

Pleasanton, California / February 17, 2010

## Roche Collaborates with Merck on Developmental Test for Cancer-Related Gene Mutation

*Investigational AmpliChip p53 Test Designed to Screen for Genetic Mutation Tied to Therapeutic Resistance in Cancer Patients*

Roche Molecular Systems, Inc. (SIX: RO, ROG; OTCQX: RHHBY) announced today a research collaboration with Merck Sharp & Dohme Corp., (a subsidiary of Merck & Co., Inc.), providing Merck access to Roche's developmental microarray-based AmpliChip p53 Test, which is designed to detect mutations in the tumor suppressor gene p53. By identifying cancers that harbor a dysfunctional p53 gene, the companies aim to achieve better treatment outcomes in cancer patients by determining which patients are most likely to respond to certain investigational therapeutic candidates.

"Roche designed its investigational AmpliChip p53 Test to rapidly provide clinically important information that can be used early in pharmaceutical development to help predict cancer patient responses to certain therapeutic candidates," said Paul Brown, president and CEO, Roche Molecular Diagnostics. "Roche is excited to enter into this collaboration with Merck because of the potential this test has to improve cancer patient response to treatment."

The p53 protein is a critical component of normal cell response to various stress types including damaged genetic material or DNA (deoxyribonucleic acid). The p53 protein functions by activating DNA repair proteins, inducing growth arrest for repair of DNA damage, and by initiating apoptosis (programmed cell death) in the case of irreparable DNA damage. When p53 function is deficient, a cell's response to DNA damage is severely impaired, contributing to tumor growth and increasing tumor cells' resistance to chemotherapy. Roche's investigational AmpliChip p53 Test is designed to detect damage to p53 DNA in tumor cells in order to identify which cells carry dysfunctional p53 proteins that can lead to treatment resistance.

"The goal of our research is to discover and develop innovative cancer therapeutics and deliver them to the right patients at the right time," said Eric Rubin, M.D., vice president, Oncology, Merck Research Laboratories. "By applying the AmpliChip p53 Test in selected clinical trials we hope to identify those patients most likely to respond to specific therapeutic regimens in development."

### About Roche AmpliChip Technology

Roche AmpliChip technology combines two leading-edge DNA amplification and detection technologies to screen for genetic mutations in cells. The Roche polymerase chain reaction (PCR) is used to amplify or make copies of genetic material, and Affymetrix high-density microarray technology is used to capture and scan the

amplified DNA. The combination of these two technologies in AmpliChip is intended to enable physicians and laboratories to determine when mutations are present and to predict the effect those mutations could have on patients' response to medical treatment.

### **About Roche**

Headquartered in Basel, Switzerland, Roche is a leader in research-focused healthcare with combined strengths in pharmaceuticals and diagnostics. Roche is the world's largest biotech company with truly differentiated medicines in oncology, virology, inflammation, metabolism and CNS. Roche is also the world leader in in-vitro diagnostics, tissue-based cancer diagnostics and a pioneer in diabetes management. Roche's personalized healthcare strategy aims at providing medicines and diagnostic tools that enable tangible improvements in the health, quality of life and survival of patients. In 2009, Roche had over 80,000 employees worldwide and invested almost 10 billion Swiss francs in R&D. The Group posted sales of 49.1 billion Swiss francs. Genentech, United States, is a wholly owned member of the Roche Group. Roche has a majority stake in Chugai Pharmaceutical, Japan. For more information: [www.roche.com](http://www.roche.com).

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