ABLYNX REVEALS POWER OF NANOCLEN™ - A HIGH THROUGHPUT METHOD FOR ISOLATING HIGHLY POTENT ANTIBODY-DERIVED THERAPEUTIC PROTEINS (NANOBODIES™)

GHENT, Belgium and LONDON, UK, 14th March 2006 - Speaking at the Drug Discovery Technology Europe 2006 Conference (London), Dr. Hennie Hoogenboom, CSO of Ablynx, for the first time presented data that reveal how Ablynx has been rapidly generating high affinity, picomolar potency Nanobodies™ using Ablynx’s proprietary Nanoclone™ discovery engine. Ablynx has been applying Nanoclone™ as part of its drug discovery efforts to generate Nanobodies™, a novel class of antibody-based therapeutics.

Using Nanoclone™, Ablynx is able to rapidly identify B-cells that produce heavy-chain antibodies that are not only specific for a particular target antigen, but also bind to the antigen with a very high affinity. Nanoclone™ is fast, easy to use and gives Ablynx a direct route to the identification of highly potent Nanobody™ leads.

Nanobodies™ are derived from heavy-chain antibodies that are found naturally in camels and llamas. Nanoclone™ involves the direct sorting of single antigen-specific B-cells (white blood cells that produce and secrete specific antibodies) from immunized llamas, without the need for phage display or any other complex screening platform. After sorting, the antibody variable genes from individual heavy chain B-cells are cloned into microbial hosts for further expression and analysis. Nanoclone™ is readily automated, further enhancing its speed and ease of use. Because Nanobodies™ comprise a single domain, they are easier to clone and express than fragments of conventional antibodies. By direct cloning antigen-specific single variable genes, Nanoclone™ avoids the biases often seen in repertoire cloning and with phage display technology.

Summarizing the results, Dr. Hoogenboom said:
“These new data demonstrate the unexpected ease with which Nanoclone™ can be used to identify Nanobodies™ that are of picomolar potency. Although similar procedures have been described for screening and sorting of B-cells expressing conventional antibodies, it was in the past notoriously difficult to isolate monoclonal antibodies with the required potency for therapeutic use. The success of Nanoclone™ is probably due to a combination of a highly stringent selection for antigen-binding B-cells and a number of well-known strengths of our Nanobody™ platform, including the simplicity of cloning and formatting, and ease of expressing Nanobodies™.”
Commenting on the commercial potential Nanoclone™ offers, Dr. Simon Kerry, Director of Business Development said:

“Nanoclone™ helps to create a competitive advantage for Ablynx, allowing us to easily identify highly potent Nanobody™ leads for our in-house programs and for our partners. Nanobody™-based therapeutics represent an exciting commercial opportunity as they combine the beneficial features of conventional antibodies, with desirable properties of small-molecule drugs.”

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About Ablynx

Ablynx is a biopharmaceutical company engaged in the discovery and development of Nanobodies™, a novel class of therapeutic proteins based on single-domain antibody fragments, for a range of serious and life-threatening human diseases. Ablynx is developing a portfolio of Nanobody™-based therapeutic programs in a number of major disease areas, including inflammation, thrombosis, oncology and Alzheimer’s disease. Already Ablynx has generated Nanobodies™ against more than twenty different disease targets. The company and its collaborators have obtained positive in vivo efficacy data from animal studies in five major therapeutic programs in four disease areas. Today, three of these programs are in advanced preclinical development, and Ablynx expects to have progressed two of those into clinical trials by 2007.

Ablynx has ongoing research collaborations and significant, multi-target partnerships with several major pharmaceutical companies, including Novartis, Centocor (J&J), Kirin Brewery and P&G Pharma. Ablynx is building a diverse and broad portfolio of therapeutic Nanobodies™ based on these collaborative deals as well as on its own internal discovery pipeline.

Nanobody™-based therapeutics represent a major commercial opportunity as they combine the beneficial features of conventional antibodies, with desirable properties of small-molecule drugs. Because they are derived from naturally-occurring heavy-chain antibodies, Nanobodies™ have unparalleled stability and can be administered in a variety of ways (injected, orally, in sprays or creams), thus overcoming the delivery issues associated with full-sized antibodies, that can only be delivered by injection. In addition, because of their unique structure they can also address therapeutic opportunities that are beyond the reach of conventional antibodies or their fragments, for example targeting epitopes such as receptor clefts, enzyme active sites and viral canyon sites. Nanobodies™ are manufactured in micro-organisms which also presents a significant cost advantage in comparison to production methods for conventional antibodies.

Ablynx holds the dominant patent position in the field of Nanobodies™. It has exclusive and worldwide rights to more than forty families of granted patents and pending patent applications, including the patents covering the basic structure, composition, preparation and uses of Nanobodies™ (the ‘Hamers patents’) which have been granted in major territories including the US, Europe and Japan. All products, including therapeutics, that contain Nanobodies™ are covered by these patents.
Headquartered in Ghent, Belgium, Ablynx has raised over €33 million (over US$40 million) from a strong investor consortium including Abingworth Management (UK), Alta Partners (USA), Biotech Fund Flanders (Belgium), Gilde Investment Management (The Netherlands), GIMV (Belgium) and Sofinnova Partners (France).

For further information please visit the website at http://www.ablynx.com

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