April 16, 2007

Rigel to Present New Research Programs at AACR Meeting

Focus on Rigel's Extensive Oncology Portfolio

SOUTH SAN FRANCISCO, Calif., April 16 /PRNewswire-FirstCall/ -- Rigel Pharmaceuticals, Inc. (Nasdaq: RIGL) today announced the presentation of four research projects aimed at identifying small molecule inhibitors of select kinases as potential therapeutics for certain types of cancers and other disorders. Rigel scientists will give the presentations during poster sessions from April 16th to 18th (see list below) at the upcoming meeting of the American Association for Cancer Research in Los Angeles, California.

"We believe that Rigel's participation in this AACR meeting is an acknowledgment of the depth and breadth of our oncology R&D portfolio," said Donald G. Payan, M.D., executive vice president and chief scientific officer of Rigel. "We have established Rigel as a productive company in the discovery of oncology kinase products and believe that Rigel is well-positioned to take the lead in the next generation of oncology targets -- ligases," he added. Additional information regarding Rigel's oncology pipeline and ubiquitin ligase research can be found at http://www.rigel.com.

One of the presentations is entitled, "Small Molecule Inhibitors of the Axl Receptor Tyrosine Kinase as Therapeutics for Angiogenesis and Tumor Growth". Rigel's scientists have found that Axl signaling controls processes vital for both neovascularization and tumorigenesis in endothelial (smooth muscle) cells. Rigel has subsequently screened for and identified compounds that could potentially inhibit Axl expression. Lead compounds from this program have shown positive results in animal models of oncology and other areas. In addition to developing a treatment for certain cancers, Rigel's scientists believe that their therapeutic candidates' ability to suppress angiogenesis may have a role in treating endometriosis, a painful, chronic disease caused by the uninhibited growth of endometrial cells outside of the uterus. Cancer is the second leading cause of death in America and endometriosis is estimated to affect 5.5 million females in the U.S. and Canada. Rigel plans to select an orally-delivered product candidate from this program during 2007, and to file an investigational new drug application (IND) and begin clinical trials in 2008.

Rigel's scientists will be presenting three other poster presentations at the AACR meeting highlighting drug discovery efforts focused on significant cancer targets: Janus Tyrosine Kinase 2 (JAK 2), Polo-Like Kinase 1 (PLK 1) and Protein Kinase C-related Kinase 1 (PRK-

1). Rigel anticipates that small molecule candidates inhibiting these targets, and others, will form a sequential series of IND candidates in oncology.

Oncology Portfolio and Partnerships

Rigel presently has two product candidates in clinical trials for cancer: a new Phase 2 trial of R788, an oral Syk inhibitor, for patients with B-cell lymphoma; and R763, an oral Aurora Kinase inhibitor, which its partner, Merck Serono, has in two Phase 1 studies for patients with solid tumors and hematological malignancies (see two presentations by Merck Serono on R763/AS703569 at the AACR meeting as listed below).

Rigel believes it has established a leadership position in identifying and discovering small molecule therapeutics to regulate a new category of drug targets, ligases, which may present a novel approach to discovering cancer treatments. Rigel has a number of research projects underway in the ligase area.

In addition, Rigel has established numerous corporate partnerships in oncology research and development including agreements with: Johnson & Johnson in 1999 to explore cell cycle regulation targets; Novartis in 2001 to generate angiogenesis targets; Merck Serono in 2005 to develop R763; and in the nascent field of drug discovery of ligase inhibitors for oncology with Daiichi in 2002 and Merck in 2004.

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Poster Presentations at the 2007 AACR Meeting

Monday, April 16, 2007 8:00am-12:00pm
Targeting myeloproliferative diseases with JAK2 inhibitors
Session ID: Experimental and Molecular Therapeutics 20, Abstract
Number 2388

Monday, April 16, 2007 8:00am-12:00pm (by Merck Serono)
The novel Aurora kinase inhibitor AS703569 shows potent anti-tumor
activity in acute myelogenous leukemia (AML)
Session ID: Targeted Agents and Other Novel Therapies, Abstract
Number 1817

Monday, April 16, 2007 1:00pm-5:00pm (by Merck Serono)
Preclinical evaluation of the orally available Aurora Kinase inhibitor
AS703569 to support the selection of tumor indications for clinical
studies
Session ID: Kinase Inhibitors 2, Abstract Number 3264

Tuesday, April 17, 2007  8:00am-12:00pm
PRK-1 kinase regulates endothelial migration and is novel target for
anti-angiogenesis therapy
Session ID: Tumor Biology 23, Abstract Number 3828

Tuesday, April 17, 2007  1:00pm-5:00pm
Small molecule inhibitors of the Axl receptor tyrosine kinase as
therapeutics for angiogenesis and tumor growth
Session ID: Experimental and Molecular Therapeutics 37, Abstract
Number 4759

Wednesday, April 18, 2007  8:00am-12:00pm
Image based driven drug discovery of Polo-Like Kinase 1 (PLK1) inhibitors
Session ID: Tumor Biology 40, Abstract Number 5529
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About Rigel (http://www.rigel.com)

Rigel is a clinical-stage drug development company that discovers and develops novel, small-molecule drugs for the treatment of inflammatory diseases and cancer, as well as viral and metabolic diseases. Our goal is to file one new investigational new drug (IND) application in a significant indication each year. Rigel has achieved this goal every year since 2002. Our pioneering research focuses on intracellular signaling pathways and related targets that are critical to disease mechanisms. Rigel's productivity has resulted in strategic collaborations with large pharmaceutical partners to develop and market our product candidates. Rigel has product development programs in inflammatory/autoimmune diseases such as rheumatoid arthritis, thrombocytopenia and asthma, as well as in cancer.

This press release contains "forward-looking" statements, including statements related to Rigel's plans to pursue clinical development of product candidates and the timing thereof. Any statements contained in this press release that are not statements of historical fact may be deemed to be forward-looking statements. Words such as "plans," "intends," "promising," "expects," "anticipates" and similar expressions are intended to identify these forward-looking statements. There are a number of important factors that could cause Rigel's results to differ materially from those indicated by these forward-looking statements, including risks associated with the timing and success of clinical trials and the commercialization of product candidates, as well as other risks detailed from time to time in Rigel's SEC reports, including its Form 10-K for the year ended December 31, 2006. Rigel does not undertake any obligation to update forward-looking statements.

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