June 23, 2017

Karyopharm Reports Updated Phase 2b SADAL Data for Selinexor in Diffuse Large B-Cell Lymphoma at the 2017 European Hematology Association Annual Meeting

Objective Response Rate Increases to 33.3% Overall and is 35% in Patients with "Double- or Triple-Hit" DLBCL

With Additional Responders, Median Duration of Response Remains Greater than 7 Months

Top-Line Data from SADAL Study Expected in the Second Half of 2018

NEWTON, Mass., June 23, 2017 (GLOBE NEWSWIRE) -- Karyopharm Therapeutics Inc. (Nasdaq:KPTI), a clinical-stage pharmaceutical company, today reported updated clinical data from the ongoing Phase 2b **S**elinexor **A**gainst **D**iffuse **A**ggressive **L**ymphoma (SADAL) study evaluating lead product candidate, selinexor (KPT-330), an oral Selective Inhibitor of Nuclear Export / SINE™ compound, in patients with relapsed or refractory diffuse large B-cell lymphoma (DLBCL). The data will be featured in an oral presentation at the 22nd Congress of the European Hematology Association (EHA) taking place June 22-25, 2017 in Madrid, Spain. In the SADAL study, selinexor has achieved a 33.3% overall response rate (ORR) in patients with relapsed or refractory DLBCL after at least two prior multi-agent therapies and who are ineligible for transplantation. The observed responses continue to be durable, with a median duration of response (DOR) of greater than 7 months, including prolonged complete responses (CRs).

Updated Phase 2b SADAL Data in Relapsed or Refractory DLBCL

In the oral presentation, titled "Single Agent Oral Selinexor Exhibits Durable Responses in Relapsed/Refractory Diffuse Large B-Cell Lymphoma (DLBCL) of Both GCB and Non-GCB Subtypes: The Phase 2b SADAL Study," Marie Maerevoet, MD, Institute Jules Bordet in Belgium, will present the updated Phase 2b SADAL data. Per the SADAL study protocol, the updated efficacy data were restricted to the interim analysis cohort (n=63), which were previously reported at AACR 2017, and the updated safety results include updated data on all patients that received at least one dose of selinexor as of the data cutoff date.

Dr. Maerevoet commented, "We are highly encouraged by the impressive response rates that continue to be observed with single-agent oral selinexor in these heavily pretreated patients with DLBCL who have received two or more prior therapies and are not eligible for transplantation, and for whom no standard therapy exists. Along with being clinically active and durable, including prolonged complete responses, the 60mg dose continues to be well tolerated with a low incidence of Grade 3 or greater adverse events, which were manageable with dose modifications and standard supportive care."

A summary of the efficacy data to be presented at EHA 2017 is outlined in the following table and described below.

Best Responses* in Patients as of 15 May 2017

Category	N	ORR (%)	CR (%)	PR (%)	SD (%)	PD/NE (%)
All patients	63	21 (33.3%)	9 (14.3%)	12 (19.0%)	6 (9.5%)	36 (57.1%)
60 mg	32	11 (34.4%)	4 (12.5%)	7 (21.9%)	1 (3.1%)	20 (62.5%)
100 mg	31	10 (32.2%)	5 (16.1%)	5 (16.1%)	5 (16.1%)	16 (51.6%)
GCB-Subtype	32	9 (28.1%)	4 (12.5%)	5 (15.6%)	3 (9.4%)	20 (62.5%)
Non-GCB-Subtype	31	12 (38.7%)	5 (16.1%)	7 (22.6%)	3 (9.7%)	16 (51.6%)

*Responses were adjudicated according to the Lugano Classification *(Cheson, 2014)* by an independent central radiological review committee. ORR=Overall Response Rate (CR+PR), DCR=Disease Control Rate (CR+PR+SD), CR=Complete Response, PR=Partial Response, SD=Stable Disease, PD=Progressive Disease, NE=Not Evaluable for Response. Responses are based on interim unaudited data for the first 63 patients (of 90 total patients enrolled as of the data cutoff date).

Based on the modified intention-to-treat analysis of the first 63 patients (median of 3 prior treatment regimens (range 2-5)), as adjudicated by an independent central radiological committee, 21 patients responded (9 patients with a CR and 12 patients with a PR) for an ORR 33.3%. An additional 6 patients experienced SD, for a disease control rate of 42.9%. The median DOR across all patients was greater than 7 months and responses tended to occur rapidly with a median of 2 months to onset. Among patients who responded, the median time on treatment was 9 months with a follow up of 12.8 months. As of the data cutoff date, 9 patients who responded remained on treatment, including 6 patients with a CR.

The median overall survival was 8 months for all patients on the study, consistent with the 6-7 month published survival data in this population, indicating that their prognosis is extremely poor. As of the data cutoff date, median survival for the patients with PR or CR had not been reached and is over 9 months; the median survival for patients with SD or PD, NE disease was 4.8 months.

Selinexor also showed robust, single-agent activity against GCB and non-GCB subtypes of DLBCL: Of the 32 patients with DLBCL of the GCB-subtype, 9 responded (4 patients with a CR, 5 patients with a PR) for an ORR of 28.1%. Of the 31 patients with DLBCL of the non-GCB (or ABC)-subtype, 12 responded (5 patients with a CR, 7 patients with a PR) for an ORR of 38.7%. Finally, amongst the 14 patients with "double-" or "triple-hit" DLBCLs, the ORR was 35%, indicating that selinexor has clear activity in this population, which usually has a particularly poor prognosis.

Among the 90 patients evaluated for safety as of the data cutoff date, the most common adverse events (AEs) across both dosing groups were fatigue (61%), nausea (51%), thrombocytopenia (50%), anorexia (49%), vomiting (31%) and anemia (30%), and were primarily grades 1 and 2 and were managed with dose modifications and/or standard supportive care. As expected, the most common grade 3 and 4 AEs in the 60mg arm were thrombocytopenia (28%), neutropenia (17%), anemia (15%), and fatigue (11%) and were manageable with dose modifications and/or standard supportive care.

As previously announced, in consultation with the U.S. Food and Drug Administration (FDA), Karyopharm has amended the SADAL study protocol to become a single-arm study focusing solely on single-agent selinexor dosed at 60mg twice weekly and has eliminated the 100mg arm. The FDA has agreed that the single-arm trial design appears appropriate for accelerated approval in DLBCL, though eligibility for accelerated approval will depend on the complete trial results and available therapies at the time of regulatory action. In total, the SADAL study is expected to enroll up to a total of 130 patients in the 60mg single-arm cohort and Karyopharm plans to report top-line results in the second half of 2018.

"The IRC-confirmed durable responses achieved with single-agent oral selinexor have improved over time and continue to demonstrate robust single-agent activity and prolonged responses in patients with heavily pretreated DLBCL, and these responses correlate with improved overall survival," said Sharon Shacham, PhD, MBA, President and Chief Scientific Officer of Karyopharm. "We were particularly pleased to see a 35% response rate in the double- or triple-hit subgroup, a particularly difficult to treat patient population. The 60mg treatment arm is enrolling on track, and we look forward to reporting top-line data from the SADAL study in the second half of 2018. Assuming a positive outcome, we expect to seek accelerated approval for selinexor in DLBCL."

Details for the Oral Presentation at EHA 2017:

Title: Single Agent Oral Selinexor Exhibits Durable Responses in Relapsed/Refractory Diffuse Large B-Cell Lymphoma (DLBCL) of Both GCB and Non-GCB Subtypes: The Phase 2b SADAL Study
Presenter: Marie Maerevoet, Institute Jules Bordet, Brussels, Belgium
Abstract code: S469
Topic: Aggressive Non-Hodgkin lymphoma — Clinical
Session: Aggressive Non-Hodgkin lymphoma — Relapsed/refractory
Location: Hall C
Date and Time: Saturday, June 24, 2017 from 14:45 - 17:00 CET

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. To date, over 2,000 patients have been treated with selinexor and it is currently being evaluated in several mid- and later-phase clinical trials across multiple cancer indications, including in multiple myeloma in a pivotal, randomized Phase 3 study in combination with Velcade® (bortezomib) and low-dose dexamethasone (BOSTON), in combination with low-dose dexamethasone (STORM) and backbone therapies (STOMP), and in diffuse large B-cell lymphoma (SADAL), and liposarcoma (SEAL), among others. Additional Phase 1, Phase 2 and Phase 3 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. Additional 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, which was founded by Dr. Sharon Shacham, currently has several investigational programs in clinical or preclinical development. 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 completion of enrollment for 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), 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, including with respect to the need for additional clinical studies; 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, 2017, which was filed with the Securities and Exchange Commission (SEC) on May 4, 2017, 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, except as required by law, 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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