

# **Cytomics Systems announces favorable results for first preclinical trials of its treatment for anti-fungal infections**

Animal model tests show the potential to control protein degradation to treat major human diseases such as cancer and nosocomial infections

Paris, December 16 2004—Cytomics Systems, a biopharmaceutical company pioneering the discovery of small proteins that control the degradation of proteins, today announces very favorable results in preclinical trials of its nosocomial fungal infection treatment. The successful in vivo trials increase the probability of being able to offer new therapies for the growing numbers suffering from fungal diseases where current treatment tends to be ineffective or highly toxic.

In the trials, mice were infected with a pathogenic fungus and received a single dose treatment with molecules selected and optimized by Cytomics Systems. This resulted in a complete cure with no undesirable side effects. Cytomics Systems identified the molecules used in these tests with its proprietary high throughput screening system, UbiScreen(R). Apcis, an independent laboratory, specializing in the design and execution of animal experiments that comply with pharmacological and medicinal safety rules, carried out the tests.

“These preclinical trials on mice demonstrate that our molecules are effective against fungal infections,” said Dr Dominique Thomas, president of Cytomics Systems. “We are very pleased to have confirmed in vivo that the control of protein degradation has a significant therapeutic potential. It marks a major milestone in the development of our company which should enable us to start clinical trials in a year’s time after improving the pharmacological characteristics of our molecules in 2005.”

Protein degradation by what is called the ubiquitin proteasome pathway is associated with many pathologies – a point recognized by the Swedish Academy of Sciences when it awarded the 2004 Nobel Prize for Chemistry to the team which discovered this mechanism. It is a highly specific and controlled process that plays major roles in every aspect of cell biology. It allows the cell to regulate the level and activity of protein by enabling recognition and destruction by the proteasome and is involved in several important cellular mechanisms such as DNA repair, apoptosis, cell cycle progression, synapse plasticity and the immune response. Ubiquitin ligases play a key role in the process. These are enzymes that regulate protein degradation by attaching a ubiquitin marker to the proteins to be destroyed. After they have been tagged, the proteasome eliminates the proteins by degrading them into inactive peptides. Cytomics Systems is applying its know-how in this new field of therapeutic intervention to develop molecules able to inhibit or trigger the degradation of target proteins.

## **About Cytomics Systems ([www.cytomics.fr](http://www.cytomics.fr))**

Cytomics Systems, Paris, is a biopharmaceutical company pioneering the discovery and development of small proteins that control the degradation of

proteins to treat major human diseases such as cancer and nosocomial 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(R) for the discovery of new therapeutic molecules controlling the degradation of target proteins. Cytomics is initially using this technology to target fungal nosocomial infections and some types of cancer. Favorable preclinical results demonstrate how effective these molecules can be.