



Binding Site sets the stage for Birmingham's ambition to transform healthcare globally

How can the region get the best return on a major investment in healthcare? Science Capital gathered 90 academic and business leaders on 21 September to take a fresh look at this question.

The stakes are high. The Greater Birmingham Local Enterprise Partnership is looking to inject multi-millions into major projects to bridge the north-south gap in the UK economy and create jobs in high growth sectors. The benefits of generating more cost-effective treatments would be significant, with the West Midlands looking to trim the £7 billion it spends on healthcare.

Binding Site CEO Charles de Rohan said early detection of disease is vital for cutting overall healthcare costs. His argument is straightforward. Generating accurate information about a patient's condition costs only a tiny fraction of the cost of treatment, particularly for cancer. As governments squeeze their healthcare spends, earlier diagnosis and treatment of disease will be increasingly essential for controlling costs and minimizing the complications associated with late intervention.

The Midlands-based company is already exporting diagnostic tests to 79 countries to help doctors make the right clinical decisions. Growth is pinned on expanding its international distribution of antibody-based assays for more types of cancer and immune system disorders.

Timeframes for developing a new clinical test at the Binding Site can be only 2 years from bench to bedside, far shorter than the time required to develop a new drug, but the need for sensitive new diagnostic assays to accompany new treatment regimens is clear.

Investors are joining the company as it becomes a global leader in the medical diagnostics industry. As well as a focus on medically relevant science, its key to success

is end-to-end control of product development and manufacturing, yielding a turnover of £50 million and over 500 jobs, of which roughly 75% are in the UK.

However, the market for its flagship multiple myeloma product, Freelite, is only beginning to open up, with estimated penetration of only 20% so far. Expect healthy growth for years to come with aging demographics and growing populations demanding better care across the developing world.

There are hundreds of other players in the Midlands' medical diagnostics and biotech arena, according to MedilinkWM. Examples include Medical Devices Technology International (MDTi) and The Diabetic Boot Company which are developing disruptive medical devices and services to treat patients suffering from urological and diabetic conditions, both of which represent growing markets.

Exports routes are straightforward according to Gordon McKenzie, who leads on the development of Michelson Diagnostics' new scanners that can see under the skin. The USA spends 16% of every dollar of GDP on healthcare, and represents a primary market, with over 3 million people presenting with non-melanoma skin cancer and costing £2 billion annually to treat. As the NHS becomes more competitive and cost-conscious, this UK-based firm is positioned for rapid growth.

Clinical research teams and industry are increasingly joining forces to provide state-of-the-art care. Birmingham Children's Hospital is working with McLaren Electronics to develop monitoring systems for critically ill children.

University Hospitals Birmingham (UHB), Aston University, Brunel University and Cochlear Europe are collaborating in the development of a micro-robotic drill, designed to minimise trauma to the inner ear during cochlear implant surgery for severe to profoundly deaf patients. The smart drill detects changes in structure and has potential for development in other types of surgery and also in manufacturing.

“Healthcare is a thriving regional business, but it takes cooperation”, said Michael Overduin the CEO of Science Capital. At the meeting in Birmingham, law firms and investors chipped in to advise the scores of entrepreneurial scientists and SME directors who had attended. “This spirit of working together between business and academia bodes well for the region’s culture of innovation”.

According to David Taylor, Head of Regeneration at UHB, the key advantages of the West Midlands are its large catchment area (5.4 million) and its medical and scientific excellence, which provide an ideal environment for designing clinical trials and developing translational research.

At the Science Capital event, Charles Craddock, who leads the Leukaemia Centre at UHB, showed what can happen when a forward looking trust and world leading university get together. Through a £2.2 million grant from Advantage West Midlands, UHB created a sustainable business model that has transformed patient care. The hospital is proposing to scale this model by an order of magnitude to provide advanced treatments for a much wider range of diseases, and is actively considering establishing a new Institute for Translational Medicine (ITM).

New infrastructure is important for creating the right environment for developing the best healthcare. The ITM building being considered would bring together inspired doctors, research nurses and leading scientists together with patients within one

space to focus on delivering the latest standard of care.

According to Professor Craddock, “creating jobs and engaging business is actually the easy part”. The world renowned clinical trials programme in Birmingham has already generated over a hundred new jobs and is a major attraction for industry looking to launch new drugs. Others are coming on board - Cure Leukaemia now supports research nurses across the region who provide patients with access to the latest treatments including £15 million in newly developed drugs donated by pharmaceutical companies.

Scientific progress is occurring on many fronts. Paul Moss at the University of Birmingham is developing treatments for cytomegalovirus. Infections by this virus are very common, afflicting about 60% of the population. The virus shaves four years off a person’s life span by suppressing the immune system and causing vascular disease. Professor Moss is about to start a clinical trial using anti-virals for elderly people within Birmingham to see if treatment strengthens the immune system and ultimately prolongs life.

Professor Craddock said “It was now clear that management and outlook of disease treatment is being transformed, with new therapies becoming available that are tailored to the needs of the patient and are much better tolerated.”

Michael Overduin said “Moving forward requires our politicians to allow regions to invest wisely in their greatest opportunities. The scientists prioritised linking intelligent diagnostics and targeted therapies as the best way to benefit patients.” The business community agreed that this could well be the most promising option on the table for major investment, and could continue to create jobs, prosperity and quality of life for generations.

For more information about Science Capital, go to www.ScienceCapital.co.uk