The Birmingham Institute of Translational Medicine: world class made in Birmingham

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Remarkable progress in the treatment of human disease was made in the 20th century but much remains to be done. Many cancers are still incurable and new antibiotic resistant infectious diseases pose an increasing threat. At the same time the suffering caused by chronic inflammatory and degenerative diseases such as rheumatoid arthritis, liver and kidney disease and dementia represent an ever-increasing clinical and societal problem. The development of new and effective therapies across a range of human disease is therefore urgently required.

Over the last 50 years basic scientific discoveries have transformed our understanding of the cause of human disease, which it is now clear, is often caused by abnormalities in the structure of an individual's DNA. In the last decade this information has underpinned the development of an ever-increasing range of new drugs and medical devices by a burgeoning global biopharmaceutical sector. At the same time the DNA revolution has resulted in the development of an entirely new class of diagnostic tests that can be used to tailor treatment according to the DNA fingerprint of individual patients. Taken together, these advances have the potential to transform patient outcome in the future through the delivery of personalised medicines.

In order that patients benefit as quickly as possible from these potentially life-saving new therapies it is vital that their safety and clinical activity is assessed as rapidly as possible in clinical trials. This requires a combined clinical and scientific endeavour and is critically dependent on access to large cohorts of patients in order to ensure rapid trial recruitment. Birmingham, with its impressive medical campus that co-locates the new Queen Elizabeth Hospital and the University's Medical School and sits at the heart of one of the largest catchment regions in Europe, is one of very few global cities with all the requirements to deliver such a translational medicine agenda.

At the same time the global pharmaceutical sector is increasingly recognising the central importance of rapid trial delivery in the effective commercialisation of new drugs and medical devices. Recognising the UK's clinical and scientific strengths, the government has recently identified the Life Sciences sector as an important engine of economic growth. This presents Britain's second city with a competitive advantage not only in consolidating itself as a major international centre for translational medicine, but also in developing a thriving Life Sciences sector with the ability to act as a magnet for inward investment by the global pharmaceutical sector.

In order to effectively exploit this opportunity the Queen Elizabeth Hospital, the University of Birmingham and Birmingham Children's Hospital have secured matched government funding, as part of the Birmingham City Deal, to build the £24 million Institute of Translational Medicine (ITM). This 6,000m2 facility, which will open in June 2015, will house 600 clinical triallists and create a focus for the Life Sciences in Birmingham and the West Midlands. The co-location of major clinical specialties with a clinical research facility, early-phase trial unit and hub to host pharmaceutical companies and SMEs will create a globally unique translational medicine centre capable of driving regional job creation and inward investment. Most importantly, the ITM will dramatically expand therapeutic options for patients by accelerating access to new diagnostics, drugs and medical devices, putting patients at the heart of a uniquely integrated medical campus.

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