

TroVax[®]: cancer

Licensing discussions at advanced stage
International Phase III TRIST trial for renal cancer in progress
FDA Special Protocol Assessment for Phase III TRIST trial received
Positive recommendation for orphan drug designation in EU for renal cancer
Encouraging results from Phase II trials in renal, colorectal and prostate cancer
UK clinical network committed to Phase III trial in colorectal cancer

MetXia[®]: cancer

Three dose levels of cyclophosphamide alongside MetXia successfully evaluated in second stage of Phase II trial in pancreatic cancer

5T4 targeted antibody therapy/CME-548: cancer

Wyeth completed key preclinical studies

Highlights

ProSavin[®]: Parkinson's disease

ProSavin outperformed standard treatment in preclinical studies
Manufacturing of clinical material initiated in GMP facility
Regulatory process for start of clinical trials underway

RetinoStat[®]: retinopathy

Preclinical results with optimised clinical candidate confirmed efficacy
Preparations for clinical trials initiated

StarGen[™]: Stargardt's disease

Preclinical programme initiated in collaboration with the Foundation Fighting Blindness

Technology licensing

LentiVector[®] technology licensing agreement with GlaxoSmithKline

Company overview

OPERATIONS

Oxford BioMedica is a biopharmaceutical company established in 1996 as a spin out from Oxford University and is listed on the London Stock Exchange. The Company has raised £117 million (before costs) through market issues of equity since its inception and has no debt obligations. The Company has a staff of 72, mainly based in its laboratories and offices in Oxford. It also has a wholly owned subsidiary, BioMedica Inc, in San Diego, USA.

Oxford BioMedica has created a broad pipeline of development candidates that use genes as the mediators of a therapeutic effect. The Company's gene-based products deliver therapeutic molecules, whilst its gene-based immunotherapy products deliver genes that recruit the patient's immune system for therapeutic benefit. The genes are delivered by the Company's highly engineered viral systems.

Oxford BioMedica has established a pipeline of gene-based product candidates. The most advanced candidate is being evaluated in an international Phase III trial. In addition to its technical research skill-base, the Company has in-house clinical, regulatory and manufacturing capabilities. External organisations are used to provide certain capital and labour intensive services such as manufacturing and management of clinical trials but always under the close supervision of the Company's staff. The Company maintains and continues to build an extensive intellectual property portfolio. The product candidates and technologies are protected by over 80 patent families, which represent one of the broadest patent estates in the field.

Oxford BioMedica has corporate collaborations with Wyeth, Intervet, Sigma-Aldrich, Viragen, MolMed and VIRxSYS; and has licensed its LentiVector technology to a number of companies including Pfizer, GlaxoSmithKline, Merck & Co and Biogen Idec.

PIPELINE

The Company's development pipeline is focused on treatments for cancer and neurological diseases. Two products are currently in clinical trials and at least two further candidates are expected to enter clinical development in 2007. The oncology pipeline comprises three major product candidates as well as a product for treating cancer in companion animals. The neurotherapy programmes principally address diseases associated with ageing, inherited conditions and vision loss, where there are inadequate or no current treatment options for patients. The neurotherapy development portfolio expanded to six therapeutic candidates during 2006, with the addition of the preclinical candidate, StarGen, for Stargardt's disease.

PRODUCT CANDIDATES

TROVAX®: RENAL, COLORECTAL AND PROSTATE CANCER

TroVax is Oxford BioMedica's lead cancer immunotherapy product. It is designed to stimulate a specific anti-cancer immune response and has potential application in many tumour types. The product induces an immune response against the tumour antigen 5T4, which is broadly distributed throughout a wide range of solid tumours. The product consists of a Modified Vaccinia Ankara (MVA) virus, which delivers the gene for 5T4. Vaccinia viruses are widely used as delivery systems for antigen-specific vaccines. MVA is the vaccinia virus strain of choice because of its excellent safety profile and its effectiveness in stimulating an immune response. Once the immune system is activated by TroVax, antibodies and killer T-cells can migrate round the body seeking out and destroying cancer cells bearing 5T4.

Over 180 patients have now been treated with TroVax in ten clinical trials in renal, colorectal and prostate cancer. TroVax has

been safe and well tolerated in all trials to date. There have been no serious adverse events related to the product. The clinical data show that over 95% of patients treated with TroVax mount an anti-tumour immune response to the 5T4 tumour antigen, and, in a number of clinical studies, there is a strong correlation between the level of the immune response elicited by TroVax and the clinical benefit to patients.

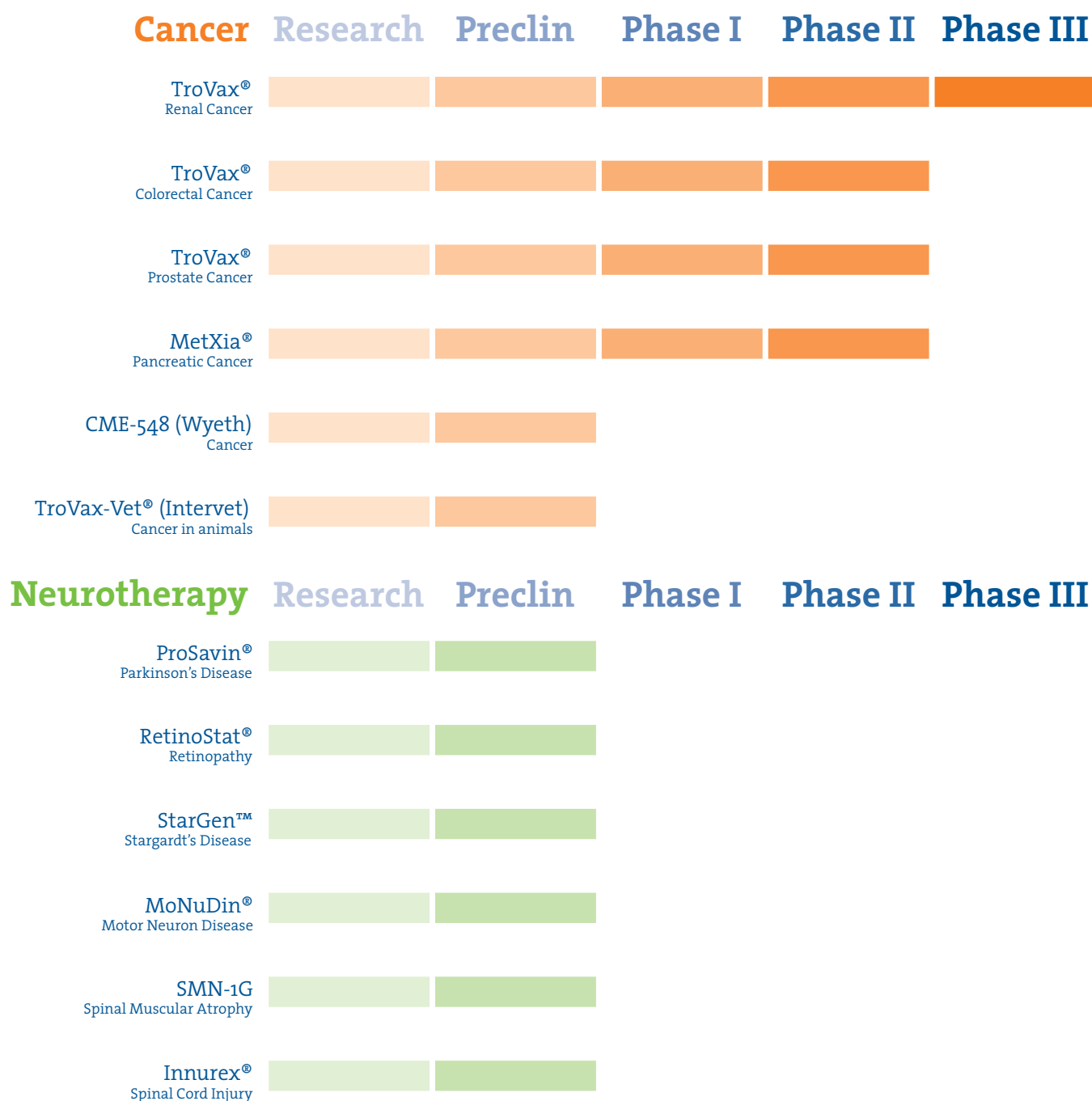
In 2006, Oxford BioMedica started a 700-patient Phase III trial of TroVax in renal cancer. The trial is designed to support initial product registration for TroVax in the USA in 2009. TroVax has attracted external support from Cancer Research UK and clinical trial networks in both the UK and the USA. These organisations are conducting or planning clinical trials, including Phase III trials, with TroVax in various cancer settings.

Worldwide cancer vaccine revenues are estimated to reach approximately US\$6 billion by 2010 (Arrowhead). Renal cell carcinoma (RCC) is the most common form of kidney cancer. More than 150,000 people are newly diagnosed with RCC worldwide each year. Prognosis is very poor. If RCC has metastasised to other organs at the time of first diagnosis, the five-year survival rate is less than 5%. In the USA and Europe, RCC accounts for more than 33,000 deaths each year. With ongoing development in renal, colorectal and prostate cancer, TroVax is addressing markets that currently exceed US\$8 billion based on annual sales of existing cancer treatments (Datamonitor).

METXIA®: PANCREATIC CANCER

MetXia is Oxford BioMedica's cancer therapeutic, designed to enhance the effectiveness of cyclophosphamide, which is a widely used cancer therapy. MetXia uses a highly-engineered retrovirus gene delivery system to deliver a specific human cytochrome P450 gene. The product is administered locally to the tumour site, enabling the P450 enzyme to be produced locally. The enzyme activates the prodrug

Product pipeline



cyclophosphamide at the tumour site, thus increasing the effective concentration of the anti-tumour, cytotoxic derivative of cyclophosphamide in the tumour mass. In principle, this should enhance the local efficacy of cyclophosphamide and reduce the need for systemic administration. This in turn should reduce the dose limiting toxicity of the drug and expand the therapeutic window.

MetXia is potentially useful in the treatment of a number of solid tumours and their metastases, particularly those where cyclophosphamide is commonly used as a treatment. Two Phase I/II trials in patients with advanced breast cancer and some cases of melanoma have been successfully completed. Two formulations of MetXia were shown to be safe and well tolerated. The P450 gene, delivered by MetXia, was readily detected in the treated tumours and clinical benefit was seen in some patients, including tumour size reduction.

Current development efforts are focused on the treatment of pancreatic cancer through direct administration of both MetXia and cyclophosphamide to the tumour. In the first part of a two-stage Phase II trial in this indication, the optimal dose of MetXia was identified. Patient recruitment is ongoing in the second part of the trial to optimise the dose of cyclophosphamide.

Pancreatic cancer is the fifth leading cause of cancer-related mortality in the USA with over 30,000 deaths attributable to this disease annually. It is one of the most aggressive forms of cancer with a five-year survival rate in the low single percentage digits, which has created a critical need for novel treatment options. Annual sales of existing therapies for pancreatic cancer are approximately US\$600 million (Datamonitor).

5T4 TARGETED ANTIBODY THERAPY/CME-548 (WYETH): CANCER

Wyeth has licensed the rights to Oxford BioMedica's proprietary antibody against the 5T4 tumour antigen for the treatment of cancer. Wyeth is using the antibody to develop an antibody-toxin conjugate, based on its expertise with the anti-cancer agent calicheamicin. Wyeth has previously demonstrated the validity of the concept of targeted toxins through its successful development of Mylotarg® for the treatment of acute myeloid leukaemia. Preclinical development of the 5T4 targeted antibody therapy is ongoing and, if warranted, initial clinical trials are expected to be in patients with any solid tumours that express the 5T4 tumour antigen. In preclinical studies, the product, denoted as CME-548 by Wyeth, has shown improved survival in standard models of cancer.

The collaboration with Wyeth is worth US\$24 million in upfront and milestone payments, plus royalties on product sales. The collaboration was signed in 2001 as an option to license and, in 2003, Wyeth exercised its option to develop the product.

CME-548 could be developed to treat any solid cancer that expresses the 5T4 tumour antigen, which, like TroVax, represents a multi-US\$ billion market. Wyeth is responsible for the development and commercialisation of the product.

TROVAX-VET® (INTERVET): CANCER IN ANIMALS

TroVax-Vet is Oxford BioMedica's veterinary 5T4 tumour antigen-targeted immunotherapy programme for the treatment of cancer in companion animals, focusing on dogs and cats. The product is licensed to Intervet, which is the world's largest animal vaccine company and a unit of Organon BioSciences. Preclinical development is largely complete, and a regulatory submission for the start of field trials in dogs with naturally occurring cancer is expected in 2007.

Cancer is a major cause of death in pet dogs and cats, with an estimated prevalence of ten million worldwide. There are no cancer vaccines currently available for these animals, and it is estimated that the market could exceed US\$200 million. Under the collaboration, Intervet is responsible for development and commercialisation and Oxford BioMedica receives development milestones and royalties on product sales.

PROSAVIN®: PARKINSON'S DISEASE

The Company's lead neurobiology product, ProSavin, provides a novel approach to the treatment of Parkinson's disease. ProSavin uses a LentiVector system to deliver the genes for three enzymes that are required for the synthesis of dopamine. The product is administered locally to the region of the brain called the striatum, converting cells into a replacement dopamine factory within the brain, thus replacing the patient's own lost source of the neurotransmitter.

Preclinical studies have shown that ProSavin appears safe, well tolerated and provides long term efficacy in industry-standard models of Parkinson's disease. The most recent data show almost total recovery of movement behaviour in a model of the disease from about five weeks after a single administration of ProSavin through to the latest time point of 15 months. This outcome is rarely achieved in this model according to the literature.

Oxford BioMedica has initiated the regulatory process with a European agency

for approval to start clinical trials of ProSavin. The clinical material is being manufactured and a Phase I/II trial in patients with moderate to late-stage Parkinson's disease is being planned.

Parkinson's disease is a chronic, progressive neurodegenerative movement disorder, characterised by tremors, rigidity and difficulty of movement. There are about 1.5 million people living with the disease in the USA (National Parkinson Foundation). Typically, the disease develops after the age of 65 and so, as the population is living longer, the market is likely to expand. The current worldwide market for Parkinson's disease therapies is about US\$3 billion. None of the existing products provide long term relief from symptoms, which is the expectation for ProSavin based on the preclinical data. In addition current treatments are complicated by side effects.

RETINOSTAT®: RETINOPATHY

RetinoStat is the Company's novel gene-based treatment for neovascular age-related macular degeneration (AMD) and diabetic retinopathy (DR), which are caused by the unregulated and aberrant growth of leaky and disruptive blood vessels in the retina. The product uses the LentiVector system to deliver two anti-angiogenic genes that block the formation of new blood vessels in the retina. The therapeutic genes, angiostatin and endostatin, have been exclusively licensed by Oxford BioMedica for use in treatments of ocular diseases from Entremed Inc.

Oxford BioMedica has shown that RetinoStat, when administered to the eye, targets the retina with great accuracy and can effectively deliver the anti-angiogenic proteins. Preclinical studies have shown statistically significant efficacy in an industry-standard model of AMD. Additional studies are ongoing at the Johns Hopkins Hospital in the USA, in collaboration with a US charity, the Foundation Fighting Blindness. These studies are designed to support a regulatory submission for clinical trials, which are expected to start in 2008.

AMD and DR are major causes of blindness in the developed world. AMD affects an estimated 25 to 30 million people in the western world. Neovascular AMD accounts for 90% of all severe vision loss from the disease. DR affects approximately 50% of people diagnosed with diabetes.

Existing treatments for both conditions have to be administered many times over many years by direct injection into the eye. RetinoStat has a potential competitive advantage, as it would require only a single or infrequent administration. Analysts' estimates, published in the Wall Street

Journal, suggest that sales of an effective treatment for macular degeneration could exceed US\$1 billion per annum.

STARGEN™: STARGARDT'S DISEASE

StarGen is Oxford BioMedica's novel gene-based therapy for the treatment of Stargardt's disease. The disease is caused by a mutation of the ABCR gene which leads to the degeneration of photoreceptors in the retina and vision loss. StarGen uses the Company's LentiVector system to deliver a corrected version of the ABCR gene. It is administered directly to photoreceptors in the retina.

StarGen has shown preclinical efficacy in the only available model of Stargardt's disease. A single administration was effective for the duration of this six-month study. Further preclinical development is ongoing at Columbia University in the USA, in collaboration with the Foundation Fighting Blindness (FFB), which is also collaborating on the RetinoStat programme, and FFB's support organisation, the National Neurovision Research Institute.

Stargardt's disease is the most common juvenile degenerative retinal disease with a US and EU population of approximately 50,000 cases and an incidence of 1/10,000 (600 new cases per year). There are no current treatment options for patients but, based on prevalence, the commercial market could exceed US\$75 million.

MONUDIN®: MOTOR NEURON DISEASE

MoNuDin is the Company's LentiVector-based product candidate for treating motor neuron disease. The product is administered directly into relevant muscle groups, and delivers the gene for vascular endothelial growth factor (VEGF), which protects motor neurons. The product is being developed initially for the treatment of amyotrophic lateral sclerosis (ALS).

The Company has published preclinical efficacy results in an industry-standard model of ALS, which suggest that MoNuDin may be one of the most effective potential therapies in the field to date. Further preclinical development is ongoing. The programme has received financial support from charitable organisations in both the USA and the UK.

ALS, often referred to as Lou Gehrig's disease, is the most common form of motor neuron disease that affects nerve cells in the brain and the spinal cord. According to the ALS Survival Guide, 50% of ALS patients die within 18 months of diagnosis and 80% die within five years. In the USA, an estimated 30,000 people are living with ALS and nearly

6,000 new cases are diagnosed annually (ALS Association). There are currently no available treatments that halt or reverse ALS.

SMN-1G: SPINAL MUSCULAR ATROPHY

SMN-1G is Oxford BioMedica's LentiVector-based therapeutic to treat another form of motor neuron disease, spinal muscular atrophy (SMA). This disease is caused by a mutation in the SMN1 gene that leads to a deficiency in the survival motor neuron (SMN) protein. SMN-1G restores levels of SMN protein by delivering the corrected version of the SMN1 gene using the LentiVector system.

Oxford BioMedica has published preclinical efficacy results with SMN-1G in a model of SMA and further preclinical optimisation studies are ongoing. The programme has previously benefited from financial support from the US charity, FightSMA.

SMA is one of the most common inherited causes of death in childhood and is, as yet, incurable. Reduced levels of active SMN protein have a severe affect on motor neurons and lead to muscle deficiency throughout the body. Over 25,000 Americans are believed to suffer from SMA, which makes the condition comparable in prevalence to ALS and cystic fibrosis. As with ALS, there is a pressing need for effective treatments.

INNUREX®: SPINAL CORD INJURY

Innurex is the Company's gene-based product for the treatment of spinal cord and related injuries through nerve regeneration. Based on the LentiVector technology, the product carries the gene for a subtype of the retinoic acid receptor (RAR β 2) that can induce nerve cells to re-grow. Oxford BioMedica collaborates with King's College London, UK, on the Innurex programme.

The Company has reported encouraging preclinical results in models of avulsion (stretch) injury. More recently, preclinical studies in models of spinal cord injury have shown a statistically significant improvement in both sensory and motor functional ability with Innurex compared to placebo. These data suggest that Innurex may be useful in the treatment of both stretch injury and the technically more challenging spinal cord damage. Further preclinical studies are ongoing. Oxford BioMedica's collaboration partner for Innurex, King's College London, received a grant for the programme in 2004 from the Christopher Reeve Paralysis Foundation.

Within the field of neurobiology, the ability to regenerate and repair nerves has been a long sought goal, as this could form the basis of treatments for nerve damage and

spinal cord injury. These debilitating conditions affect approximately 20,000 people per year in Europe and the USA and, as there are currently no effective treatments, prognosis for functional recovery is generally poor. The commercial market for an effective treatment could be as large as US\$2 billion.

TECHNOLOGY

Oxford BioMedica has developed proprietary gene delivery technologies, which are used in its therapeutic product candidates, but that also have other applications ranging from disease modelling and target validation in drug discovery to the creation of transgenic animals for biomanufacturing.

Oxford BioMedica's proprietary LentiVector technology represents one of the most advanced gene delivery systems currently available. Licensed users include Biogen Idec, GlaxoSmithKline, Merck & Co and Pfizer. Oxford BioMedica also has a strategic alliance with Sigma-Aldrich to develop and commercialise LentiVector-based reagents for the research market. As a platform for gene therapy, it has broad utility for the treatment of chronic disorders such as neurodegenerative and ocular diseases.

Based on lentiviruses, LentiVector offers permanent gene transfer to a broad range of dividing and non-dividing cells, including neurons and retinal cells, in a stable and efficient fashion. The LentiVector technology is designed to be safe and non-toxic, as no viral genes are taken into the target cell.

The Company has shown in preclinical studies that gene expression using the LentiVector technology is maintained for more than 18 months. To date, Oxford BioMedica has not identified a situation where expression has ceased during the course of an experiment. Oxford BioMedica has established a broad pipeline of neurotherapy product candidates based on its LentiVector technology.



“We achieved a key development milestone by commencing a Phase III clinical trial with TroVax”

