

NBC Speech, November 1st 2006
Dr Crawford Brown

Let me add to Brian's note of welcome to the official opening of the UK National Biomanufacturing Centre (NBC) located here in Liverpool, which is the central hub of biomanufacturing in the UK. More people go to work each Monday morning to produce biopharmaceuticals meaning a pharmaceutical produced using a biotechnology process that utilises a living system, an organism such as a bacteria, than any other place in Britain. Let me give you an overview of the biopharmaceutical market and the goals of the National Biomanufacturing Centre within this context.

The biopharmaceutical market has undergone rapid expansion since its emergence twenty five years ago and has some impressive statistics. By the end of this decade it is expected that 17% of all prescriptions written will be biopharmaceutical products and as a product class the market for Biopharm products has been observed as the fastest growing sector within the pharmaceutical industry. Over 130 such products are currently being marketed around the world including thirteen blockbuster drugs. The global market for biopharmaceuticals, which is currently valued at around US\$50 billion, has been growing at an impressive compound annual growth rate of 19% over the previous five years. A trend that looks to continue with innovative science driven by the human genome project accelerating the market into targeting a huge range of diseases from growth deficiency to arthritis to HIV and especially cancer, both treatment and prevention.

But this rate of growth comes with challenges. As an international business since we were established in 2000 we have undertaken biopharmaceutical development projects with clients literally around the world in Asia, Africa, Australasia, USA and of course Europe. While the locations are different a common theme emerges, a shortage of experienced biopharmaceutical development and manufacturing scientists. Establishing a world-class facility such as the National Biomanufacturing Centre is necessary for this class of pharmaceutical - but it is not sufficient. Trained staff that can design processes, develop the analytical methods that provide the tools to control the purification of products from the biochemical soup of living cultures and deliver consistent clinical production is essential. And indeed, one of the goals of the National Biomanufacturing Centre project is to contribute to the resources within the biotech community in the UK for trained staff through training programmes. The project has already successfully benefited a number of individuals from several higher education institutions including Sheffield, Liverpool and Chester Universities.

I said the National Biomanufacturing Centre project because the National Biomanufacturing Centre is only one component by providing world-class facilities.

The NBC project has several goals:

- It also seeks to overcome two other barriers especially critical for early stage companies coming from British Universities where there is no shortage of good ideas. Firstly, provision of advice to SMEs on the technical, commercial and regulatory challenges for biopharmaceutical development. This service has been operating for over 2 years and around 120 groups have been provided with advice, ranging from Amoebics, a spin out of Edinburgh University developing innovative MRSA treatments, spin outs at an even earlier stage from Cardiff University developing cancer treatments through as recently as last week to an Oxbridge stock market listed biotech looking at manufacturing design options for their products. Overall companies across not only our region but across the UK have gained benefit from this service so

that they can, as we would say, ***begin with the end in mind*** at the inception of their drug development programmes.

- Additionally, independent of Eden Biodesign as a commercial operator, the Northwest Regional Development Agency (NWDA) administers an access fund that permits financial support to assist SMEs purchase our services. To date, awards have been provided to several groups including Onyvax an innovative cancer vaccine company located in London, Aquapharm Biodiscovery in Oban Scotland seeking to mine the biodiversity of marine organisms for pharmaceutical application and Liverpool University which is developing new therapeutics for cancer.
- An additional goal is for the centre to act as a promoter of Liverpool and the UK for inward investment for life science based businesses. A measure of the success already achieved even before the centre is officially open are the visits of over a dozen Japanese delegations, along with those of Korea, Australia and the United States over the past two years. It should not be forgotten the major investment and support that the city has provided to the project linked to MerseyBio the commercial incubator company of Liverpool University.

I think it is appropriate to highlight that the concept for the centre arose from Liverpool University. In the late 1990s, Prof Julian Crampton the then pro-Vice Chancellor of Liverpool conceived that along with the redevelopment of the life science school that a centre for biopharmaceutical GMP production would be a major asset to UK science. It quickly became apparent that the skills of GMP production and drug development are principally those of the commercial sector hence the concept was developed as a private/public partnership. Prof Crampton then passed on the baton so to speak to Dr Linda Magee without whom this project would never have come to fruition. As I know Dr Cox is going to expand on Dr Magee's contribution I would simply like to acknowledge both Julian and Linda's vital role and see the opening of the centre as a reward for their endeavors over the past few years along with many others that are too numerous to mention.

So what of the future, the goal for Eden Biodesign as the commercial operator and that of the NWDA co-inside: ***We aim to establish the National Biomanufacturing Centre as Europe's leading centre for biopharmaceutical development and expand our global services thereby ensuring an on going commercially successful enterprise located in Liverpool.***

On the public side of the project we will build on our apprenticeship & skills program by widening our involvement from our current University and College training initiatives to include local schools. And I am delighted to announce today a new program where Eden is entering into a formal arrangement with the School of Biomolecular Sciences, Liverpool John Moores University in being able to offer a Summer Bioprocess training school open initially to North West biotech and pharmaceutical companies. The course, to be run in 2007 will focus on equipping individuals with specific and unique skill sets required for Biomanufacturing. It is hoped that the course will in time act as a module to fit within the framework of a dedicated Bioindustry apprenticeship and talk to the recently published training needs highlighted in the life sciences skills survey commissioned by the Learning & Skills Council (LSC), JET South Liverpool and MerseyBIO with considerable input from Novartis Vaccines.