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Almac and VTU Technology form collaboration to provide customers with high yielding, fast-track generation of site-specific modified products

Approach enables homogenous labelled product with retained biological activity

Almac and VTU Technology announced today their collaboration to offer joint services for the expression of recombinant proteins with site-specific modification and labelling, such as PEGylation for half-life extension of proteins.

Almac has previously developed technology for site-specific C-terminal modification of recombinant proteins. The technology can be applied to the generation of PEGylated proteins for half life extension, labelled proteins for PET and SPECT imaging, engineered and bispecific proteins and protein drug conjugates. Currently available protein labelling technologies produce products which are labelled at multiple sites in an uncontrolled manner. This inevitably results in a heterogeneous population of labelled molecules resulting in a net decrease in potency compared to the unlabelled analogue. The Almac approach allows the specific labelling site to be selected and controlled and generates a homogeneous labelled product in good yield with retained biological activity.

VTU Technology, a leading supplier of exclusive technologies and comprehensive services for the development of high yielding, high-performance *Pichia pastoris* protein expression strains and processes and Almac have recently completed a case study to prove the applicability of Almac's site-specific PEGylation technology to proteins (single domain antibodies) produced through secreted expression from *Pichia pastoris*. The study clearly demonstrates the advantageous combination of a powerful eukaryotic expression system with a versatile approach for site-specific C-terminal protein modification and is applicable to a wide variety of modifications including attachment of polymers such as PEG, small molecule labels and synthetic peptides.

"We are delighted that our *Pichia pastoris* platform enables the production of intein-fusion proteins at high yields and proved to be perfectly compatible with Almac's site-specific protein modification technology", said Dr. Thomas Purkarthofer, Head of Business Development at VTU Technology.

"This collaboration between VTU Technology and Almac will help to further demonstrate the broad applicability of our *Pichia* protein production platform", Purkarthofer added.

The Almac-VTU Technology alliance provides several benefits to biopharmaceutical companies seeking fast-track protein expression and process development and subsequent site-specific protein modification. This integrated service platform combines two proven and unique technologies. VTU Technology's high-expression *Pichia* technology and speed in expression strain and process development along with Almac's expertise in peptide and protein engineering techniques for the improvement of drug products. This 'One-Stop-Shop' offers customers an integrated approach with a smooth technology transfer throughout all phases.

"This exciting collaboration with VTU Technology has enabled us to demonstrate the utility of our unique protein engineering technology in *Pichia* therefore making our site-specific protein labelling solutions more accessible to the biotechnology community" commented Dr Stephen Barr, President and MD of Almac's Sciences Business Unit.

VTU Technology and Almac will be exhibiting at the BIO 2012 International Convention in Boston and will be available to provide more information on intein-fusion protein expression and site-specific protein modification at booth 3265 and booth 1422 respectively.

Notes to Editors

About Almac:

The Almac Group provides a broad range of services from R&D, biomarker discovery and development, API manufacture, formulation development, clinical trial supply and IXRS® technology (IVRS/IWRS), to commercial-scale manufacture. Almac provides services to more than 600 companies, including all the world leaders in the pharmaceutical and biotech sectors. The company employs over 3,300 individuals and is headquartered in Craigavon, Northern Ireland. US operations are based in Pennsylvania, North Carolina and California.

About VTU Technology:

VTU Technology is a leading contract research and development company, providing services for the fast track generation of high performance, industrial protein production strains and economically viable protein production processes for pharmaceutical companies and other protein manufacturers.

VTU's exclusive *Pichia pastoris* expression platform is based on its 1st and 2nd generation AOX1 promoter libraries enabling proper fine-tuning of protein expression. Applied by VTU's sophisticated team, this cutting-edge platform facilitates the delivery of unparalleled expression levels often achieving more than 10 g/L secreted protein (20 g/L peak expression level) within a few weeks development time for a wide range of proteins including serum proteins, cytokines, fusion proteins, Fabs, antibody derived fragments, scaffold proteins and enzymes.

VTU Technology is part of VTU Group, a provider of comprehensive technology services with over 200 employees and several sites and offices across Europe.

For more information about VTU Technology, please visit www.vtu-technology.com or e-mail office.technology@vtu.com.