to your question, there needs to be accountability at the Cabinet level. There then needs to be a joint governance committee with the right representation to oversee that. Then, importantly, there need to be working groups. Those can be transparent. The documents that they produce can be published. Those joint working groups need to have joint representation. That is what I meant by joint working and joint solutions, because some of the issues that we are dealing with are incredibly complex.

We recognise the issues that the NHS is facing in terms of affordability, for example. It is a responsibility for all of us to make sure that we keep it sustainable, in terms of both the NHS and the constant stream of innovative products that ultimately need to benefit patients. That is the most important thing.

We noticed in the previous session that uptake was mentioned. The UK is lagging behind in terms of the uptake of innovative medicines, which means the patients are not benefiting from that. To give you some numbers, in the first year we have about 75% less uptake of innovative medicine than some of the comparator countries that we have looked at. That is something that would also need to be addressed.

Q182 Lord Griffiths of Fforestfach: I wonder if I can carry on with that question. You distinguished between a transactional approach and a partnership approach. When it comes to a partnership approach and you get down to a working party committee, or something of that nature, you represent investors and shareholders who are looking for a return on their capital. When it comes to making a decision about how much capital you are prepared to allocate in a certain situation in this partnership relationship, how does that work?

Erik Nordkamp: When you have a joint working group, proposals are put on the table. Both parties will then have to go back to their respective senior management—whoever that is in the Government, probably the Cabinet, and for us it would be our senior management—and say, “Are we supportive of that?” They would then go back in with that and say, “This is how we work forward towards a solution”. That is then put on the table and a decision gets made. That is how it works successfully in other situations that I have seen.

That is what I said: we always have our own considerations to make, and the Government have their own considerations to make. Some of the issues that we are facing are so complex. When you have, for example, a consultation process that takes 12 months, where you get an opportunity to input, and then the first time you see something is when it comes out after a couple of months, that is not necessarily the best way to find solutions for these complex issues. That is what I was talking about.

Louise Houson: There are some great examples of successful partnerships between industry, the NHS and broader stakeholders in the system. Our company is heavily involved in one of the testbed projects up in Greater Manchester. We work both with the local NHS and Verily, which provides algorithms to try to improve patient outcomes in Manchester through the improved treatment of patients with long-term conditions. There are some pockets where everybody is aligned to an outcome. Generally, that alignment is around improving outcomes for patients in the UK. I believe that is a very common goal of everybody in the sector. The ambition of the life sciences industrial strategy, if developed, is to improve outcomes for UK patients, as well as having a benefit to the UK economy. When you find that joint win, partnership works really effectively. There are some wonderful examples of that. Through this strategy, there is a great opportunity to capitalise on some of those best practices and to move the UK forward. That is exciting.

Q183 Baroness Young of Old Scone: I was struck by the evidence we had last week from the NHS, which seemed to show almost a degree of suspicion about the industry, in terms of the dichotomy between stuff

that the NHS can afford and stuff that is good for patient outcomes but that it cannot afford. In implementation terms, as representatives of the industry, do you believe that, if we could at least get faster uptake and more universal uptake of the cost-effective stuff, it would be a major step forward? Is that simply not enough?

The Chairman: At this stage, I might ask Baroness Neville-Jones to ask a question, because she was alluding to that question later on. We can take both together.

Baroness Neville-Jones: It is again on the NHS. It is very clear to all of us that this is a central player in the life sciences strategy. There are two questions. How would you characterise your current relationship between the corporate sector and the NHS, a large organisation? As we shall hear from Lord Maxton, there is more than one NHS in this country.

The Chairman: I am glad you pre-empted that.

Baroness Neville-Jones: How would you try to shift the scene? You have introduced some governance ideas, which give you some kind of strategic direction. How would you then try to get a much more living relationship, if I can put it that way, between companies engaged in R&D and the NHS?

Mark Hicken: There are two questions there. I will answer the first question first, very briefly, on whether it is enough to deploy what is cost effective into the system. We respect that the NHS and the leadership of the NHS have a challenging job to do, for sure. With the NHS, one of the tensions that we often wrestle with, which can lead to some frustration in the relationship, is the need for the NHS to deal with its budgets on an in-year and often on a siloed basis.

What we bring to them through innovation is often something that will deliver value outside a silo. It may reduce social care costs, for example. It might offset future cost of care. Hepatitis C is a great example of that. That is not realised by the individual holding a specific budget. Either within the year or within the silo, if the budget does not balance, there is a challenge to the adoption of that.

Baroness Neville-Jones: The silo cannot accommodate what you are suggesting. Is that what you are saying?

Mark Hicken: Not always, but that is often the case. This is why opportunities such as Manchester are so exciting. When you start to bring together health and social care, if you can take a medium-term view, the conversation that we can have is far less challenging. It is broadening the conversation that will help us with the adoption and diffusion of things that are affordable but are affordable in the medium term. As industry, we are prepared to have that conversation more creatively: how do we come to commercial arrangements that work for the NHS, us and our shareholders?

Erik Nordkamp: Maybe I can build on that and on Louise's point that we have some excellent partnerships in the NHS. In another role that I have for the industry, I am chairing an effort to improve the engagement that

we have with the NHS. One of the things we are in discussion with Simon Stevens on is to have a framework agreement that we can utilise to create and stimulate more of the good partnerships that we already have.

We did an inventory and, at the moment, if I am not mistaken, we have something like 80 partnerships with various companies across the NHS. They are mostly regional partnerships. There are very few national partnerships. If we are going to make this work, we have to work harder, both on the NHS side and on our side, to develop and foster that relationship. That is both as a research partner, but also helping the NHS with the challenges that it is. As Mark was saying, we do not have early enough discussions to route some of the technologies that we have in the right way into the system so that the system can get ready for some of those technologies. Some of those have the potential to save a lot of money, for example. Others are high cost but will get rid of some costs that are not necessarily in the silo that they are operating in.

Baroness Neville-Jones: Is that national-level partnership, or consultation, and ability to set the larger framework contained in your proposed governance framework, or separate from it?

Erik Nordkamp: At the moment, we are at the very early stages of discussing that framework with Simon Stevens and his team. The framework would address national ideas for partnership, but then we would set a framework for how successfully we partner on a regional or local level. The most important point is that the NHS leadership signals its intent and that it wants to partner, on both the research side and the improvement of the system side, where we can bring our expertise to bear.

Baroness Neville-Jones: In the context of an industrial strategy for the life sciences, earlier on you all talked about some kind of partnership framework at the senior level. Would that be the body to do that?

Erik Nordkamp: It has the potential to do that.

Baroness Neville-Jones: I mean in your view.

Erik Nordkamp: It depends where you do it. This is the point that Mark made. We need to make sure that the NHS is a close partner in the implementation of the life sciences industrial strategy. That is crucial, because, as many people are saying, the NHS is probably one of the major differentiators. But it is going to be a differentiator only if that is a priority for the senior management of the NHS. At the moment, I cannot see who has the accountability for the implementation of the life sciences industrial strategy in the NHS and whom we would partner with to make that happen. That is one of the first things that this new governance committee could look at, to say, "How would we make that happen?"

Baroness Neville-Jones: Thank you. That is very helpful.

Louise Houson: On the question of uptake, we welcome the introduction of the idea of the UK being a top-quartile adopter of new meds. As a UK patient, I think that it is in the best interests of all UK patients. That is

very difficult to do, unless you increase the funding in the system. Efficiencies can be found, but if we are to meet that target, which we welcome and which is in the best interests of patients, it requires some more money in the system.

Q184 **Lord Fox:** You have alluded to the barriers to partnership, but you have also alluded to the fact that there are some good examples. What caused those good examples to happen? Was it just one person with an idea? Was it so obviously sensible that it happened? How did you make these partnerships overcome the barriers that currently exist?

Mark Hicken: There is a strategy. There are opportunities built into the system. The work of the Academic Health Science Networks is specifically tasked with bringing together academia, the NHS and private companies. There is the Vanguards programme and the NHS Clinical Entrepreneur programme. There are formal programmes in the system that we all participate in as companies that provide those opportunities to come together. That is helpful, because, as with any organisation, there have to be incentives in the system. Otherwise, these sorts of programmes and opportunities get deprioritised. Then you have to bring together a coalition of the willing. We have to sit together, talk about opportunities and have a dialogue.

Lord Fox: Would extending those programmes be sufficient, or do we have to do something completely different to make it work?

Mark Hicken: There is a call for a larger role for the Academic Health Science Networks in the implementation of the industrial strategy. We would welcome that. Generally, the engagement has been positive. It has a difficult job to do with limited resources, if I am to talk for the Academic Health Science Networks, so there is more to do there. A bit more weight behind some of those programmes would probably help. As Erik says, there may be some things at a single national level that we might want to have a conversation about as industry.

Lord Fox: But we could get things moving now by doing that, rather than wait for a bigger national thing to kick in.

Mark Hicken: Yes. There is no need to wait. The governance that has been talked about, the responsibility or accountability at Cabinet level, is going to be critical, because it will possibly require moving resources around. We do not need to wait for that; there is already opportunity in the system to get moving.

Louise Houson: The right approach, one that the NHS has taken, is around piloting new initiatives. The challenge is then how you scale them. Although it is one NHS, we have to acknowledge that there are regional differences and differences in every area. That is a challenge: where you find an innovation that works, what do you learn from that, and how do you scale it across a broader ecosystem, if the benefits are shown to come through? That is a challenge.

Q185 **Lord Hunt of Chesterton:** You commented that Belgium had a very effective system in general, and yet we have been hearing about a

variety of partnerships and arrangements. In that case, is this development in Belgium being considered now in the health service? Are there good arrangements in all these trials in the NHS for importing ideas and methods from elsewhere, as well as, presumably, exporting them?

Erik Nordkamp: It is fair to say that we have sent the documentation on that to Sir John Bell, and he has taken that into account with his life sciences industrial strategy. Belgium is not the only example. There are other examples, like Singapore and Switzerland, that have all been taken into account for the life sciences industrial strategy. All we are doing is emphasising some aspects that we think need to be highlighted as particular areas of focus to make the implementation of the life sciences industrial strategy a success. The one aspect of the arrangement in Belgium which is different here is that in the UK we have a PPRS agreement.

Lord Hunt of Chesterton: What does that stand for?

Erik Nordkamp: A Pharmaceutical Price Regulation Scheme agreement. Basically, we go into an agreement with the Government to manage the overall cost of the medicines bill as an industry. That is ongoing at the moment. We have had it for the last 40 years, I think. In Belgium, they have that arrangement as part of the overall deal, but it is up to every single country to decide how it wants to do that. The UK has decided to keep it separate.

Lord Maxton: From 2013, Belgium was without a Government for 500-odd days. Are you therefore saying that does not matter?

Erik Nordkamp: The Dutch just have a Government now, but they also went quite a long time without one.

Q186 **Lord Griffiths of Fforestfach:** I have noticed one thing that has come out a number of times in what you say. The US is considered by far the best country in the world in this whole area, but you have said that you look to countries like Belgium, Singapore and Switzerland—all small countries, yet they have been very successful. Does that mean we in the UK should not be thinking the only country we should chase is the US? Should we develop our own individual strategy independent of both the very small countries and the very large country?

Erik Nordkamp: Coming from a small country, I would say—

Lord Griffiths of Fforestfach: I come from Wales myself.

Erik Nordkamp: There we go.

Lord Maxton: I think you will find that is not a country.

Erik Nordkamp: In order to optimally work together, around the world, you have clusters that serve 3 million to 5 million people. You can look at the Boston area or San Francisco, for example. They are a similar size. Belgium is a little bit bigger. Sweden is also a good example, as is Singapore. That is one of the reasons why the life sciences industrial strategy is looking at regional clusters, and we agree with that. Regionally, you need to get your act together around 3 million to 5

million people, which is what Greater Manchester is doing. That is one of the reasons why it is such an interesting example.

Increasingly, the technologies we have lend themselves to that. I will give you one example of a technology that we have, which is gene therapy. In the way that you develop that particular technology, you want to have the R&D, the manufacturing and the clinical trials all in the same area. As a company, you are looking to find a cluster somewhere that can successfully deal with all those things. That is one of the reasons why we definitely believe that would be a good thing to do.

Q187 The Chairman: Does that not support the argument that maybe you are better off, in terms of developing the life sciences strategies, identifying where a particular development in biomedical science can occur, to take it to innovation and trials et cetera in the same way? You identify where the cluster should be based, rather than a global, nationwide strategy.

Louise Houson: In many ways, that is what has happened throughout the development of the industrial strategy. The strategy board had this view of looking out to see what the key emerging themes are in life sciences. Data was one; there is a massive revolution at the moment in the use of data, and there are medical advances coming through.

In this document, Sir John has tried to highlight those key themes and pull out some areas where he believes the UK could be world leading. Data has come out as one of those, and the idea to use regional clusters to drive that innovation forward has come out in the industrial strategy. Personally, I think that is what the document has set out to do—to say, “Given the rate of change in this sector, where do we think the UK could and should win? Where do we look to move forward?” For me, that is the intent of the strategy.

The Chairman: Are you seeing this as a UK-wide strategy or an English strategy?

Louise Houson: I see it as UK wide.

Q188 Lord Borwick: How well does the UK measure up as a place for businesses to invest in life sciences? I am thinking of things like employment regulations, taxation rates, property costs and the other things that you look at on a global basis.

Louise Houson: The decisions that you take as a global company when you choose to invest in any market are multifactorial and dependent on the specific investment that you are looking to do. If I talk about the decision to place our recent investment here, it was based on our ability to get access to the best scientific talent. We believe that, with the golden triangle that exists here, this is a really good place at the moment to do early discovery-stage science. Obviously, the rents in London are not the cheapest so, if we did it in terms of the cost to build a discovery centre, London would not have been the place to do it, but we believe that this is where the best science is. There is a huge variety of factors that you would evaluate when making any decision, which are specific to the investment at that time and what you need.

Mark Hicken: I would agree. Historically, you would say yes. As I mentioned, we located our innovation centre for Europe here for a good reason—because you are close to research. You are close to where this research is deployed in the system, in the NHS. You are close to the capital as well. We are close to the City, which is helpful. That proximity helps, and the UK has a long history of delivering success in that regard and being an attractive place to come.

The question for today, which is being considered in the strategy, is about the future, particularly in a post-Brexit world. I will not try to summarise it, but that is where the strategy lays out quite clearly the work that needs to be done in order to remain competitive in the future of life sciences.

Erik Nordkamp: Quite a number of studies have been done to look into that question. The one that I quoted before, the PwC study that we commissioned, is interviewing the major companies, both large ones and biotech companies, to say “What do you base your decisions on?” What is coming out is that, in many of the areas, the UK is doing pretty well in terms of its R&D base and skilled labour. In terms of its tax incentives, it is doing pretty well. There are other areas where it can improve: for example, the way it almost account-manages companies. Where other countries are doing particularly well, they are creating almost one front door to make it easier to do business in their country.

One area that has been highlighted where we need to do better is the uptake of innovative medicines, which sometimes creates a negative sentiment in boardrooms, which permeates through to the decision-making that takes place. In terms of the NHS as a research partner, we need to make the most of it in terms of its clinical trials. Those are the areas, and the study says that, if those areas improve, the potential is there to create a couple of thousand more R&D jobs here in the UK. It quotes something like £700 million GVA that can be added to the economy. It is a major impact, and there is a clear relationship.

We are saying that there is an opportunity here to increase the odds of the decisions that are being made on a global level in the UK’s favour, if you get all these elements right. When preparing for a situation such as Brexit, where there is uncertainty and the cost of doing business is probably going up, one of the ways in which you can overcome that is making sure that systematically you address the areas where you are not doing so well. In other areas where you have strength, you should make the most of them. That will increase the odds of getting investments.

As you have seen around this table, although we are all American pharmaceutical companies, we do not make our decisions exactly in the same way. We have slightly different portfolios. We have slightly different ways in which we make decisions—but, if you get all these elements right, for all of us you will increase the odds of attracting more investment.

Lord Griffiths of Fforestfach: Could I clarify one thing? The two areas where you said we could do better both depend critically on improving the response of the NHS.

Erik Nordkamp: Yes.

Q189 **The Chairman:** That is the key point. One of the things in the life sciences strategy is about creating the so-called HARP project and creating three or four big companies over a period of a decade. Do you think that is something that is feasible for the UK?

Mark Hicken: I will have a first stab, and then my colleagues can join in. One of the things that we see as large investors is that we create opportunities for smaller companies to partner. For example, with the American pharmaceutical companies we directly support around 14,000 jobs. If you look at the number of indirect jobs that are supported through the companies that partner with us, it is three times that. From our own experience of partnering in collaborations with the NHS and small biotechs or venture funds in the UK, when you have large investors that can tolerate a little more risk across a balanced portfolio, it creates opportunities for smaller companies to prosper. It could be a very positive thing for the UK, in supporting a larger ecosystem in which smaller companies would also prosper.

Louise Houson: We do quite a lot of work as an organisation, as Mark said, to support start-ups. An example of that is a project we run called Velocity Health, which is a digital accelerator. We look for small start-ups and support them in solving some of the challenges that the NHS is facing. We run that to try to support those start-ups as they set up in the UK. I have nothing further to add.

Erik Nordkamp: The best chance of creating those larger companies is by addressing all the investment conditions. Companies like ours are still supplying the majority of the funding for those smaller companies and opportunities to collaborate to grow. You then need to guide them in the right direction afterwards. That is creating the most opportunities for small and mid-sized companies to be successful.

Q190 **Lord Mair:** To what extent does the role of universities play in your decisions as to where to locate your R&D? We have heard from previous evidence that some companies have relocated their R&D out of the UK. Obviously, there are examples of where other companies have brought their R&D into the UK. How much do our universities influence that?

Louise Houson: From our very recent perspective, significantly. One of the reasons we decided to come to the UK to invest was the golden triangle of Oxford, Cambridge and the universities in London. You have access to not only great talent but great ideas. The way that we like to work is to work with the ecosystem and collaborate with all the people who operate there. One of the UK's greatest strengths, from an R&D perspective, is having three of the top 10 universities in Europe based here. That was a huge consideration for us in deciding to place an investment here. It is critically important, moving forward, that that stays.

Mark Hicken: In many of those universities, there are very active and productive tech transfer groups that work with investors very successfully

and continue to attract investment. For example, we participate in a relatively small fund of polytherapeutics, along with a couple of other domestic companies and three universities: UCL, Imperial College and Cambridge. That looks at how we move from basic science and research, which is very strong in the UK, into translational medicine. How do we move that into producing medicines that can then be delivered to patients worldwide? We are actively looking in exactly that space, and it is a good reason to be here.

Erik Nordkamp: We also have partnerships with some universities. For example, the gene therapy one I mentioned earlier is a consortium with a couple of universities: Oxford, Cambridge, UCL, Imperial, King's College London and one more. I do not recall exactly, but I think it is Queen Mary. We are collaborating with them purely because of their expertise in this field. My global R&D head recently said, in a meeting I was at, that there are many areas and universities in the world that are excellent at the moment and are developing that. That will become one factor. There are other factors involved, and you need to get them all right, but this is obviously an important factor.

Q191 **The Chairman:** In some of the evidence we heard before, it was suggested that IP is sometimes an issue between universities and industry. Some British universities do not understand and they want to hold on to much more of the IP. Therefore, it attracts less commercialisation. Is that an issue?

Louise Houson: I am not well placed enough to answer that question. I can get a response from the company, but I do not have that information for you.

Erik Nordkamp: It is the same for me.

Mark Hicken: It is the same for me. I am not aware of any specific issues or problems.

The Chairman: That is good to know, because that is what we have been presented with. It is not true.

Q192 **Lord Renfrew of Kaimsthorn:** Can I ask you a little more about what impact you feel Brexit will have on decisions to invest in the UK?

Louise Houson: The issue of Brexit is quite a complicated one, and probably one that warrants a much longer conversation. There are some key areas of our business that will be impacted by Brexit. We can summarise those into three key themes. There is one around the regulation of products and clinical trials. The second one is around the ability to move products in and out of the UK: to move either active ingredients in or medicines in and out of the UK to ensure that UK patients can get access. The final one, which applies to most organisations, is the ability to get highly skilled labour in the UK. Brexit creates some challenges. We have to see how the negotiations play out, but there are also opportunities in that to create something unique in the UK, if we get that right.

Lord Renfrew of Kaimsthorn: Do you think the life sciences industrial strategy will mitigate the effects of Brexit in any way? Does it have a constructive impact?

Louise Houson: In part, yes. What is here is a fantastic document that sets out the vision for life sciences in the UK over the coming five, 10 or 20 years. This is very welcome, and it gives us all some clear guidance about the commitment that the UK Government have to life sciences and how we want to see this continue to be a key sector for the UK economy. It is a welcome document and very positive.

However, there are some realities of Brexit that will make it either harder or easier to operate here. Those are very real realities and they will of course be a consideration in any investment moving forward. We have to see how those negotiations play out. What you have with Brexit is a clear alignment between most of industry and government as to what is needed to ensure the effective ecosystem for life sciences moving forward. The alignment is clear there.

Q193 **Lord Griffiths of Fforestfach:** Do you think the move of the European Medicines Agency from London to Amsterdam is bad news from the UK point of view?

Louise Houson: It is a huge loss to the UK. It created lots of very highly skilled jobs. There needs to be robust business continuity plans in place to make sure that, when that agency moves, the volume of work that needs to be done can be done. It is a loss to the UK.

Erik Nordkamp: One of the things that we have called for, to give a clear signal from the UK that it wants to prioritise the life science sector, is to have a sector deal with the industry and government that addresses some of the areas where we want to see improvement as an industry. That would send a signal: "There is uncertainty here, but we are serious about this sector and want to address some of these areas that you have signalled to us that we need to improve on. Let us work together to make them better". That is what we have put to the Government. This would be the best thing, and this is also what was asked for in a letter that was sent. That is something that we need to look at.

The Chairman: Currently, MHRA is absolutely aligned with the European Medicines Agency. If that remains so, even though it might be a separate agency, would that in any way hinder doing Europe-wide clinical trials—or, for that matter, commercialising products?

Mark Hicken: No, as long as the regulations that govern the trials maintain the same alignment. We are very much in favour of remaining aligned and having, as best we can, a single regulatory process. We would not want to duplicate or reinvent process. There would be a risk there that the UK could slip down the order of being able to make regulatory filing submissions and so forth. There are resource consequences of that. As much as possible, everything should remain aligned. There is maybe opportunity after the point of the CHMP's recommendation, before the EC directive. Maybe the UK can accelerate a

little at the back end of the process, which could be an opportunity—but alignment is much better for the UK.

Q194 **Lord Hunt of Chesterton:** You say that you are working with a wide range of industry, not just life sciences, in helping the Government to minimise the downside of leaving Europe. My subsidiary question is the fact that nuclear facilities from Euratom are quite important, and we still do not, so far as I understand, have a realistic decision on that. Are you working with all these industries to push the Government, or is each industry going one by one, pleading that we have to find an optimum solution?

Louise Houson: There are key themes that will affect every single business within this country. People is a great one. There are other areas where the requirements are very specific to the sector, and therefore working with them does not necessarily provide any more clarity to the UK Government. Where it makes sense for collaboration, there is collaboration across the sector but, where there are requirements that are specific to a sector, that is where the sector as a whole responds with one voice.

Mark Hicken: Many of the companies have come together through the CBI, so there is a voice for business, which is pretty well co-ordinated.

Q195 **Lord Kakkar:** To come back to this sector deal that would provide the confidence required, how many elements of that sector deal are reflected in the life sciences strategy? If the Government were to adopt it wholeheartedly, how much of the anxiety would be lifted?

Erik Nordkamp: It comes down to the implementation of particular elements of the life sciences industrial strategy. In particular, there are two elements. One is partnership funding. If you are serious about innovative medicines, we need to see the funding increase. The second piece is, looking at the uptake of innovation, we need a more streamlined, flexible and centralised arrangement for access to our innovative medicines. Those are the two most important elements.

Mark Hicken: The bit that is not in the strategy is the agreement we would reach around pricing frameworks and the continuation of the PPRS: the stability pact that we have with government. We are in the process of starting those negotiations. That is an important element that is deliberately not included in the industrial strategy.

Q196 **The Chairman:** Thank you very much. Ms Houson, your company, MSD, has already announced the investment you are making. So has Qiagen. Are we about to hear some more announcements?

Louise Houson: You will have to ask my colleagues there, but we were delighted to make our announcement. It is a good week for this company, so thank you.

The Chairman: I hear a silence.

Mark Hicken: There are other announcements to follow, but we will have to wait for those.

The Chairman: Thank you, lady and gentlemen, for coming today. I am glad you persisted with coming here, Mr Nordkamp, because it has been an interesting session. Thank you all for coming. We appreciate it very much.