

From cells to therapeutics **Vivalis**

Media Relation
Franck Grimaud
Tel : +33 (0) 228 07 37 10
Fax : +33 (0) 228 07 37 11
www.vivalis.com
Email : info@vivalis.com

EBx® CELL LINES INITIAL PROOF OF CONCEPT
FOR THE PRODUCTION OF MONOCLONAL ANTIBODIES.

VIVALIS AND MAT BIOPHARMA TO ENTER IN A NEW PHASE OF THEIR COLLABORATION.

Nantes (France) and Evry (France) – July 24th, 2007 - VIVALIS (Euronext : VLS) announce first promising data resulting from a scientific collaboration with **MAT BIOPHARMA** to evaluate VIVALIS EBx® cell lines for the production of MAT BIOPHARMA's monoclonal antibodies. The results confirm the strong potential of the EBx® cell lines for the monoclonal antibody market.

VIVALIS and MAT BIOPHARMA demonstrated that the glycosylation profile of monoclonal antibody of IgG1 subtype produced in avian EBx® cells, is similar to human antibodies glycosylation profile, with the remarkable feature of having a reduced fucose content. This latter feature is known to be associated with a better antibody-dependent cell cytotoxicity (ADCC) activity, a biological activity particularly attractive for treating cancerous cells. Indeed, the pharma and biotech industry is looking for new cell lines, beside the traditional CHO cell line, which would produce monoclonal antibodies with a better therapeutic effect.

VIVALIS has also demonstrated that EBx® suspension cells can be easily genetically engineered and efficiently produce MAT BIOPHARMA's monoclonal antibody in stirred-tank bioreactors, in an animal serum-free cell culture medium .

These latest results open the way for a new market for VIVALIS, in addition to the vaccine market, where the company has already established a strong position. Following these results, VIVALIS and MAT BIOPHARMA have decided to enter in a new phase of their collaboration in order to produce pre-clinical batch.

Majid mehtali, VIVALIS CSO declared : *“The results obtained during this collaboration show that EBx® cells have the potential to constitute a new cellular platform for the production of recombinant proteins, in particular monoclonal antibodies with increased cytotoxic activity. There is today a strong demand for monoclonal antibodies having improved biological activities, in order to reduce therapeutic doses and production costs. This market accounts today for approximately \$20 billion. The recent signature of collaboration agreements with a second biotech company and a pharmaceutical company confirm the interest of this new cellular platform for the production of antibody with increased ADCC activity. VIVALIS aims to sign licences agreements with upfront payments, milestones payments and royalties on products sales, as already achieved in the vaccine area”.*

JEAN KADOUCHE, CEO of MAT BIOPHARMA, added: *“From the beginning, one of our top priorities has been to focus on the manufacturing and the optimization of our antibodies that are key points. We are delighted to collaborate with VIVALIS in this field. Results obtained from the collaboration confirm the potential of this antibody and allow us to realize our vision of excellence developing “first-in-class” compound. This important milestone should lead us to accelerate the development of this monoclonal antibody in solid tumors”.*

About recombinant proteins production in EBx® cell lines

Monoclonal antibodies represent an important class of biotherapeutic products, that account for approximately a \$20 billion

market. Today, the production of monoclonal antibodies is performed in established cell lines, such as the hamster CHO cell line that became since the 80's a industrial production standard.

A significant fraction of the monoclonal antibodies currently on the market or under development for the treatment of cancers or auto-inflammatory diseases, act via antibody dependent cell cytotoxicity (ADCC) mechanism. Recently, new cellular platforms, especially genetically modified CHO cells, were developed to produce monoclonal antibodies with altered glycosylation profile, mainly having a reduced fucose content, to provide an improved ADCC activity in order to reduce therapeutic doses.

VIVALIS has developed proprietary EBx® cell lines derived from duck embryonic stem cells, that present interesting industrial and regulatory characteristics, specially a cell growth to a high cell density (> 10 millions cells/ml) in suspension in serum free medium. EBx® cell lines are already widely endorsed by the human and veterinary pharmaceutical industries for viral vaccines production as accredited by the signature of numerous licenses, such as for example, SANOFI-PASTEUR, GLAXO-SMITH-KLINE, NOVARTIS VACCINES, NOBILON, CSL, BAVARIAN NORDIC, FORTDODGE, MERIAL, INTERVET, CEVA.

Today VIVALIS wishes to provide to its partners the EBx® cells as a new cellular platform for the production of recombinant proteins, specifically antibody having an enhanced cytotoxic activity.

About VIVALIS (www.vivalis.com)

Vivalis (Euronext: VLS) is a biopharmaceutical company specialised in vaccines and in viral diseases. VIVALIS' know-how and proprietary technologies are commercially exploited in three main areas:

- Vaccine development and manufacturing. VIVALIS grants commercial licences to its proprietary ebx® embryonic stem cell lines to pharmaceutical and biotechnology companies active in the viral vaccine business.
- Recombinant therapeutic protein and monoclonal antibody expression systems development. VIVALIS partners with pharmaceutical and biotechnology companies in this area, to which it licences its proprietary ebx® embryonic stem cell lines to manufacture recombinant therapeutic proteins.
- The build-up of a proprietary portfolio of vaccines and anti-viral molecules.

Based in Nantes (France), Vivalis was created in 1999 by Group GRIMAUD (1350 employees), the n°2 group worldwide in avian genetic breeding. Vivalis has established several partnerships with companies that are worldwide leaders in their respective fields, including Sanofi Pasteur, GlaxoSmithKline, Novartis Vaccines, Merial and SAFC Biosciences. VIVALIS is a member of the French ATLANTIC BIOTHERAPIES cluster.

The collaboration agreement described in this press release is one of the two collaboration agreements with industrial customers mentioned in the Registration Document. VIVALIS filed its Registration Document under the number I.07-077 dated 23 May 2007, with the Autorité des Marchés Financiers ("AMF"). The Registration Document approved the 23 May 2007 under the number I.07-077 is available free of charge from Vivalis' head office, 6 rue Alain Bombard, 44800 Saint-Herblain, and in electronic form on the Company's web site (www.vivalis.com) and on the web site of the AMF (www.amf-france.org). VIVALIS draws the readers' attention to the chapter 4 "Risks factors" of the Registration Document approved by the AMF. This press release, together with the material set forth herein, does not constitute an offer of securities for sale nor the solicitation of an offer to purchase securities in any jurisdiction. Distribution of such press release in certain jurisdiction may constitute a breach of applicable laws and regulation.

About MAT BIOPHARMA (www.matbiopharma.fr)

MAT BIOPHARMA (Evry, France) is a private biotech company focused in oncology. MAT BIOPHARMA target cancer through multiples approaches: angiogenesis and vascular disrupting agent, apoptosis and cell adhesion (cancer stem cells) and conjugated antibodies. MAT BIOPHARMA has focused its strategy on one pillar: innovation, selecting very promising targets with a strong intellectual property and developing "first-in-class" monoclonal antibodies.

Its lead product, Ferritarg, is in phase I/II clinical trials in refractory Hodgkin's disease. A humanized monoclonal antibody should enter into the clinic by Q4 2009.

Contact: Frédéric Gomez, Head of Corporate and Business Development, f.gomez@matbiopharma.fr