



Institut Pasteur Researchers Demonstrate Microscopic, Deep Brain Imaging in Freely Moving Mice, Detecting GFP Molecule

New Portable, Easy-to-Use Probe Designed in Collaboration with Mauna Kea Technologies

PARIS (January 14, 2009) – Institut Pasteur researchers have demonstrated microscopic, real-time imaging of the deepest regions of the brain in a freely moving mouse, using it to analyze the expression of Green Fluorescent Protein, the protein at the base of this year's Nobel Prize in Chemistry.

“This advance should have profound impact on the field of neurological research,” said Uwe Maskos, DPhil, a Lab Chief at Institut Pasteur. “Never before have we been able to see the deep reaches of the brain at the cellular level while an animal is moving freely. Gaining understanding of neurological activity throughout the brain is vital to understanding normal brain function and the kinds of alterations that lead to neurological disorders.

“We now have visual, microscopic access to the living, working brain that we’ve never had before. We can now bridge the gap between processes at the cellular, organ and animal level.”

Dr. Maskos and his team, headed by Arnaud Cressant, collaborated with Mauna Kea Technologies, a Paris-based medical device company, to create a portable, easy-to-use prototype cannula system to guide a tiny fiberoptic camera, Mauna Kea’s Cellvizio® probe-based Confocal Laser Endomicroscope, into the mouse’s brain and hold it into place and provide balance. The Cellvizio probe allows physicians to view live tissue inside the body at the cellular level in real time. Dr. Maskos presented his findings at the Society for Neuroscience 38th Annual 2008 Meeting in Washington, D.C. in November.

“We congratulate the Institut Pasteur team on this significant advance, which we believe could alter the research paradigm for understanding and exploring the brain and all the body’s functions linked to neurological activity,” noted Sacha Loiseau, President & CEO and founder of Mauna Kea Technologies. “Cellvizio has already changed how many gastroenterologists



diagnose and treat GI disease. We're extremely excited to see Cellvizio's continuing impact on other areas of medicine and science."

Cellvizio uses *in vivo* cellular imaging, a new endoscopic imaging approach which is improving both diagnostic rates, as well as the time needed to diagnose the condition. Cellvizio is the first and only confocal microscopy system that is compatible with most endoscopes and allows physicians to view live tissue inside the body at the cellular level in dynamic, real-time images at 12 frames per second. Over 2,000 of these procedures have been completed to date. Cellvizio has 510(k) clearance from the Food & Drug Administration and the European CE-Mark for use in the gastrointestinal and pulmonary tracts.

About Cellvizio®

Cellvizio®, the world's smallest microscope, is the first system designed to provide live images of internal human tissues at the cellular level during endoscopic procedures. This new method, known as probe-based confocal laser endomicroscopy (pCLE), allows physicians to pinpoint and remove diseased tissue with endoscopic tools on the spot, or, in more serious cases, send the patient directly to surgery. This new, advanced imaging technique helps physicians more effectively detect cancer so patients can be treated earlier and undergo fewer biopsies. Physicians and thought leaders at more than 40 top medical institutions around the world have completed over 2,000 of these procedures and have published more than 25 peer-reviewed papers on the technology in major medical journals. Cellvizio, which delivers up to 12 images per second and can be used with almost any endoscope, has 510(k) clearance from the U.S. Food and Drug Administration and the European CE-Mark for use in the gastrointestinal and pulmonary tracts.

About Mauna Kea Technologies/Cellvizio Inc.

Mauna Kea Technologies, which operates as Cellvizio Inc. in the U.S., is a venture-backed medical device company based in Paris, France, with U.S. offices in Fort Washington, Penn. With its flagship Cellvizio® system, the company leads the growing *in vivo* cellular imaging market, enabling physicians to visualize, diagnose and treat pathologies that cannot be seen using other imaging techniques. Investors include Psilos Group, Seventure and Creadev. For more information about Mauna Kea Technologies: www.maunakeatech.com



About Institut Pasteur

Mauna Kea Technologies teamed up with the Pasteur Institute in Paris because of its leading role in mouse genetics and neurology over the last 40 years. Set up by Nobel Prize laureate François Jacob, Pasteur researchers have been among the very first to create transgenic and knock-in models for neurological disorders. Spearheaded by Jean-Pierre Changeux with his seminal isolation of the nicotinic receptor in 1970, Pasteur Institute neurologists have been at the forefront of research ever since, focusing research on the main issues of today. This includes research on neurodegenerative diseases, stem cells, and the molecular mechanisms of cognition.

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