

## PhotoBiotics presents *OptiLink*<sup>TM</sup> Antibody-drug conjugate (ADC) platform at World ADC Summit in San Francisco

London, 25 October 2011: Dr Gokhan Yahioğlu, Director of Chemistry for PhotoBiotics Ltd will present a poster entitled “*OptiLink*<sup>TM</sup>: An antibody fragment-based ADC platform” at Hanson-Wade’s **World ADC Summit**<sup>1</sup>. Dr Yahioğlu, lead author of the poster<sup>2</sup> which includes collaborators at Imperial College London and Kings College London, outlines the principles of the *OptiLink*<sup>TM</sup> platform<sup>3</sup> and how it can generate antibody-fragment based, light-activatable ADCs which have low side-effects and potent anti-tumour effects in a human ovarian cancer animal model. Data on improved fluorescence yields (leading to better optical imaging) and targeted magnetic resonance imaging (MRI) will also be shown.

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. Similarly, current MRI techniques suffer for lack of sensitivity and selectivity, which can be addressed by antibody targeting.

PhotoBiotics’ *OptiLink*<sup>TM</sup> platform can help overcome these problems. There is much excitement in the biotech industry as the first of a new generation of ADCs has just been approved for Hodgkin’s lymphoma, and many more are in the pipeline<sup>3</sup>. 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.

“The World ADC summit is probably the biggest ADC meeting in the calendar”, says Dr Yahioğlu, “... many of the big US companies will be there and this will give our innovative and next-generation ADC platform real exposure. There are dozens of ADCs coming through clinical development and our *OptiLink*<sup>TM</sup> platform has the potential to tackle difficult solid tumours where penetration is a real issue”.

### Notes for Editors:

1. World ADC Summit, 2011, Stanford Court Renaissance Hotel, San Francisco, USA. 25-28 October, 2011.
2. Poster: ‘*OptiLink*: An Antibody fragment based ADC platform’, G. Yahioğlu, I. Stamati, I. Sanjuan, A. Constantinou, M. Wylezinska-Arridge, Pei-Hua Chung, K. Suhling & M. P. Deonarain.
3. 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@photobiotics.com](mailto:m.deonarain@photobiotics.com) Tel: +44 (0)7711580914.
4. Toxic antibodies blitz tumours, Heidi Ledford, *Nature*, August 2011.

<http://www.nature.com/news/2011/110822/full/476380a.html>

**About PhotoBiotics** (see [www.photobiotics.com](http://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 deleterious 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 contrast agents.