Karyopharm Announces Phase 1b Selinexor Sarcoma Data Published in Journal of Clinical Oncology

Data Provide Early Evidence of Anticancer Activity in Advanced Sarcoma and Inform Recommended Phase 2 Dose
Company Also Announces Orphan Drug Designation Granted by FDA for Selinexor in Soft Tissue Sarcoma

NEWTON, Mass., July 27, 2016 (GLOBE NEWSWIRE) -- Karyopharm Therapeutics Inc. (Nasdaq:KPTI), a clinical-stage pharmaceutical company, today announced that data from its Phase 1b clinical trial evaluating lead drug candidate selinexor (KPT-330), a novel, oral Selective Inhibitor of Nuclear Export (SINE™) compound, in patients with advanced refractory bone or soft tissue sarcoma were published online in the Journal of Clinical Oncology. The paper, titled, "Phase 1b Study of Selinexor, a First-in-Class Inhibitor of Nuclear Export, in Patients with Advanced Refractory Bone or Soft Tissue Sarcoma," discusses the results from a 54-patient study which evaluated the pharmacokinetics (PKs), pharmacodynamics (PDs), safety, and efficacy of selinexor, and determined the recommended Phase 2 dose (RP2D) in this patient population.

The published data, which were previously presented at the American Society for Clinical Oncology 2015 Annual Meeting, demonstrated evidence of anti-cancer activity with single-agent oral selinexor, which was determined to be safe and well tolerated at 60mg twice per week on an intermittent (3 weeks on, 1 week off) dosing schedule. Of the 52 evaluable patients, 30 (58%) showed a best response of stable disease (SD), with 17 (33%) experiencing durable SD (≥4 months). Thirteen (30%) of 43 patients with quantifiable tumor measurements showed a reduction in target lesion size from baseline. Antitumor activity was particularly noted in patients with dedifferentiated liposarcoma (DDLPS; n=15), with 6 (40%) patients showing a reduction in target lesion size from baseline, and 7 (47%) patients showing durable SD (≥4 months). Immunohistochemical analysis of paired tumor biopsies revealed increased nuclear accumulation of tumor suppressor proteins (TSPs), decreased cell proliferation, and increased tumor cell apoptosis after treatment. Single-agent oral selinexor is currently being evaluated in the SEAL study, a multi-center, randomized, double-blind, placebo-controlled Phase 2/3 clinical trial in patients with advanced unresectable DDLPS. Topline data from the Phase 2 portion of the SEAL study are expected in mid-2017.

"The published data provide support and rationale for the continued development of oral selinexor in sarcoma, and we hope that through Karyopharm's ongoing clinical development efforts, we may one day have new treatment options for this rare and difficult-to-treat disease," said Mrinal M. Gounder, MD, Attending Physician, Sarcoma Service and Developmental Therapeutics Service, Memorial Sloan Kettering Cancer Center, and lead author of the paper.

Today, Karyopharm also announced that selinexor has received Orphan Drug Designation from the U.S. Food and Drug Administration (FDA) for the treatment of soft tissue sarcoma (STS).

"Aberrations in TSPs have been well described in many sarcoma subtypes and are thought to contribute to tumorigenesis and drug resistance," commented Sharon Shacham, PhD, MBA, President and Chief Scientific Officer of Karyopharm. "Exportin 1 (XPO1) shuttles a wide variety of proteins, including TSPs and growth regulating proteins, from the cell nucleus to the cytoplasm. The overexpression of XPO1 is one mechanism by which neoplastic cells inactivate TSPs and thereby circumvent cell-cycle regulation, genome survey and apoptosis. Selinexor inhibits XPO1, resulting in the accumulation of TSPs and other key mediators in the nucleus, restoring cell-cycle checkpoints and inducing growth arrest and apoptosis in malignant cells."

Dr. Shacham continued: "The FDA's decision to grant Orphan Drug Designation for selinexor in STS is an important regulatory milestone for Karyopharm and further supports the development of this first-in-class oral SINE™ compound in this difficult-to-treat disease. We believe selinexor has the potential to be a significant advancement in the treatment of sarcomas, and we look forward to leveraging the benefits of the orphan designation to bring selinexor to patients in need as rapidly as possible."

In addition to STS, selinexor has received Orphan Drug Designation from the U.S. FDA for use in the treatment of multiple myeloma (MM), acute myeloid leukemia (AML) and diffuse large B-cell lymphoma (DLBCL). Selinexor has also received orphan designation from the European Medicines Agency (EMA) for use in the treatment of MM, AML, DLBCL, chronic lymphocytic leukemia (CLL) and small lymphocytic lymphoma (SLL).

About Orphan Drug Designation

The FDA grants Orphan Drug Designation status to encourage the development of medicines which may provide benefit to patients suffering from rare diseases and disorders, providing certain incentives to sponsors developing drugs or biologics. The FDA defines rare diseases as those affecting fewer than 200,000 people annually in the U.S. Orphan Drug Designation provides certain benefits and incentives, including greater access to FDA staff, a period of marketing exclusivity if regulatory approval is ultimately received for the designated indication, potential tax credits for certain activities, eligibility for orphan drug grants and the waiver of certain administrative fees. The receipt of Orphan Drug Designation status does not change the regulatory requirements or process for obtaining marketing approval.

About Selinexor

Selinexor (KPT-330) is a first-in-class, oral Selective Inhibitor of Nuclear Export (SINE™) compound. Selinexor functions by binding with and inhibiting the nuclear export protein XPO1 (also called CRM1), leading to the accumulation of tumor suppressor proteins in the cell nucleus. This reinitiates and amplifies their tumor suppressor function and is believed to lead to the selective induction of apoptosis in cancer cells, while largely sparing normal cells. Over 1,500 patients have been treated with selinexor in company and investigator-sponsored Phase 1 and Phase 2 clinical trials in advanced hematologic malignancies and solid tumors. Selinexor is being evaluated in several later-phase clinical trials, including one in older patients with acute myeloid leukemia (SOPRA), one in patients with diffuse large B-cell lymphoma (SADAL), one in patients with liposarcoma (SEAL) and a single-arm trial of selinexor and low-dose dexamethasone in patients with multiple myeloma (STORM). Additional Phase 1 and Phase 2 studies are ongoing or currently planned, including multiple studies in combination with one or more approved therapies in a variety of tumor types to further inform the company's clinical development priorities for selinexor. The latest clinical trial information for selinexor is available at www.clinicaltrials.gov.

About Karyopharm Therapeutics

Karyopharm Therapeutics Inc. (Nasdaq:KPTI) is a clinical-stage pharmaceutical company focused on the discovery and development of novel first-in-class drugs directed against nuclear transport and related targets for the treatment of cancer and other major diseases. Karyopharm's SINE™ compounds function by binding with and inhibiting the nuclear export protein XPO1 (or CRM1). In addition to single-agent and combination activity against a variety of human cancers, SINE™ compounds have also shown biological activity in models of neurodegeneration, inflammation, autoimmune disease, certain viruses and wound-healing. Karyopharm was founded by Dr. Sharon Shacham and is located in Newton, Massachusetts. For more information, please visit www.karyopharm.com.

Forward-Looking Statements

This press release contains forward-looking statements within the meaning of The Private Securities Litigation Reform Act of 1995. Such forward-looking statements include those regarding the therapeutic potential of and potential clinical development plans for Karyopharm's drug candidates, including the timing of initiation of certain trials and of the reporting of data from such trials. Such statements are subject to numerous important factors, risks and uncertainties that may cause actual events or results to differ materially from the Company's current expectations. For example, there can be no guarantee that any of Karyopharm's SINE™ compounds, including selinexor (KPT-330) or any other drug candidate that Karyopharm is developing, will successfully complete necessary preclinical and clinical development phases or that development of any of Karyopharm's drug candidates will continue. Further, there can be no guarantee that any positive developments in Karyopharm's drug candidate portfolio will result in stock price appreciation. Management's expectations and, therefore, any forward-looking statements in this press release could also be affected by risks and uncertainties relating to a number of other factors, including the following: Karyopharm's results of clinical trials and preclinical studies, including subsequent analysis of existing data and new data received from ongoing and future studies; the content and timing of decisions made by the U.S. Food and Drug Administration and other regulatory authorities, investigational review boards at clinical trial sites and publication review bodies; Karyopharm's ability to obtain and maintain requisite regulatory approvals and to enroll patients in its clinical trials; unplanned cash requirements and expenditures; development of drug candidates by Karyopharm's competitors for diseases in which Karyopharm is currently developing its drug candidates; and Karyopharm's ability to obtain, maintain and enforce patent and other intellectual property protection for any drug candidates it is developing. These and other risks are described under the caption "Risk Factors" in Karyopharm's Quarterly Report on Form 10-Q for the quarter ended March 31, 2016, which was filed with the Securities and Exchange Commission (SEC) on May 9, 2016, and in other filings that Karyopharm may make with the SEC in the future. Any forward-looking statements contained in this press release speak only as of the date hereof, and Karyopharm expressly disclaims any obligation to update any forward-looking statements, whether as a result of new information, future events or otherwise.

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