

rational therapeutics

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Physiomics plc

("Physiomics" or "the Company")

Physiomics to collaborate with Green Biologics Limited and North Energy Associates Limited in the Carbon Trust funded project:

Advanced Fermentation Process for Butanol

Physiomics (AIM: PYC), the Oxford, UK based systems biology company, is pleased to announce that the Company together with Green Biologics Limited (GBL) and North Energy Associates Limited has been awarded a total grant for £268,000 from the Carbon Trust for a project to demonstrate an Advanced Fermentation Process for Butanol.

The aim is to improve the microbial fermentation process for producing renewable butanol (a "next generation" biofuel) using solventogenic Clostridia. The project will focus on improvements in butanol productivity using a novel bioreactor design together with improved microbes and cheaper more sustainable feedstock found in the UK. Example feedstock includes sugar beet pulp, distillers dried grains & solubles (DDGS) and municipal solid waste.

The advanced butanol fermentation process should reduce production costs below \$500/ tonne making it cost competitive with first generation biofuels. In addition, the use of renewable and sustainable feedstock supports significant savings in net greenhouse gas (GHG) emissions in the UK, which could total 1,230,000 t eq. CO_2 / annum by 2020.

GBL will lead, coordinate and manage the project. GBL will deliver improved biocatalysts and demonstrate a novel fermentation process at laboratory and pilot scale. Physiomics will model microbial population and provide input into how best to optimise the fermentation process. North Energy will complete life cycle assessment (LCA) of the process on model biomass feedstock applicable to the UK.

The project will occur in two stages: the first stage of the project is due to be completed by 31 March 2011 and the second stage is due to complete 18 months later on 30 September 2012. Full grant funding (for the second stage) and continuation of the project beyond stage 1 is



conditional on achieving certain technical milestones during stage 1 for which Physiomics will receive approximately £31,000.

The grant is from the Carbon Trust's Entrepreneurs Fast Track scheme which provides a customised package of research and development funding, expert advice and enhanced networking opportunities to the leading UK clean tech ventures with the highest growth potential.

Physiomics shall grant GBL an exclusive licence to use the intellectual property they develop during the project for butanol production. In return, GBL shall pay Physiomics a royalty upon commercialisation that is commensurate with their contribution to reducing the cost of butanol production.

Dr Christophe Chassagnole, COO of Physiomics, said

"We are delighted that our project has been selected by an innovation-supporting body such as the Carbon Trust. This is also a landmark in our diversification strategy as it would be the first non-pharmaceutical application of our technology. We look forward to working with the partners of the consortium"

Dr Edward Green, CTO of Green Biologics Limited, said

"The funding enables us to accelerate our work on non-edible feedstock prevalent in the UK. This not only helps drive down the cost of bio-butanol production making it cost competitive for the biofuel market but also improves the sustainability of the process and reduces GHG emissions compared with first generation biofuels. This technology breakthrough offers a tremendous opportunity to commercialise the butanol fermentation in the UK.

Dr Nigel Mortimer, MD of North Energy Associates Limited, said

"North Energy is very pleased to be able to contribute our established expertise in carbon accounting to this important development which offers significant improvements in greenhouse gas emissions reductions. The development and commercialisation of new processing technologies for the production of sustainable biofuels from diverse and abundant feedstock is essential for the transformation of our transport systems to practical low-carbon alternatives."

Enquiries:

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Information on Physiomics plc

Physiomics (AIM:PYC) is a computational systems biology services company applying simulations of cell behaviour to drug development to reduce the high attrition rates of clinical trials. As 80-90 per cent of all clinical drug candidates fail to reach the market, estimates show that an overall ten per cent improvement in success rates could reduce the cost of one drug's development by as much as \$242 million, from the current estimate of around \$800 million.

Physiomics develops computational systems biology models to predict and understand cancer drug efficacy from pre-clinical research to clinical development. Physiomics has created detailed mathematical models incorporating the most important molecular events taking place during the human cell cycle and apoptosis processes. The company's SystemCell® technology enables the simulation of populations of "virtual cells". The models are used to optimise compound design, as well as to design drug schedules and combination therapies.

Physiomics, based in Oxford, UK, was founded in 2001, and floated on AIM in 2004. For further information, please visit www.physiomics-plc.com

Information on Green Biologics Limited

Green Biologics Ltd (GBL) is an industrial biotechnology company that provides innovative bio process solutions for butanol in a global market. The technology produces environmentally friendly and sustainable biofuels with significant potential for GHG reduction by delivering technical improvements in the fermentation process accommodating a wide range of low cost and sustainable agricultural by-products and waste streams resulting in a faster, cleaner and more efficient process.

For further information, please visit www.greenbiologics.com

Information on North Energy Associates Limited

North Energy Associates Ltd. is a long-established renewable energy and sustainability consultancy. From offices in Northumberland and Yorkshire, the team has delivered renewable energy and sustainability solutions to business, industry and commerce in the UK and beyond since 1992. One particular area of specialisation has been life cycle assessment, in general, and carbon accounting, in particular. Our clients include many biofuel developers and producers as well as government department and agencies.

For further information, please visit www.northenergy.co.uk