

## **Cross-Party Group on Life Sciences**

**Minute of the meeting: Tuesday 26 June 2018**

**Committee Room 4, Scottish Parliament**

### **Attendance**

*MSPs:* Kenneth Gibson (Convener); John Scott (Vice Convener); Tom Mason; Clare Adamson; Paul Wheelhouse.

*MSP Apologies:* Graham Simpson (Vice Convener); Miles Briggs; Kezia Dugdale.

*Guests:* Alison Culpan, ABPI; Andy Currie, GSK; Tracey Bowden, Pfizer; Susanne Cameron-Nielson, Royal Pharmaceutical Society in Scotland; Claire Headspeath, ABPI; Maggie Clark, Novartis; Robert Crawford, Novartis; Damien Crombie, AstraZeneca; George Davidson, GSK; Kathleen Grieve, MSD; Marie Claire MacPherson, Pfizer; Colin McInnes, Moredun Research Institute; Consulting Pharmaceutical Physician; Marilyn Robertson, Realise Solutions Ltd; Professor Frank Gunn-Moore, The Scottish Universities Life Science Alliance; Steven Burke, Industry Liaison Manager at NHS Research Scotland; David Littlejohn, Strathclyde University; Ed Hutchinson, Scottish Enterprise; Greg Stevenson, Roche; Jake Laurie, Scottish Government; John Brown, Scottish Lifesciences Association; John Macgill, Ettrickburn; Michelle Conway, Alexion; Alex Herdman, Scottish Parliament; Claire Sommerville, Scottish Government;

*Presenters:* Alison Strath, Scottish Government; Greig Chalmers, Scottish Government; Cait Murray-Green, Cuantec; Karen Facey, Evidence Based Health Policy Consultant; David Scott, ILG, Minister Paul Wheelhouse.

### **1. Welcome from Convener**

Kenneth Gibson MSP welcomes MSPs and guests to the meeting

### **2. Review of Minutes**

The minutes of the meeting of 27 March 2018 were proposed by Claire Adamson and seconded by Tom Mason and accepted.

### **3. Scottish life sciences strategy update**

#### **3.1. The work of the Life Sciences Scotland Industry Leadership Group (LSS ILG)**

*The meeting was addressed by David Scott, a member of the ILG, of Hologic Ltd, whose company Tepnel Pharma Services is based at Livingstone.*

David Scott reminded the group of the reach of life sciences in Scotland with a £4.2 billion annual turnover delivering 34% of Scotland's business are NDE expenditure, employing 37,000 people across 700 organisations.

He explained the work of the 24-member ILG with government to promote life sciences in Scotland and ensure that the Life Sciences Scotland strategy continues to align and connect with the people organisations and institutions at the forefront of the sector. He gave a detailed overview of the four pillars of Scottish life sciences strategy:

- innovation and commercialisation

- sustainable production
- internationalisation
- business environment,

and stressed the importance of this being about government working alongside industry and academia for deli of its themes of attract, build and anchor very. He reiterated that this was industry driven and industry lead and welcomed the work of MSPs to support individual companies to help deliver its ambition to reach £8 billion annual turnover for the sector by 2025.

### **3.2. The Government's Vision for Life Sciences**

Paul Wheelhouse MSP, Minister for business, innovation and energy in the Scottish government, addressed the group on the ambitions for the sector.

The Minister put particular emphasis on the work being done across government to ensure that the sector has the right people to meet its skills needs and to attract companies to locate operations to Scotland, now and in the future.

- A transcript of his address to the group is included as an appendix to these minutes.

## **4. CuanTec**

*Cait Murray-Green is Chief Executive of CuanTec, an 18 month old spin-off from Strathclyde University.*

Cait explained that CuanTec, whose name derives from Gaelic for technology from the sea, is a biotech company taking langoustines shells through a process to create antimicrobial compostable packaging, thereby addressing several serious challenges for modern society around food waste and plastic pollution.

Cait went into detail about how much food waste is rejected because it is contaminated with food wrapping and stated it was important that people made the distinction between *biodegradable*, which means that a plastic breaks down into very small particles which can then re-enter the food chain, as opposed to *compostable* where material breaks down into organic matter.

She said that CuanTec has managed through using their chemical formulation knowledge to mimic the standard of normal plastic but from biological food sources: not converting biologically created monomers to polymers but using naturally occurring biopolymers. Chitin, which is what they are extracted from langoustine waste, is the second most abundant naturally occurring biopolymer in the world. The company wants to add other natural sources as well as langoustines. She stated the source materials are in ready supply with some 6000 tonnes of langoustine waste in Scotland and 5000 tonnes of crab waste, which has the potential to supply 500 tonnes of chitin.

Cait said the CuanTec process is highly innovative using a third of the electricity of equivalent plastics production, creates no toxic sludge, does not use sodium hydroxide, is entirely biological and produces the highest possible quality chitin. This chitin is translated into chitosan, which has excellent antimicrobial properties, opening the possibility of the technology's use in Meditech and pharmaceuticals. She pointed out that there are already 3000 applications of chitin and chitosan which might benefit from sourcing using the CuanTec processes, costing less, reducing harm to the environment and cutting food waste – indeed, its antimicrobial processes, allowing food to be stored longer, will itself reduce food waste.

During a question session, Cait talked about the scalability ambitions of the CuanTec process and their intention to offer systems on site at food processors, reducing transportation impacts

and helping these companies meet their waste reduction targets. She talked about the global interest in the technology, and working relationship with Scotland's industrial and aquaculture innovation centres in Scotland.

## 5. Data

### 5.1. Scotland potential in data and how we compare with other countries

*Karen Facey is a Senior Research Fellow at The University of Edinburgh and independent Evidence Based Health Policy Consultant*

Karen explained her background as the first Chief Executive of a national agency for health technology assessment in Scotland – the Health Technology Board for Scotland – and the importance of Scotland's heritage in the practice of evidence-based medicine, a heritage that was taken forward with the launch in 1993 of the Scottish Intercollegiate Guidelines Network (SIGN) which is seen internationally as a leader in developing evidence-based clinical guidelines. She explained that the Board supported the creation of the Scottish Medicines Consortium, which has punched above its weight since it was established in 2001, followed by the Scottish Health Technologies Group which was established in 2007.

Karen explained to the Group that health technology assessment allows national policy decisions to be made about what we should recommend for use by the NHS. She said there is increasing recognition of the importance of making decisions based on evidence from a range of sources, not just clinical research. Indeed, clinical research has been moving in a different way with smaller clinical trials, so-called adaptive pathways, bringing medicines to licence at an earlier stage but this creates uncertainties with the trials producing less data.

She talked about the community health index (CHI), which is a unique identifier for every patient that has been available since the 1960s but not used consistently across all elements of healthcare. And while Scotland gathers data from cradle to grave, not all the benefits are being realised. For instance, although we can identify each prescription for each patient as the CHI is now included, the diagnosis (condition) is not captured. By contrast, linking data has helped Scotland to be a leader in quality improvement and patient safety: identifying variation in practice and reducing waste.

Karen suggested a big opportunity lies in gathering outcomes data, citing examples from the USA and Italy of collaborations with industry to set up databases to track the outcomes of individual medicines. She suggested that Scotland was now moving behind Wales and England where the Welsh Assembly Government and NICE are developing value-based healthcare approaches and considering value-based procurement – where value is rooted in the outcomes for patients. Karen suggested that the Scottish Government should bring forward a new 'Statement of Intent' on collaboration on delivering good outcomes for patients, modelled on one it produced several years ago for the adoption of innovation in the NHS.

### 5.2. The Government's new Digital Health and Care Strategy

- In April, the Scottish Government working with the NHS and third sector published Scotland's Digital Health and Care Strategy - *Enabling, Connecting and Empowering*

*Alison Strath is Principal Pharmaceutical Officer in the Scottish Government and clinical adviser to the Scottish Government Medicines Branch*

*Greig Chalmers is Head of the Scottish Government's Medicines Branch*

Alison paid tribute to the role that Karen Facey had played in some other data aspects of the Montgomery Review which were now being reflected in the new approach to ultra-often medicines. She said it was important to acknowledge the challenges for the NHS, which is expected to make perfect decisions but often without access to the data needed to do so. She

said that the new digital strategy sought to create opportunities around better data linkage, suggesting that, while primary care datasets, particularly in pharmacy, were well connected, a particular challenge lies in hospital data. With electronic prescribing and medicines administration being rolled out in hospitals, the current systems do not collect information on indications.

Grieg pointed to the new ultra-orphan medicines assessment framework as an opportunity to pilot new approaches. The small patient populations, he said, lend themselves to being tracked in new ways and to allow patients' own reported outcomes to be collected. He said that the Scottish Government would welcome a wider debate around the concept of value.

Alison welcomed the work being done by academics on outcomes data and value. She pointed to the strategic work being done on cancer medicines data by Strathclyde University and NHS Greater Glasgow and Clyde and said that, as the Government sought to take forward a Scottish Model of Value, they are keen to learn from elsewhere about how to capture value in decision-making.

During **questions**, Karen said patients are surprised that their data doesn't follow them. She added that many countries look at Scotland with envy because of its unified systems which should be able to integrate primary, community, hospital and social care data to understand, and optimise, the pathway for patients.

Alison said that to deliver the digital strategy she would hope Scotland can be smart about using existing capabilities, perhaps connecting them differently, rather than seeking to invent a big new system.

Kenneth Gibson said he was interested to hear that NHS Ayrshire and Arran are looking at data along entire patient pathways, the work being at an experimental stage. He also accepted a suggestion that cancer was often ahead of other therapy areas and that what was being learned in cancer care might well transfer across to other therapies.

Alison responded to a question about possible 'quick wins' by saying the Government wants to have conversations quickly about what is working elsewhere in the UK. She also accepted the importance of hearing the voice of patients in the debate about value.

Karen added that it was particularly important in informing decisions about medical devices, by bodies such as the SHTG, to have outcomes-based assessment of value because devices often present with a much smaller evidence base than medicines, while sometimes having the potential, if adopted, to make big changes to the patient care pathway.

## **6. Close**

Mr Gibson thanked everybody for attending.

He commented that there had been a significant amount of ground covered during the evening and that it might be best to restrict future meetings to an in-depth discussion of just two items, with a 10-minute break between them. He asked for ideas and suggestions to be sent to the secretariat and look forward to seeing everybody again at the next meeting of the group on 30 October

Life Sciences is a central component of the Scottish economy and as Dave [previous speaker] outlined employs some 37,400 people across 740 or so very diverse organisations and £4.2 billion of turnover.

It is such an important sector for Scotland, creating high-value and highly skilled employment opportunities for school leavers, graduates and experienced personnel from across the nation and beyond, but also clearly is an opportunity for a young workforce and the potential to create a lot more employment, and the impact of this cannot be underestimated.

I'd also like to say a few words about the recent Life and Chemical Sciences Skills Investment Plan launched by my colleague Jamie Hepburn last month. The skills agenda is absolutely at the heart of our Life and Chemical Sciences strategies and obviously has a huge influence over where businesses choose to locate. We hear that from inward investments when they come in, they like what they see but they always ask us about how we can guarantee the pipeline of skills and we're always having to have honest conversations about that and the actions that we are putting in to the STEM strategy, and we are trying to generate a fantastic pipeline of highly qualified individuals who are job-ready for roles in the life and chemical sciences sector and we are working hard to keep it that way.

We are also involved with the leadership aspects of the sector and there is a good joint programme taking people through a masterclass programme, developing the next generation of leaders in business who will drive forward the sector.

Skills is a central issue for the 'Business Environment' theme of the strategy, and the latest Skills Investment Plan is developed in partnership by Skills Development Scotland and the industry. It is worth stressing the point that the strategy is industry-led. That is perhaps a bit unusual for government, but it is important that a sector like this, with great ambition of 90% growth by 2025, is grounded in reality and it is built from the grassroots up and it is a combination of all businesses saying what we can do collectively: if we get the following things in place. So, it is a credible strategy led by industry and one that I would encourage you all to adopt.

The work done by Skills Development Scotland has provided a framework which seeks to enable that supply of highly skilled and educated workers to meet the needs of the sector and a new skills plan identifies four priority themes itself:

- addressing specific skills shortages,
- ensuring national coverage of skills and training provision,
- increasing exposure to understanding of industry and
- enhancing practical experience.

And the involvement of industry is essential to the skills plan achieving its goal. The more employers that get involved from across the sector, and the more initiatives that are emerging, then the more the sector itself will benefit, so we would encourage those employers who are not yet engaged in the process to think about it.

Some of the action areas include promoting work-based learning, foundation apprenticeships – which are themselves a new type of apprenticeship that Jamie Hepburn is taking forward with SDS, increasing uptake of modern apprenticeships and developing graduate-level apprenticeships as well which is another innovation in the apprenticeship space.

And, in addition, the student intake on specific courses relevant to the sector will be addressed, enhanced provision of CPD and new models of learning such as online and distance learning are also being developed for the sector.

Work placements for undergraduates will also be increased and enhanced supplementary practical courses will be developed and more industry-led classes focusing on graduate employability will be available going forward that have been in the past.

The strategy was launched at the life sciences company Charles River based just outside Edinburgh in East Lothian, and Charles River is a major employer in the region with over 1000 people working at its sites and it's a good example of an extremely diverse workforce, noticeably offering lots of opportunities for young people. The company has been particularly proactive in this area and have tailored pharmaceutical degree level qualifications in conjunction with their local university. And this approach embraces the young workforce and, by working directly with universities, provides opportunities for young people to study and to gain that crucial work experience which we believe is a real win-win for the employer and for employees alike.

As Dave alluded to, the collaborative approach across the sector is what's keeping us on target to realise our ambitious plans for increasing life sciences' contribution to the Scottish economy to £8 billion by 2025 and together with David Tudor, who is an excellent co-chair, I have been fortunate to be co-chair of the Life Sciences Scotland Industry Leadership Group for the last two years. It's been great to have been able to see the industry, how it has been shaped and driven by some of Scotland's leading life sciences business leaders including Dave Scott who I pay tribute to as a very positive member of that Group, contributing a lot of time and effort to getting the strategy up and running. And we were working closely, with industry, to meet these ambitious goals and the Scottish Government, for our part, is committed to picking up Dave's challenge to government to show that we are committed to developing the right policies in response to the needs of the sector.

So, the input of industry in shaping the strategy is crucial and we are grateful to the commitment of the members of the ILG for the passion they show in taking this forward, and we are very aware of the value of the input of the industry as stakeholders to further developing that and without them none of our targets and ambitions would be realised.

Recognising that the Scottish life sciences sector is truly innovative, it goes without saying that the priorities that we have set build upon Scotland's reputation as a nation of innovators. The Government has a role to play here and one of the main ways that we can create an environment that helps to foster innovation is to provide some financial assistance and support to research. R&D funding and support for R&D grants from the enterprise agencies now total £45 million over the next three years which is in itself is a 70% increase in the amount of funding that is available.

In recent months it has been really pleasing to see some uptake of R&D grants by a number of companies investing in R&D across a number of projects so that at the beginning of May 1 Minister announced £1.9 million of R&D funding for Synpromics Ltd, based in Roslin, to expand its programme of cell and gene therapies picking up one of the themes that Dave picked out. I visited Touch Bionics myself last month in Livingston to announce an R&D grant of £1.3 million in addition to substantial investment from the Icelandic parent company. R&D grants can lever more investment from the company owners as well, which shouldn't be forgotten. And I had the pleasure of opening the BioReliance laboratory in Glasgow with investment from Merck, a real testament to the Scottish workforce, where the company is hoping to reach around 400 staff by the end of the year. It is an expansion project.

We want more good news stories like this as we strive to realise the ambitions and to ensure the sector remains at the forefront of research with ground breaking discoveries in areas such as dementia, precision medicine and cancer treatments to name but three.

And is only by ensuring that we continue to attract world-class researchers and make sure Scotland is the preferred location for companies with a global reach, that we will remain on target to reach £8 billion 2025. What are we doing to help with this? The commitments that were made in the Programme for Government and in the Trade and Investment Strategy, where we have committed to increase Scottish Development International's presence in Europe: establishing a board of trade, trade envoys and the placing of strategic innovation investment hubs in strategic locations such as Berlin and Paris which are two of the most recent announcements. In doing this, Scotland is taking action to safeguard its global position and we have undertaken to double the number of staff across Europe working through SDI to help us to cement that.

And to finish up with some good news, a major win for Scotland, as Dave alluded to. Last week we saw the announcement of the new £56 million UK Medicines Manufacturing Innovation Centre and the Scottish Government is putting in the largest component of that, £15 million towards that. It is a world first where the industry-led centre will offer Pharma companies, from start-ups to multinational organisations, a unique service to develop and adopt novel manufacturing techniques and to adapt them into their manufacturing processes.

I'd like to say, not least the Kenny's consideration, that it is critical that we make that to work for the whole of the sector in Scotland. I know there were competing interests from Grangemouth and North Ayrshire, but I can absolutely assure you that the new centre will work for the whole of the sector, not just in the UK, but will be putting particular focus on making sure that it works for the whole of Scotland. And this will not only transform processes and technologies, allowing advanced therapies to be developed and manufactured, the speed of bringing new drugs to market could also improve drastically. I am absolutely delighted that Scotland was successful. I thank Innovate UK for helping support the project and it is a real testament to Scotland's life and chemical sciences sector.

All of this goes a long way to keeping us on track to build the industry's contribution to the economy to £8 billion by 2025.

#### Questions

*Chair of the life sciences and government affairs group of the ABPI Scotland Martin Coombes: I saw when Dave was presenting that you had one of the pillars the health Informatics capability for NHS in Scotland and we're going to be hearing a little bit about that later. I wanted to take the opportunity to ask how we can unlock that opportunity, to get that step change in the availability and accessibility to that data, so that the life sciences sector, and Pharma perhaps particularly, can make use of it and invest more into real-world data and research, commercial outcome-based approaches, and, given that the NHS side of the budget is strapped, whether the enterprise side of the budget can support making that step change?*

*Minister: One of the things that I should stress is that the Minister for Public Health Aileen Campbell, who's just been promoted to the Cabinet, her post also attends the Industry Leadership Group and there has been considerable effort in recent times to focus on procurement issues in the NHS and how to develop partnerships between the NHS and industry. Obviously there is a discussion going on about the Single National Formulary at the moment which is looking at how we work to support innovation in the health sector and one area that I know where the First Minister herself, having sat through a meeting with her, with a major Pharma company coming into meet with the government, is that a significant strength that we have is the ability to have this deep database of patient records which is a phenomenal asset if used appropriately and sensitively. But it's also the engagement with the NHS that is*

very well-established and she was expressing her desire to continue to work on how we can make the most of that in an appropriate way that helps to support the life sciences industry. So, it is one that is very much on agenda. We have obviously have an innovation centre which is focused on digital health which covers a number of aspects and one of the areas that it is looking at is our Datalab which looks at the analytics and informatics sector with digital health, and with the work with the NHS procurement team. I think we have quite a good ecosystem of supporting the use of NHS data to support therapeutic developments and it is a real asset that we got on our side in Scotland.

Greg Stevenson, National programme manager for Roche Products

We are in the interesting position of being one of those investors from a multinational perspective that invests with Scottish companies for our research work and that is around about 2.5 times what we sell in Scotland and about a third of what we invest across all of the UK comes to Scotland. How should we engage with the system around that, because largely we are invisible: we are just seen as a vendor of expensive stuff rather than working with various partners in the life sciences sector in Scotland?

Minister: What I certainly recognise is that we want to have visibility of all the important parts of the ecosystem of the life sciences sector and as Dave is alluding to, the best way to improve visibility is to engage with Life Sciences Scotland and to work with our appropriate work stream and to improve the understanding of your place in system, and how different policy decisions are impacting on you so that we can get the policy framework right for all aspects of the sector. Obviously, you're here tonight, which I would certainly encourage you to work with the Cross Party Group which is of great benefit to all MSPs from across the Chamber that they understand all the different components of the system and where there are initiatives where the parliament, or indeed by applying pressure to the government, can make to help you. Obviously, I will know by the end of tomorrow whether I am still in this position. I am keen to engage so if there are any issues that you want to raise through the ILG, then we will touch base with you either myself or my successor but we are keen to make sure that we are listening to all parts of the sector and doing all we can to support you. So, it's an open door and a willingness on behalf of ministers to meet all parts the industry and to ensure we are listening to you and we're reflecting what you are asking us to do.

George Davidson, Government Affairs GSK: *It all sounds very positive but what do you see from your perspective is the biggest threat out there to not achieving the ambition?*

Minister: I think probably it's the uncertainty surrounding Brexit; clearly around the EMA engagement with the EMA – whether or not will have associate membership which is what's being proposed by the UK Government. Obviously, we need clarity about that. I appreciate that is putting real pressure on businesses at the moment who are having to make real decisions right now about where they locate production. We saw some stats from Dave in his presentation that over 50% of the testing happening in Scotland, which is important for patients: batch testing quality assurance. We need to get those practical issues sorted so that we know where we stand. That's not me making a party political point. It is just a practical issue that we have to get sorted. We need clarity, hopefully we will get that clarity. I think we have got the talent in Scotland and the leadership and the industry is developing new leaders and I have every confidence that we have the strength in the management team in Scotland. Those, for instance, working in aspects around finance, particularly for smaller companies and the Scottish National Investment Bank could play a really important role in technology-driven start-ups going forward.

And the other issue is not just the National Formulary, it's also how we get Meditech into the NHS. How do work on the procurement process? It's something that the committees of the Parliament take a real interest in, something that government takes an interest in. We obviously have to protect patients' interests at all times but I do think we could do more to get

innovative new products into the NHS and that will give a real leg-up to companies exporting to say that they're working with the Scottish NHS which, even though were not the biggest health service in the world, is certainly a well-respected health service globally and that obviously helps small start-up companies to help make it big time and prove what they can do and I am confident that the engagement that the industry is having with Shona Robison and the team has been very helpful in moving the SNF debate forward and we need to look at how we work with Meditech as well.