

POTENTIAL TREATMENT FOR CHIKUNGUNYA DISCOVERED BY COLLABORATION BETWEEN VIVALIS AND A*STAR'S SINGAPORE IMMUNOLOGY NETWORK

Singapore - Nantes (France) – February 14, 2011 (SGT) - The Singapore Immunology Network (SIgN), an institute of the Agency of Science, Technology and Research (A*STAR), and VIVALIS (NYSE Euronext: VLS), a French biopharmaceutical company, announced today the discovery of two new fully human monoclonal antibodies which could battle Chikungunya, a disease that currently has no available vaccine or specific treatment. The international team of scientists, coordinated by Dr Lucile Warter of SIgN, has published their groundbreaking discovery in the *Journal of Immunology*.

Chikungunya is prevalent in Africa, South Asia, and South-East Asia and is transmitted by the *Aedes* mosquito, the same mosquito that spreads dengue fever. In Singapore alone, over 1000 Chikungunya cases were reported over the period 2008-2010. Dr Warter and her collaborators used Humalex[®], a VIVALIS technology platform designed to identify and generate fully human monoclonal antibodies, to develop two antibodies that could neutralize several Chikungunya strains *in vitro* by culturing immune cells from an individual who had developed resistance to Chikungunya. Monoclonal antibodies can be more potent and have fewer side effects than conventional small molecule drugs.

“The discovery of these antibodies is a big step forward in combating a disease that presently has no available vaccine or specific treatment. The use of VIVALIS’ Humalex[®] was invaluable in helping us isolate the target antibodies from the cultured immune cells. We hope to further validate the use of these antibodies as a viable treatment for Chikungunya.” said Dr Warter. She added that further testing *in vivo* would have to be carried out to validate the antibodies’ performance as a potential treatment for Chikungunya.

“It is thanks to the successful synergy between industry and SIgN that the development of two antibodies against a disease that is on the rise has been accomplished. The combination of Humalex[®] technology, SIgN’s expertise in human immunology, virology and molecular biology, and Singapore’s location as a hub for Asia helped to speed up the selection, sequencing and characterization of the most potent antibody candidates. I am delighted to note that this breakthrough was achieved in less than a year from the start of the project”, said SIgN Chairman Prof Philippe Kourilsky.

“The new platform used by SIgN for the generation of fully human monoclonal antibody is already providing excellent results, and we hope to generate a number of new fully human monoclonal antibodies that could be used as therapeutics,” said SIgN Scientific Director Prof. Paola Castagnoli.

"The discovery of these new fully human monoclonal antibodies with strong neutralizing activities against the Chikungunya virus constitutes an additional testimony of the efficiency of the Humalex[®] platform. Coming shortly after the signature of a major commercial agreement with Sanofi Pasteur, the vaccine division of sanofi aventis, this discovery is a further validation of the power of VIVALIS Humalex[®] antibody discovery platform. It is a first milestone in our research partnership with SlgN and we expect to benefit from the excellent scientific input from SlgN scientists in the field of immunology in future collaborative programs", commented Franck Grimaud, CEO, and Majid Mehtali, CSO, co-managers of VIVALIS.

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Notes to the Editor:

Research publication:

The research findings described in the press release can be found in the January 28 online issue of ***The Journal of Immunology*** under the title "Chikungunya Virus Envelope-Specific Human Monoclonal Antibodies with Broad Neutralization Potency".

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About the Singapore Immunology Network (SlgN)

The Singapore Immunology Network (SlgN), officially inaugurated on 15 January 2008, is a research consortium under the Agency for Science, Technology and Research (A*STAR)'s Biomedical Research Council. The mandate of SlgN is to advance human immunology research and participate in international efforts to combat major health problems. Since its launch, SlgN has grown rapidly and currently includes 200 scientists from 25 different countries of the world working under 20 renowned principal investigators. At SlgN, researchers investigate immunity during infections and inflammatory conditions including cancer and are supported by cutting edge technological research platforms and core services. Through this, SlgN aims to build a strong platform in basic human immunology research for better translation of research findings into clinical applications. SlgN also sets out to establish productive links with local and international institutions, and encourage the exchange of ideas and expertise between academic, industrial and clinical partners and thus contribute to a vibrant research environment in Singapore.

For more information about SlgN, please visit www.sign.a-star.edu.sg.

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About VIVALIS (www.vivalis.com)

VIVALIS (Euronext code: VLS) is a biopharmaceutical company that provides innovative cell-based solutions to the pharmaceutical industry for the manufacture of vaccines and proteins, and develops drugs for the prevention and treatment of unmet medical needs. VIVALIS' expertise and intellectual property are exploited in three main areas:

1. EB66[®] Cell Line

VIVALIS offers research and commercial licenses for its EB66[®] cell line, derived from duck stem cells, to pharmaceutical and biotechnology companies for the production of therapeutic and prophylactic viral vaccines, virosomes, VLPs and recombinant proteins, especially monoclonal antibodies with enhanced cytotoxic activity. VIVALIS receives upfront payment, clinical stage milestone payments and royalties on its licensees' net sales.

2. Humalex[®] platform

VIVALIS proposes customized solutions for the discovery, development and production of fully Human monoclonal antibodies. VIVALIS receives upfront payment, clinical stage milestone payments and royalties on its licensees' net sales.

3. 3D-Screen platform

VIVALIS performs discovery and development, up to pre-clinical evaluation, of original small chemical molecules identified with its proprietary platform, 3D-SCREEN. This unique screening platform is designed to identify original molecules that alter the three-dimensional structure of a target protein, thus modulating its biological function through an innovative mode of action. VIVALIS is building a portfolio of proprietary new chemical entities for the treatment of hepatitis-C virus infection.

Based in Nantes (France), VIVALIS was founded in 1999 by the Grimaud group (ca. 1,500 employees), a worldwide leader in animal genetic selection. VIVALIS has established more than 30 partnerships and licenses with world leaders in this sector, including Sanofi Pasteur, GlaxoSmithKline, Merck, CSL, Kaketsuken, Merial, Intervet, SAFB Biosciences. VIVALIS is a member of the French ATLANTIC BIOTHERAPIES and LYON BIOPOLE bio-clusters.

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Reuters: VLS.PA – Bloomberg: VLS FP

Included in NYSE Euronext's SBF 250, CAC Small 90 and Next Biotech indexes



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