



Cenix BioScience and The Instituto de Medicina Molecular Initiate First Genome-Scale RNAi Screen for Novel Malaria Genes

Dresden, Germany, and Lisboa, Portugal, June 29, 2005 – Cenix BioScience GmbH (Dresden), the leading specialist in advanced RNA interference (RNAi)-based research services, and the Instituto de Medicina Molecular (IMM, Lisboa) have initiated a research collaboration to identify human genes required for the malaria infection process, using systematic genome-scale RNAi screening. The identified genes will represent excellent candidates for the development of novel anti-malarial therapeutics.

The laboratory of Dr. Maria Mota, based at the IMM, has pioneered in recent years an *in vitro* assay system to monitor the crucial process of sporozoite infection using the Malaria parasite *Plasmodium berghei* ANKA with cultured human liver cells. Recognizing the assay's enormous discovery potential if it could be applied at the genome scale, Dr. Mota approached Cenix BioScience in 2004 to address this challenge. The Dresden-based specialist, renown for its expertise in combining high throughput RNAi with high content microscopy-based assays in human cells, successfully completed a collaborative pilot study to adapt and optimize Mota's malarial infection assay for high throughput RNAi screening. The resulting dataset established the solid proof of principle needed to secure the grant funding for the actual screen.

This screen, involving both Cenix and IMM scientists, is now under way in Dresden and, based on the level of funding secured to date from the European Science Foundation and the Fundação para a Ciência e Tecnologia (Portugal), will cover over 800 human genes including all known kinases, key regulators of nearly all cellular pathways.

"We feel very excited and privileged to have this opportunity to combine our expertise with Dr. Mota's, in helping to combat this devastating disease", noted Dr. Christophe Echeverri, CEO/CSO of Cenix BioScience. "This project perfectly illustrates how Cenix, by offering flexible, customized genomics research services, can synergize with and greatly extend the research capabilities of leading academic institutes like the IMM."

"To our knowledge, this is the first systematic genome-scale RNAi screen for novel anti-malarial target genes" added Dr. Maria Mota of the IMM. "We could not have envisaged such an ambitious endeavor without the involvement of Cenix: it is therefore extremely gratifying to see that granting agencies have recognized the powerful synergies created by combining our own malaria-focused expertise with Cenix's genomic RNAi screening capabilities."

While the ongoing project is already yielding novel discoveries, the two partners are continuing their search for further funding sources, public or private, to extend this crucially important study to its fullest possible scope, i.e. the entire human genome. With Dr. Mota's excellent assay and Cenix's leading track record in this field, including arguably the most comprehensive genome-wide RNAi screen published to date (*Nature* 434:462, Mar 2005), such a goal is technically well within reach for the group.

About Malaria

Malaria remains the most devastating parasitic disease worldwide. Approximately 40% of the world population lives in areas with the risk of malaria. In any year, approximately 10% of the global population will suffer from malaria – 500 millions clinical cases – and more than two million die as a result. In Africa, malaria kills one child in 20 before five years of age. In addition to causing enormous human suffering, malaria impedes the economic development and stability of many developing countries. Malaria is caused by the infection of the protozoan parasite

Plasmodium and it is transmitted by female Anopheles mosquitoes. Attempts to eradicate malaria have so far been unsuccessful. Their failure is attributed to increasing resistance to insecticides in the mosquito vector and to anti-malarial drugs in the parasite. Due to the continuous emergence of drug resistance there are now fewer tools to control malaria. Liver infection by *Plasmodium* is the first obligatory step of infection and it lasts a week in the human infection. These characteristics make of the liver stage an ideal target for the development of novel intervention strategies against the infection. Understanding the intricate interactions occurring between *Plasmodium* and the host cells not only offers a new perspective into mammalian cell biology but also contributes to the design of rational approaches to combat malaria infections.

About the Instituto de Medicina Molecular

The Instituto de Medicina Molecular (IMM), located on the campus of the University of Lisbon School of Medicine, is an Associate Laboratory of the National Ministry of Science and Higher Education. The mission of the Institute is to foster basic, clinical and translational biomedical Research with the aim of contributing to a better understanding of disease mechanisms, developing novel predictive tests, improving diagnostics tools and developing new therapeutic approaches. For more information, please visit the IMM's website: www.imm.ul.pt.

About Cenix BioScience GmbH

Cenix BioScience GmbH is a pioneer and leader in high throughput (HT), genome-driven applications of RNA interference (RNAi) for the discovery and validation of new therapeutic drug targets. Founded in 1999 as the first biotechnology company specializing exclusively in HT-RNAi, Cenix has accumulated unparalleled depth and breadth of experience in this field, combining high content phenotypic analyses with proprietary genome-wide RNAi libraries for use in key experimental systems, including a wide range of human and rodent cells. Cenix is now making its unique expertise accessible to industry and academic researchers through highly customizable research services. Please contact Cenix or visit the company's web site www.cenix-bioscience.com for more information.

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