November 7, 2016

Karyopharm Reports Third Quarter 2016 Financial Results and Highlights Recent Progress

− Recent Utilization of ATM Financing Facility Nets Proceeds of $47 million; Extends Cash Runway to end of 2018, Beyond STORM Expansion Data Readout —

− Updated Clinical Data from STORM and STOMP Studies to be Reported in Oral Presentations at ASH 2016; Results Continue to Support Planned Approval Strategy in Multiple Myeloma −

− Conference Call Scheduled for Today at 5:00 p.m. ET −

NEWTON, Mass., Nov. 07, 2016 (GLOBE NEWSWIRE) -- Karyopharm Therapeutics Inc. (Nasdaq:KPTI), a clinical-stage pharmaceutical company, today reported financial results for the third quarter 2016 and commented on recent accomplishments and clinical development plans for its lead, novel, oral Selective Inhibitor of Nuclear Export (SINE™) compound selinexor (KPT-330), and KPT-8602, its second-generation SINE™ compound.

"During the third quarter, we communicated our planned development and regulatory approval path for oral selinexor as a treatment for patients with multiple myeloma (MM)," said Michael G. Kauffman, MD, PhD, Chief Executive Officer of Karyopharm. "We believe this plan, based on the positive selinexor-dexamethasone efficacy emerging from STORM and the selinexor-Velcade® (bortezomib)-dexamethasone combination data from STOMP, provides a path to FDA and EMA filings. At the upcoming American Society of Hematology (ASH) 2016 Annual Meeting, we will be highlighting twenty-one abstracts, including key presentations featuring maturing data from both STORM and STOMP, new clinical data in acute myeloid leukemia (AML), including selinexor in combination with chemotherapies in patients with newly diagnosed and relapsed/refractory AML, and preliminary data from a Phase 1 study of KPT-8602 in patients with relapsed/refractory MM."

Dr. Kauffman continued, "Looking ahead to the remainder of 2016, we are focused on executing the STORM trial expansion which will add approximately 120 additional patients with penta-refractory disease. We expect to report top-line data from this expanded cohort in early 2018, and, assuming a positive outcome, we intend to use this data to support accelerated approval for selinexor in MM. The trial design for the planned Phase 3 BOSTON study evaluating selinexor in combination with bortezomib and dexamethasone in patients with MM previously treated with one to three regimens moves selinexor into much earlier lines of therapy and is currently being finalized to include feedback from the FDA. We remain on track to commence this pivotal study in early 2017."

Conference Call Information:

Karyopharm will host a conference call today, Monday, November 7, 2016, at 5:00 p.m. Eastern Time, to discuss the third quarter 2016 financial results, recent accomplishments, clinical developments and business plans. To access the conference call, please dial (855) 437-4406 (US) or (484) 756-4292 (international) at least five minutes prior to the start time and refer to conference ID: 96721150. An audio recording of the call will be available under "Events & Presentations" in the "Investor" section of Karyopharm's website, http://www.karyopharm.com, approximately two hours after the event.

Third Quarter 2016 and Recent Highlights:

Selinexor in Multiple Myeloma

- **Reporting updated STORM data at ASH 2016.** Karyopharm is scheduled to present updated clinical data from the ongoing Phase 2b STORM study at the upcoming ASH 2016 annual meeting in early December. In an oral presentation titled, "Selinexor and Low Dose Dexamethasone in Patients with Lenalidomide, Pomalidomide, Bortezomib, Carfilzomib and Anti-CD38 Ab Refractory MM STORM Study," Dan T. Vogl, MD, MSCE, Assistant Professor of Medicine, Perelman School of Medicine, University of Pennsylvania, will present data demonstrating that selinexor in combination with low-dose dexamethasone achieved an overall response rate (ORR) of 21% across all evaluable patients in the study. The ORRs were 21% in patients with quad-refractory disease and 20% in patients with penta-refractory disease, all based on Independent Review Committee (IRC) adjudication. The side effect profile for selinexor was consistent with previous trials, with low rates of Grade ≥3 non-hematologic toxicity, Grade ≥4 infections (1.3%) and sepsis (1.3%). Patients with quad-refractory disease have documentation that they have

previously received two PIs (bortezomib (Velcade) and carfilzomib (Kyprolis®)) and two IMiDs (lenalidomide (Revlimid®) and pomalidomide (Pomalyst®)), and their disease is refractory to at least one PI, at least one IMiD, alkylating agents and glucocorticoids, and has progressed following their most recent therapy. Patients with penta-refractory myeloma have quad-refractory disease that is also refractory to an anti-CD38 monoclonal antibody, such as daratumumab (Darzalex™) or isatuximab.

- **Expanding STORM Study to Include 120 Additional Patients with Penta-refractory MM.** The Company believes that there are currently no available therapies with known activity in patients with penta-refractory myeloma, and that this represents a growing unmet medical need. Therefore, Karyopharm has expanded the STORM study to include approximately 120 additional patients with penta-refractory MM and expects to report top-line data from the expanded cohort in early 2018. Assuming a positive outcome, Karyopharm intends to use the data from the expanded STORM study to support accelerated approval for selinexor in MM.

- **Reporting Updated STOMP data at ASH 2016.** Karyopharm is also scheduled to present updated clinical data from the ongoing Phase 1b STOMP study at ASH 2016. In an oral presentation titled, "Selinexor in Combination with Bortezomib and Dexamethasone Demonstrates Significant Activity in Patients with Refractory MM Including Proteasome-Inhibitor Refractory Patients," Nizar Bahlis, MD, Assistant Professor of Hematology, Southern Alberta Cancer Research Institute, will present data demonstrating that selinexor in combination with Velcade (bortezomib) and dexamethasone (SVd) achieved an ORR of 77% across all evaluable patients in the study. All 10 patients with non-refractory disease responded (5 patients with a very good partial response (VGPR) and 5 patients with a partial response (PR)) for an ORR of 100%. Twelve of the 22 patients in the SVd combination arm had MM previously refractory to a proteasome inhibitor, typically bortezomib or carfilzomib. Seven of these 12 patients responded (1 complete response and 6 PRs) for an ORR of 58%. Only one patient (4.5%) had progressive disease, suggesting that this regimen induces rapid and potent myeloma control, even amongst patients with MM that is refractory to one or more proteasome inhibitors. Side effects were generally less than those observed with the individual drugs, and only one case of neuropathy (Grade 1, 4.5%) was reported. Similar high levels of activity are observed with the combination of selinexor and carfilzomib with dexamethasone, including in patients with MM that is refractory to one or more proteasome inhibitors; results from the Phase 1/2 study of this combination will also be reported at ASH. Together, these data indicate that treatment with selinexor in combination with proteasome inhibitors leads to high levels of anti-MM activity, including in patients with proteasome-inhibitor refractory disease.

- **Initiating Pivotal Phase 3 BOSTON Study in Early 2017.** Based on the robust data from the SVd arm of the STOMP study, Karyopharm plans to initiate a pivotal randomized Phase 3 study, known as the BOSTON (**Bo**rtezomib, **S**elinexor and dexame**t**has**on**e) study, which will evaluate SVd compared to bortezomib and low-dose dexamethasone (Vd) in patients with MM who have had one to three prior lines of therapy. Karyopharm has identified the combination dose of selinexor (100mg weekly), bortezomib (1.3 mg/m^2 weekly given sub-cutaneously for 4 of 5 weeks) and dexamethasone (40mg weekly) to be used in the BOSTON study and expects that the study will enroll approximately 360 patients. Based on feedback from the FDA, the protocol is currently being finalized and the Company remains on track to commence the BOSTON study in early 2017.

- **Karyopharm to Host Dinner Reception and Webcast at ASH 2016 Focusing on Multiple Myeloma.** On Monday, December 5, 2016, Karyopharm will host an investor and analyst dinner reception, which will feature a moderated panel discussion with recognized thought leaders in the treatment of MM, updated selinexor data in MM, and a live Q&A session. The event will take place during the ASH 2016 annual meeting and interested parties can access a live webcast of the event beginning December 5, 2016 at 8:15 p.m. PT by going to the "Investors" section of the company's website at http://investors.karyopharm.com/events.cfm.

Selinexor in Acute Myeloid Leukemia (AML)

- **Reporting Clinical Data from Phase 2 SAIL Study at ASH 2016.** Updated clinical data from the Phase 2 SAIL study evaluating selinexor in combination with Ara-C and idarubicin in heavily pretreated patients with relapsed or refractory AML will be highlighted in an oral presentation by Walter Fiedler, MD, University Medical Center Hamburg. The SAIL data demonstrate that the selinexor, Ara-C and idarubicin combination achieved compelling response rates and has the potential to be an effective AML treatment option and serve as a bridge to stem cell transplantation in this patient population.

- **Other Selinexor Combination Studies Selected for Oral and Poster Presentations at ASH 2016.** Three additional abstracts were selected for presentation at ASH, including one oral presentation highlighting data from a clinical trial evaluating the combination of selinexor with high-dose cytarabine and mitoxantrone in patients with AML (Amy Wang, University of Chicago) and two poster presentations (Bhavana Bhatnagar, Ohio State University and Kendra Sweet, Moffitt Cancer Center). These presentations highlight early-stage clinical data demonstrating the feasibility and tolerability of selinexor in combination with other standard of care agents in patients with AML, including in elderly patients, as well as early signs of clinical activity, including response rates that are superior to published data using standard chemotherapy regimens.

Selinexor in Solid Tumors

- **Reported Updated SIGN data at ESMO 2016**. Updated clinical data from the Phase 2 SIGN study evaluating selinexor for the treatment of gynecological cancers were presented at the European Society of Medical Oncology (ESMO) 2016 annual meeting. In this study, single-agent selinexor demonstrated robust clinical benefit and favorable tolerability in patients with heavily pretreated gynecologic cancers, including a 49% disease control rate (DCR = PR plus stable disease for ≥3 months) in ovarian cancer and 45% in endometrial cancer. Selinexor-associated adverse events were found to be manageable with supportive care and dose modifications as demonstrated by the number of patients who have remained on study after achieving disease control, with some continuing treatment for longer than 12 months.

KPT-8602

- **Reporting Phase 1 KPT-8602 Clinical Data at ASH 2016**. Clinical data from a Phase 1/2 study evaluating KPT-8602, Karyopharm's second-generation SINE™ compound, will be presented at ASH 2016 by Frank Cornell, MD, Vanderbilt Ingram Cancer Center. These data demonstrate that oral KPT-8602 is well tolerated in heavily pretreated patients with relapsed or refractory MM and shows early signs of encouraging efficacy.

Third Quarter 2016 Financial Results

Cash, cash equivalents and investments as of September 30, 2016, including restricted cash, totaled $176.9 million, compared to $166.2 million as of June 30, 2016. The increased cash balance includes the net proceeds from the sales of common stock through the Company's At-the-Market (ATM) financing facility through September 30, 2016 of approximately $31.5 million dollars. Subsequent to the close of the quarter, in October, the Company sold additional shares of common stock through the same ATM facility for additional net proceeds of approximately $15.4 million. In total, Karyopharm sold 5,243,914 shares of common stock for gross proceeds of $48.2 million and net proceeds of approximately $46.9 million in September and October combined. As of October 31, 2016, the Company has 41,262,146 shares outstanding and 47,215,794 fully diluted shares inclusive of outstanding stock options and restricted stock units.

For the quarter ended September 30, 2016, research and development expense was $19.9 million compared to $25.9 million for the quarter ended September 30, 2015. For the quarter ended September 30, 2016, general and administrative expense was $5.9 million compared to $4.8 million for the quarter ended September 30, 2015.

Karyopharm reported a net loss of $25.4 million, or $0.69 per share, for the quarter ended September 30, 2016, compared to a net loss of $30.4 million, or $0.85 per share, for the quarter ended September 30, 2015. Net loss includes stock-based compensation expense of $5.6 million and $3.5 million for the quarters ended September 30, 2016 and September 30, 2015, respectively.

Financial Outlook

Karyopharm expects to end 2016 with at least $170.0 million in cash, cash equivalents and investments. Based on current operating plans, Karyopharm expects that its existing cash and cash equivalents will fund its research and development programs and operations through the end of 2018, including through the data readout for the expanded STORM cohort, completion of enrollment for the BOSTON study and advancement of the SOPRA, SADAL and SEAL clinical studies to their next data inflection points.

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). The Company's initial focus is on seeking regulatory approval and commercialization of its lead drug candidate, oral selinexor (KPT-330). To date, over 1,800 patients have been treated with selinexor and it is currently being evaluated in several mid- and later-stage clinical trials across multiple cancer indications, including multiple myeloma in combination with low-dose dexamethasone (STORM) and backbone therapies (STOMP), and in acute myeloid leukemia (SOPRA), diffuse large B-cell lymphoma (SADAL), and liposarcoma (SEAL), among others. Karyopharm plans to initiate a pivotal randomized Phase 3 study of selinexor in combination with bortezomib (Velcade®) and low-dose dexamethasone (BOSTON) in patients with multiple myeloma in early 2017. 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 five 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 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), KPT-8602, Karyopharm's next generation SINE™ compound, or KPT-9274, Karyopharm's first-in-class oral dual inhibitor of PAK4 and NAMPT, 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 June 30, 2016, which was filed with the Securities and Exchange Commission (SEC) on August 4, 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.

CONDENSED CONSOLIDATED BALANCE SHEETS

(unaudited)

(in thousands, except share and per share amounts)

	September 30, 2016	December 31, 2015
Assets		
Current assets:		
Cash and cash equivalents	$ 43,908	$ 58,358
Short-term investments	82,903	117,275
Prepaid expenses and other current assets	3,440	1,967
Total current assets	130,251	177,600
Property and equipment, net	2,991	3,483
Long-term investments	49,598	33,878
Restricted cash	484	482
Other assets	299	—
Total assets	$ 183,623	$ 215,443
Liabilities and stockholders' equity		
Current liabilities:		
Accounts payable	$ 2,193	$ 3,808
Accrued expenses	12,309	11,023
Deferred rent	275	206
Other current liabilities	175	95
Total current liabilities	14,952	15,132
Deferred rent, net of current portion	1,739	1,946

Total liabilities	16,691	17,078
Stockholders' equity:		
Preferred stock, $0.0001 par value; 5,000,000 shares authorized; none issued and outstanding	—	—
Common stock, $0.0001 par value; 100,000,000 shares authorized; 39,724,003 and 35,864,765 shares issued and outstanding at September 30, 2016 and December 31, 2015, respectively	4	4
Additional paid-in capital	506,125	455,170
Accumulated other comprehensive loss	(28)	(282)
Accumulated deficit	(339,169)	(256,527)
Total stockholders' equity	166,932	198,365
Total liabilities and stockholders' equity	$ 183,623	$ 215,443

CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS

(unaudited)

(in thousands, except share and per share amounts)

	Three Months Ended, September 30,		Nine Months Ended September 30,	
	2016	2015	2016	2015
Contract and grant revenue	$ 48	$ 75	$ 107	$ 225
Operating expenses:				
Research and development	19,893	25,923	66,267	73,680
General and administrative	5,897	4,762	17,407	16,318
Total operating expenses	25,790	30,685	83,674	89,998
Loss from operations	(25,742)	(30,610)	(83,567)	(89,773)
Other income:				
Interest income	311	239	926	647
Other income (expense)	6	(2)	(1)	(9)
Total other income, net	317	237	925	638
Net loss	$ (25,425)	$ (30,373)	$ (82,642)	$ (89,135)
Net loss per share—basic and diluted	$ (0.69)	$ (0.85)	$ (2.28)	$ (2.51)
Weighted-average number of common shares outstanding used in net loss per share—basic and diluted	36,819,329	35,708,739	36,223,324	35,575,745

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