



Cytomics Systems identifies new anti-cancer molecules targeting the Ubiquitin-proteasome pathway

Second-generation proteasome inhibitors open the way to new therapies in oncology and provide a further validation of Cytomics' *UbiScreen*[®] screening technology

Paris, July 8, 2005 - Cytomics Systems, a biopharmaceutical company pioneering the discovery of small molecules that control the degradation of proteins, today announces that it has identified compounds able to inhibit the *in vitro* proliferation of human cancer cells. These molecules act on the non-catalytic activities of the proteasome and represent a new generation of proteasome inhibitors with potential to create new therapies for use in the fight against cancer.

Cytomics used its proprietary high-throughput cell-based screening technology, ***UbiScreen*[®]** to identify these new compounds. ***UbiScreen*[®]** is a platform designed to help develop candidate molecules targeting the Ubiquitin-proteasome protein degradation pathway. The announcement follows Cytomics' earlier success in preclinical trials of its hospital-acquired fungal infection treatment using molecules also identified through ***UbiScreen*[®]**.

In vitro experiments carried out by Cytomics show that the new molecules target the regulating subunits of the proteasome and should provide more efficacy and selectivity than the compounds targeting the catalytic activities of the proteasome.

At present, only one drug on the market targets the Ubiquitin-proteasome pathway and it has been very successful in treating multi-resistant myeloma from both a therapeutic and a commercial point of view. "The identification of these molecules is a further proof of the efficacy of Cytomics' ***UbiScreen*[®]** platform," said Dr Cécile Bougeret, Director of Research and Development at Cytomics Systems. "Using ***UbiScreen*[®]**, we can select molecules of therapeutic interest which regulate the degradation of proteins by the Ubiquitin-proteasome pathway."

Cytomics Systems will further optimize the newly identified molecules and

expects to carry out in vivo experiments in early 2006. These tests will be carried out on nude mice xenografted with human cancer cells. Assuming positive results, Cytomics will move them into pre-clinical trials.

"With this second series of molecules, Cytomics has taken a significant stride forward," said Dominique Thomas, president of Cytomics Systems. "We now believe that our molecules should lead to significant improvements in the treatment of several types of cancer."

About the Ubiquitin Proteasome pathway:

The Ubiquitin Proteasome pathway is the universal process of protein degradation in human cells. Ubiquitin ligases are the key enzymes that regulate this degradation by attaching a Ubiquitin "label" to the proteins that are to be destroyed. The proteins with this tag are recognized and eliminated by the Proteasome which then breaks them down into inactive peptides. By regulating the concentration of proteins present in a cell, the Ubiquitin pathway plays a key role in a large number of cellular processes, including regulation of the cellular cycle and immune response, the control of gene expression, and apoptosis or cell-death. Faults in the degradation of certain proteins are known to cause major pathologies including cancer, inflammatory disease and neurodegenerative diseases as has been pointed out by the Swedish Academy of Science when the Nobel Prize for Chemistry 2004 was awarded to the team who discovered this mechanism.

About Cytomics Systems: www.cytomics.fr

Cytomics Systems, Paris, is a biopharmaceutical company pioneering the discovery and development of small molecules that control the degradation of proteins to treat major human diseases such as cancer and hospital-acquired fungal infections. The company was founded in 2000 by Dr Dominique Thomas, director of research at the CNRS Center for Molecular Genetics, and internationally recognized for his work in the field of the ubiquitin-proteasome pathway for protein degradation. Cytomics has so far raised EUR3M from SGAM (Société Générale Asset Management) and has 15 employees. The company has developed a highly innovative high-throughput screening technology, **UbiScreen®** for the discovery of new therapeutic molecules controlling the degradation of target proteins. Cytomics is initially using this technology to target fungal hospital-acquired infections and some types of cancer. Favorable preclinical results demonstrate how effective these molecules can be.

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