THE PROSPECTS FOR BRITISH LIFE SCIENCES AND PHARMACEUTICALS

Britain is beginning to contemplate its future after the two-headed monster – the unprecedented credit crunch and the deep economic recession – has done its worst.

WHERE WILL THE FUTURE-FACING SKILLS, JOBS, EXPORTS AND PROSPERITY COME FROM?

We have been saying for some time: ‘It’s the knowledge economy’. The creation and application of intellectual property. The training and attraction to Britain of highly skilled knowledge workers – scientists, technologists, engineers, creative types. High added value brain work to create globally competitive breakthroughs serving global markets.

DOES THIS SOUND LIKE ANY INDUSTRY YOU KNOW?

The life sciences sector, and its most important channel of commercialisation, pharmaceuticals, is already a jewel in our economic crown. 70,000 pharmaceutical company employees support about a quarter of a million others – and similar numbers of public or charity sector researchers are a key part of the effort. The UK has some of the best regarded bioscience universities in the world, working closely with commercial companies to translate the basic bioscience in which we excel into unique therapies. And about one in five of the world’s leading medicines were discovered here. But is the sector a secure part of the future?

Businesses periodically conduct SWOT analyses – surveying their strengths, weaknesses, opportunities and threats. Let me do the same for our sector. With the situation we face, it helps no-one to paint an artificially rosy picture, so I’ll speak straight from the shoulder.

Our strengths are clear and undisputed. A great track record in basic bioscience, with a disproportionate number of Nobel laureates. And a proven strength in aspects of ‘translational medicine’ – taking the basic breakthroughs and turning them into so-called molecular ‘leads’, and turning these into candidates for clinical trial.

As technology has evolved, we have evolved with it. The UK has some of the best biologists looking for new generation medicines among the body’s proteins and antibodies. And many of the most important breakthroughs in stem cell biology have been made here.

The NHS is also a strength – but in one main sense only. It is a single system (strictly speaking of course, four systems) with the ability to establish a lifetime relationship with patients and track the course of their treatments and their outcomes as almost no one else can.

Weaknesses, though, are beginning to show. We are no longer attracting more than our fair share of patients for clinical trials. A great track record in basic bioscience, with a disproportionate number of Nobel laureates. And a proven strength in aspects of ‘translational medicine’ – taking the basic breakthroughs and turning them into so-called molecular ‘leads’, and turning these into candidates for clinical trial.

. . . We need to reassure the global leaders of the pharmaceutical industry that the UK offers a long-term, stable environment in which to do business, and ignite uptake of new medicines . . .
quality of our investigators’ work remains high, but – as aggressive competition emerges in Asia and Eastern Europe – our costs are prohibitive and our patient recruitment woefully slow.

We are also no longer a sought-after location for manufacturing. We do not even make the shortlist, when Singapore, Ireland and Bangalore offer tax breaks, regional grants and plenty of highly trained technicians. While some of the sector’s manufacturing is routine and low added value, much is the very opposite – sophisticated bioprocessing, cell cultures, sterile handling, etc.

Before depression sets in, let’s turn our eyes to the opportunities! Fundamentally, life sciences is still in its infancy. Yes, we have already cracked some of the basic and widespread health problems – most bacterial infections, blood pressure and lipid control, replacing insulin for diabetics. And these have generated large ‘blockbuster’ markets that have fuelled the industry’s growth.

Let’s be blunt. Research and development expenditure in the UK represents nine per cent of the industry’s total worldwide expenditure. However, the UK represents just three per cent of the total global sales for medicines. So as a nation, the UK is over-represented by a factor of three to one when it comes to the spend on researching medicines against the spend on buying them. This imbalance won’t have escaped the attention of global leaders who, in keeping with their counterparts in other industries, are having to make very tough choices about the future direction of their businesses.

First, we need to carve out a uniquely attractive role for the UK in the new era of open innovation. Most major companies are realising that their partnerships with innovative academics and SMEs will be critically important in new discoveries and in translating them into candidate products. And it is at this end of the innovation pipeline the UK’s skills are strongest. We need to build strong clusters of collaboration, through new funding mechanisms, new academic incentives, and new infrastructure initiatives.

Second, we must tackle much more urgently the disconnect between research and practice in the NHS. The recent decision to put research goals into the NHS operating framework is a good start. But we all know that the combination of NICE’s focus on keeping out expensive new therapies and the NHS’s reluctance to adopt them kills the UK’s potential role as a champion of innovation.

Here, a new mindset is needed. NICE needs to be turned around to become innovation-responsive: it is clear to me that the cost per QALY straightjacket is still constraining thinking. We urgently need broader measures of value.

As far as uptake of medicines in the NHS is concerned, following the Darzi Review we have the ingredients of a brighter future. But we and the NHS need to grasp this future with both hands before the likely squeeze on NHS expenditure hits in the next financial planning period.

Finally, jobs. As mentioned above, the industry supports over 300,000 jobs, directly or indirectly, and these are some of the highest added value jobs around. In recent years we have missed out on most of the new wave of process and manufacturing jobs as biological products have mushroomed. We need to put in place the tax arrangements and infrastructure that will attract new bioprocessing investment and jobs to Britain, and so exploit here the intellectual property that is so often created here.

Let me finish with good news. The Government appears to be listening. As I write, we are preparing for a summit meeting with the Prime Minister, attended by global CEOs. Let’s hope it leads to meaningful action.