

Press Release XL-protein GmbH:

### **European Patent granted for XL-protein's PASylation® technology**

FREISING, GERMANY, MARCH 17<sup>th</sup>, 2011 – XL-protein GmbH, a German biotech company that specialises in the development of biopharmaceuticals with extended plasma half-life, today announced that the European Patent Office granted a core patent (EP2173890) for XL-protein's PASylation® technology.

Beside the granted PASylation® EP patent, several other corresponding national patent applications are currently processed worldwide. The European patent covers the use of random coil polypeptide sequences comprising the natural amino acids Proline, Serine, and Alanine (PAS) to enhance the stability of biologically active proteins if attached as part of a fusion protein.

The N- or C-terminal PAS tag can be directly produced together with the therapeutic protein in microbial hosts, e.g. *E. coli*, or in cell culture, thus avoiding costly *in vitro* coupling steps that are required for other presently available approaches such as PEGylation. Furthermore, the biodegradability of the PAS polypeptide should prevent organ accumulation during chronic treatment.

PASylation® can be applied both to existing biologics, yielding 'biobetters', or to innovative therapeutic proteins or peptides, leading to a prolonged plasma half-life by a factor 10-100 as demonstrated in numerous animal studies. Thus, PASylation® offers a superior solution to a general problem in biological drug development, eventually allowing less frequent and lower dosing together with better tolerability for patients.

Dr. Arne Skerra, founder and CEO of XL-protein GmbH, said: *“This patent is an important milestone for our company and its collaboration partners. It reinforces our competitive market position and will strengthen corporate development”*.

This revolutionary principle for increasing drug stability was originally developed at the Technische Universität München (TUM). In 2009, XL-protein entered into a license agreement with TUM via Bayerische Patentallianz GmbH, the central patent and marketing agency for 28 Bavarian universities and universities of applied sciences, and acquired the exclusive worldwide rights for the PASylation® technology, which also includes the right to grant sublicenses.

Mr. Peer Biskup, CEO of the Bayerische Patentallianz GmbH, commented: *“The Bayerische Patentallianz is very pleased with the timely decision of the EPO to grant the first PASylation® patent and with the positive development of XL-protein's business, which involves both in house drug development activities and partnering with pharma and biotech companies.”*

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**About XL-protein GmbH**

XL-protein GmbH is a privately owned biopharmaceutical company based in Freising-Weihenstephan, Germany, which exploits the PASylation<sup>®</sup> technology to develop second generation biopharmaceuticals with extended plasma half-life. PASylation<sup>®</sup> of therapeutic proteins allows less frequent and lower dosing combined with better tolerability, also opening perspectives for superior follow-on products of approved biopharmaceuticals. XL-protein was founded in 2009 as a spin-off from the Institute of Biological Chemistry at the Technical University of Munich (TUM). With its strong proprietary technology position, XL-protein focuses at the preclinical as well as clinical development of PASylated protein and peptide drugs in commercially attractive disease areas. XL-protein is engaged in a collaboration with Phylogica Ltd (ASX: PYC), a leading Australian-based drug discovery company, and in various undisclosed partnerships with the Pharma and Biotech industry.

**About PASylation<sup>®</sup>**

PASylation<sup>®</sup> is the genetic fusion of a therapeutic protein with a conformationally disordered polypeptide of defined sequence comprising the amino acids Pro, Ala, and Ser. This technology provides a superior way to attach a solvated molecular random chain with large hydrodynamic volume to a biologically active protein. Owing to this size effect, the typically rapid clearance via kidney filtration of a biopharmaceutical can be retarded by a factor 10-100, depending on the length of the PAS tag. PAS sequences are highly soluble though uncharged, retain the biological activity of the fusion partner, offer efficient recombinant protein production and/or secretion in *E. coli* as well as eukaryotic host cells, avoid chemical coupling procedures, are non-toxic, non-immunogenic, biochemically inert and stable against plasma proteases, while being biodegradable.

**About Bayerische Patentallianz GmbH**

As the central patent and marketing agency for 28 Bavarian universities and universities of applied sciences, the Bayerische Patentallianz GmbH markets the inventions of more than 17,000 scientists. Thereby, it supports the researchers in protecting their inventions and then facilitates its commercial use. We provide industry with a unique access to the largest technology pool in Bavaria. Thanks to the internationally renowned research quality of the Bavarian universities, Bayerische Patentallianz GmbH owns a high quality range of marketable innovations and patents in life sciences and physical sciences. ([www.baypat.de](http://www.baypat.de))