

## News Release

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[mark@impress-pr.com](mailto:mark@impress-pr.com)**SIGMA® LIFE SCIENCE EXTENDS RESEARCH MODEL  
PORTFOLIO INTO ONCOLOGY AND CARCINOGENICITY SCREENING;  
INTRODUCES WORLD'S FIRST P53 KNOCKOUT RAT**

**St. Louis, MO. – April 19, 2010** – Sigma® Life Science, the innovative biological products and services brand of Sigma-Aldrich® (**NASDAQ: SIAL**), today introduced the world's first p53 'knockout' rat model, an important development that is expected to, due to the rat's closer physiological and metabolic similarity to humans, significantly improve timelines for carcinogenicity screening and reduce time to market for therapeutics.

The p53 model, being developed through Sigma Advanced Genetic Engineering (SAGE™) Labs ([www.sageresearchmodels.com](http://www.sageresearchmodels.com)), a Sigma® Life Science initiative, offers the potential for faster and more accurate predictions of how anti-cancer therapeutics work in humans and seeks to increase the understanding of this critical gene. Further characterization of this model is expected to lead to a more comprehensive knowledge of how cancers begin and proliferate. Research applications include early Carcinogenicity screening, Chemopreventive and Chemotherapeutic screening, and p53 pathway studies.

"Over the past twelve months, SAGE Labs has been developing novel rat models, in which specific genes associated with defined disease conditions are deactivated or knocked-out, for use in disease research, especially in areas where the existing mouse models poorly mimic human disease," said Dr. Edward Weinstein, director of SAGE Labs. "The addition of the p53 model extends our offering into oncology research and builds upon our existing portfolio, which

*(more)*

targets applications across a number of fields including physiology, endocrinology, neurology and toxicology. Using our proprietary CompoZr™ Zinc Finger Nuclease platform, we are able to develop mouse or rat models without the need for embryonic stem cells. This enables us to create founder animals in about four to five months, which is about a third of the time it would take using a traditional approach.”

p53 is a tumor suppressor protein encoded by the TP53 gene and is one of the most widely studied cancer-related genes. Its role in the regulation and stabilization of cell cycle, thus preventing genome mutation, is observed among a wide variety of multicellular organisms, including humans, rodents, frogs and fish. Homozygous rats deficient in the p53 protein are expected to be prone to spontaneous tumors and will be valuable for *in vivo* screening of carcinogenicity, as well as studying chemopreventive and therapeutic treatment.

The colony of p53 knockout rats is currently being expanded and it is anticipated that cohorts of homozygous p53 knockout animals will be available to ship beginning in July 2010. Parties interested in reserving a cohort to characterize can register their interest or learn more by visiting <http://www.sagerresearchmodels.com/research-models/priority-partners>.

**Cautionary statement:** The foregoing release contains forward-looking statements that can be identified by terminology such as “is expected to,” “significantly improve timelines,” “reduce time to market,” “offers the potential,” “lead to a more comprehensive knowledge” or similar expressions, or by express or implied discussions regarding potential future revenues from products derived therefrom. You should not place undue reliance on these statements. Such forward-looking statements reflect the current views of management regarding future events, and involve known and unknown risks, uncertainties and other factors that may cause actual results to be materially different from any future results, performance or achievements expressed or implied by such statements. There can be no guarantee that the p53 model will continue to meet the demands of the marketplace. Nor can there be any guarantee that the p53 model will achieve any particular levels of revenue in the future. In particular, management's expectations regarding the p53 model could be affected by, among other things, unexpected regulatory actions or delays or government regulation generally; the Company's ability to obtain or maintain patent or other proprietary intellectual property protection; competition in general; government, industry and general public pricing pressures; the impact that the foregoing factors could have on the values attributed to the Company's assets and liabilities as recorded in its consolidated balance sheet, and other risks and factors referred to in Sigma-Aldrich's current Form 10-K on file with the US Securities and Exchange Commission. Should one or more of these risks or uncertainties materialize, or should

underlying assumptions prove incorrect, actual results may vary materially from those anticipated, believed, estimated or expected. Sigma-Aldrich is providing the information in this press release as of this date and does not undertake any obligation to update any forward-looking statements contained in this press release as a result of new information, future events or otherwise.

**About Sigma Life Science:** Sigma Life Science is a Sigma-Aldrich brand that represents Sigma's leadership in innovative biological products and services for the global life science market and offers an array of biologically-rich products and reagents that researchers use in scientific investigation. Product areas include biomolecules, genomics and functional genomics, cells and cell-based assays, transgenics, protein assays, stem cell research, epigenetics and custom services/oligonucleotides. Sigma Life Science also provides an extensive range critical bioessentials like biochemicals, antibiotics, buffers, carbohydrates, enzymes, forensic tools, hematology and histology, nucleotides, amino acids and their derivatives, and cell culture media.

**About SAGE Labs:** SAGE Labs, a Sigma Life Science initiative, is a world-class provider of research models, including knockout rat models, and extensive support services. Using Sigma's proprietary platform technologies, SAGE specializes in genetic manipulation of in vivo systems for specialized R&D applications. SAGE Labs specializes in the development and characterization of unique, next-generation animal research models featuring specific gene deletions, insertions, repressions and modifications using proprietary CompoZr ZFN (zinc finger nuclease) technology. This genetic manipulation technology works for a variety of animal research models, as well as a wide range of research applications.

**About Sigma-Aldrich:** Sigma-Aldrich is a leading Life Science and High Technology company. Its biochemical and organic chemical products and kits are used in scientific research, including genomic and proteomic research, biotechnology, pharmaceutical development and as key components in pharmaceutical, diagnostic and other high technology manufacturing. Sigma-Aldrich has customers in life science companies, university and government institutions, hospitals, and in industry. Over one million scientists and technologists use its products. Sigma-Aldrich operates in 38 countries and has 7,700 employees providing excellent service worldwide. Sigma-Aldrich is committed to Accelerating Customer Success through Innovation and Leadership in Life Science, High Technology and Service. For more information about Sigma-Aldrich, please visit its award-winning website at <http://www.sigma-aldrich.com>.

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