

Interview: Julia Brown – Portfolio Director Strategy and Sectors, Scottish Enterprise, UK



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Heading the Life Sciences strategy for Scotland's main economic development agency Scottish Enterprise, Julia Brown recalls some of the region's unique features making it an ideal place for life Sciences investment: a historic focus on research and interest in clinical trials, great talent from world-class universities, as well as an ability to think outside of silos for better solutions in the healthcare of the future.

In 2018, Scotland boasted a GBP 2.7bn pharmaceutical sector; what are the historical reasons that have made Scotland into such a great life sciences hub?

I think there are several factors. First and foremost, for a life sciences company, there is the access to our outstanding universities and the quality of research within. Their sheer number has been key to attract pharmaceutical companies to come and look at non-clinical research collaborations and projects, but also clinical research collaborations in Scotland. We have a long history of patients being very interested in participating in clinical research in this country. We have great systems to enable efficient clinical research projects, such as the NHS Research Scotland portal we created as a single point of access. Through it, we guarantee a centralised system that can quickly assess the feasibility of a study, something CROs have been very appreciative of. The establishment of Pfizer's Inspire site or the repeated work Quintiles has conducted in Scotland are just some illustrations of Scotland's unique positioning.

How do you explain this strong focus on clinical research in Scotland?

There is a strong support system for pharmaceutical companies across the full value chain of therapeutic development including data management. About one quarter of the life sciences companies based in Scotland are involved in supporting the pharmaceutical sector. Therefore, from a pharmaceutical company point of view, they know they can access local talent, and Scotland has

indeed a very attractive value proposition for them.

Furthermore, the academic input in itself is very strong. Scotland has always been very dedicated to investment in research. Scotland represents only eight percent of the population in the UK, but 14 percent of all UK biosciences publications. Our universities are strong on all fronts. The University of Dundee has an important drug discovery unit, while the University of Edinburgh and the University of Glasgow have very strong and internationally recognised training programmes for the clinical field.

NHS Scotland [*healthcare in Scotland is devolved and Scotland has control over its own NHS operating as an independent entity – Ed.*] is also an important bonus point for companies coming to Scotland. It relies on a great asset, a single unique identifier for all citizens who access medical support here, the Community Health Index number, established after the end of the Second World War. Individuals are trackable from birth to any treatment, which is especially useful in research in certain areas such as genomics.

In addition, people in Scotland can volunteer to be part of the NHS SHARE database, through which they can easily be approached for trials at any given time. There are already several thousand people registered for the database, the target being to reach one million individuals. This eagerness is due to a strong trust between the patients and the system, and the legacy of invention that is long embedded in Scotland, something people are proud of and want to be part of.

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The last reason why Scotland is an ideal place for conducting clinical trials is that we have a small population of five million, but one that is very stable and does not move around much. Hence drop-out rates from trials are very low. That population has also—sadly—shown a long history of common diseases such as cardiovascular conditions or diabetes.

What is the importance of life sciences as a sector to Scotland's overall economy?

Life sciences in Scotland is one of our key strategic sectors. The government has recognised it is a growing sector with over four percent growth in recent years. Moreover, it provides our people with high value jobs. Productivity is extremely high, and associated talent very strong.

It is also a sector we see as a means to assist us in some of the social challenges we meet, and our population will meet in the future. Health and social care are important cost points for governments, and it is crucial we develop today the solutions for tomorrow's sustainability.

Scotland does not only invest in research and development, production is also a key topic, with for example the Medicines Manufacturing Innovation Centre (MMIC) coming to Renfrewshire that you have supported with a GBP 15 million funding. Can you present this initiative to us?

This is a long-term project and something we are very excited about. Production is a challenge for pharmaceutical companies: lead times are significant, precision medicine entails smaller batches, and the pharmaceutical manufacturing of tomorrow will be different from the one of today. Within MMIC, industry and the Continuous Manufacturing and Crystallisation Research Group at Strathclyde University joined forces to translate innovative ways of increasing manufacturing efficiency into practice.

We are very proud MMIC will be established in Scotland and are delighted to contribute in its funding. Its localisation is strategic as it will provide access to expertise from Strathclyde University in Glasgow and will allow the Centre to draw on the talent pool that is surrounding it. Scotland wants

to build an innovation and manufacturing hub in Renfrewshire and sees the need to invest in manufacturing facilities, across sectors. It will allow for talent development and ensure Scotland will be first in line to benefit from new manufacturing innovations and new technological developments.

How do you see Brexit impacting such initiatives?

Brexit will be a challenge over the coming years, but our view is longer term. The MMIC for instance is a long-term strategic investment from which we will gain know-how and expertise. Some of the testing phases for the new technologies it will encompass will be longer than the five-year period we will see most of Brexit's consequences unroll in. I reckon we will succeed in building up such a brain hub; we will foster talent in a unique way and this will make companies want to come and invest in MMIC.

How do you ensure the world is aware of Scotland's excellence in life sciences?

Scottish Development International, the international arm of Scottish Enterprise, is active in collaborations with various geographies globally. We are engaged in many talks with Japan, and a series of Japanese companies invest in Scotland and have been particularly interested in acquiring medical device companies here. Nikon, Canon, ReproCell are just a few names on the list of recent investors in Scotland. We are also very active in our relationship with the US.

Jointly with the government we are currently establishing a series of hubs in different parts of the world, for example in Dublin, Berlin or Brussels. We have pledged further resources investment in Switzerland. These are strategic moves to help us establish good and positive connections abroad beyond Brexit.

This proactive approach shows that we are aware of the competitive environment out there and we have to ensure we keep up. Our focus internally is to align all stakeholders: the academic community, the clinical community and our industrial community. We feel it is essential they all work as one to promote what we have in Scotland.

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We have already started with some campaigns: we have been working on an international initiative called "Scotland is NOW". It is aiming to raise interest for Scotland as a tourism but also business destination. As Scotland, we have a very strong diaspora which we are able to leverage upon through the Global Scots Programme, inviting our diaspora globally to help promote Scotland abroad and facilitate matters and integration for new Scotsmen and women and Scottish businesses venturing abroad.

We see an important aspect to the Brexit discussion in our responsibility to continue to attract and retain talent to the region. It is of utmost importance people still feel welcome here and see opportunity to come and work and live in Scotland. When Brexit news first broke, there was a significant amount of disquiet in that regard. For some of our smaller companies, 40 percent of their staff comes from outside the UK. The expected impact was consequently huge. Our government has subsequently reached out to stress that we do recognise this workforce as vital and will continue to welcome people from everywhere and are very keen to do so.

Within the "Life Sciences Strategy for Scotland 2025 Vision", one of the main aims is to significantly increase Scotland's life sciences sector's turnover to reach GBP eight billion by 2025. How will you reach such an ambitious goal?

Indeed, we want our life sciences cluster to double in size by 2025. In order to achieve such

ambitious targets, we need companies that make and sell products and services. This means that we have to strive for companies to be able to move from early stage to become commercial businesses. Our role is to ensure support for them, so that they can invest in manufacturing and internationalisation. Therefore—because of the timeframe—our focus group will be those companies that are today already established and see scaling up as the next step. For many of our life sciences businesses today, Europe and the UK are their primary markets. We want to help them think beyond historical markets. Asia is for example a target region. In parallel, we will also try to attract more businesses from abroad to Scotland.

What is Scotland's life sciences pitch?

Scotland really wants your business! We will go out of our way to ensure that you will be profiting from our connections, our strong research base and clinical experts. The Scottish Government works closely with industry. We provide industry with a platform to influence our political leaders with new ideas because we believe in interaction. And Scotland has great talent available, pouring out of world class universities.

Last but not least, we do not think in silos in Scotland. Our focus is not solely on pharmaceuticals and not only on human healthcare. Our understanding of life sciences corresponds to biology-related fields, from industrial biotechnology through to animal and plant health. This corresponds to the interests of many large multinational groups, where the boundaries between medical devices and pharmaceuticals are being lifted. Scotland has long been famous for its excellence in animal health—the Roslin Institute created Dolly the Sheep—and often findings from one human project can be translated to animal health, or vice versa. Scotland has a strong research base and interest in cell biology and is very active in gene and cell research. Our ability to break down the silos allows us to have data analysts collaborate with animal health scientists or oncologists. In other words, we take a team approach to solving problems, and that makes it a very stimulating environment.

We still encounter an important lack of knowledge about Scotland internationally. As Scottish Development International, it is our responsibility to ensure we pass on the message about our added value. We further stress that Scotland has some important unique features within the UK, and those features might just be what you are looking for.

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