

**PhotoBiotics' CSO hosts
Antibody Drug Conjugate
(ADC) event at Berlin Novel Protein Therapeutics Conference**

London, 27 September 2011: Dr Mahendra Deonarain, Reader in Antibody Technology at Imperial College London and PhotoBiotics' Chief Scientific Officer will host an evening discussion seminar at Informa's **7th Annual R&D of Novel Protein Therapeutics Conference**¹. Dr Deonarain, an expert in recombinant antibody fusion proteins and conjugates will be reviewing the re-emerging and promising field of ADCs and looking ahead to the next generation of ADC technology, including that of PhotoBiotics' **OptiLink** platform².

When used as cancer therapeutic agents, unmodified monoclonal antibodies (mAbs) extend survival by only 5-6 months, and drug resistance develops against many mAbs because of mutations in cell-signalling pathways. Although conventional anti-neoplastic drugs such as doxorubicin, daunomycin, vinca-alkaloids and taxanes do kill cancer cells, they do so with limited selectivity and high toxicity to normal cells, yielding only marginal therapeutic indices. On the other hand, ADCs offer the selectivity of mAbs combined with the potency of anticancer drugs.

ADCs have been around for over 30 years, but early clinical trials in the 80s and 90s met with failure due to side-effects, limited efficacy and quality control issues. New technologies have led to more specific human antibodies, more efficient linking technologies and a wider range of potent drugs tailored to particular cancers. The first of these new generation ADCs has just been approved for Hodgkin's lymphoma, and many more are in the pipeline³. Pharmaceutical companies are taking a real interest in this area again, leading to licensing opportunities for biotechnology companies specialising in small molecule drugs and antibody-drug conjugation technologies.

"It's an exciting time to be working in the area of ADCs", says Dr Deonarain, "...there's real innovation happening and a lot of promising new technologies are emerging. We're going to see dozens of new ADCs come through clinical development and ones based on antibody fragments rather than whole mAbs could tackle difficult solid tumours where penetration of the tumour is a real issue".

Notes for Editors:

1. 7th Annual R & D of Novel Protein Therapeutics, 27 - 28 September 2011, Maritim proArte Hotel, Berlin, Germany.

2. For more information on PhotoBiotics' technology, please contact: **Dr Mahendra Deonarain**, PhotoBiotics Ltd, Dept of Life Sciences, Biochemistry Building, Imperial College London, Exhibition Road, London SW7 2AZ., UK. Email: m.deonarain@imperial.ac.uk. Tel: +44 (0)2075945318. Mob: +44 (0)7711580914.

3. Pharma interest surges in antibody drug conjugates, Sarah Webb, *Nature Biotechnology*, April 2011.

<http://www.nature.com/nbt/journal/v29/n4/full/nbt0411-297.html>

About PhotoBiotics (see www.photobiotics.com)

PhotoBiotics Ltd is a multidisciplinary company spun out from Imperial College London to explore ways of targeting drugs directly to tumours, thus enhancing the efficacy of cancer treatment while also reducing unwelcome side-effects. The Company has developed a unique and simple antibody-drug conjugate (ADC) technology platform, denoted **OptiLink**, which enables the multiple attachment of drugs to *antibody fragments*. Counter-intuitively, **OptiLink** allows far higher drug loadings on antibody fragments than normally achieved with whole monoclonal antibodies. The PhotoBiotics' R&D team has already succeeded in its initial objective of targeting photosensitiser-based drugs to tumours, generating compelling efficacy data in various orthotopic and xenograft models, and has a product ready to enter preclinical toxicology/clinical development. The Company is now exemplifying how **OptiLink** has utility across a wide range of other ADC applications, including the targeted delivery of conventional cytotoxic drugs and MRI (Magnetic Resonance Imaging) contrast agents.