Karyopharm Reports Third Quarter 2019 Financial Results and Highlights Recent Company Progress

– XPOVIO Phase 2b STORM Study Results Published in The New England Journal of Medicine –

– Achieved XPOVIO® U.S. Net Product Sales of $12.8 Million with Over 500 Prescriptions Fulfilled as of September 30, 2019 –

– Strengthened Balance Sheet with Cash Runway Expected to be Sufficient to Fund Operations into the Middle of 2021 –

– Conference Call Scheduled for Today at 8:30 a.m. ET –

NEWTON, Mass. – November 4, 2019 – Karyopharm Therapeutics Inc. (Nasdaq:KPTI), an oncology-focused pharmaceutical company, today reported financial results for the third quarter 2019. In addition, Karyopharm highlighted select corporate milestones, including an update regarding the initial U.S. commercial launch of XPOVIO® (selinexor), and provided an overview of its key clinical development programs.

"This has been a landmark quarter for Karyopharm as we saw the accelerated approval and commercial launch of XPOVIO, the first and only oral nuclear export inhibitor approved in the U.S., indicated for patients with heavily pretreated multiple myeloma," said Michael G. Kauffman, MD, PhD, Chief Executive Officer of Karyopharm. "The XPOVIO launch is off to a very strong start and we are extremely pleased with the early commercial uptake and feedback from prescribing physicians. As we look ahead to the next few months, we eagerly await the top-line results from the ongoing Phase 3 BOSTON study, which, if positive, would represent another significant advancement in the treatment of patients with relapsed or refractory multiple myeloma. Finally, we remain on track to file, by the end of 2019, a New Drug Application in the U.S. for selinexor requesting accelerated approval for patients with relapsed or refractory diffuse large B-cell lymphoma."

Third Quarter 2019 Highlights and Recent Progress

XPOVIO (selinexor) in Multiple Myeloma

- **XPOVIO U.S. Commercial Rollout Off to a Strong Start.** Oral XPOVIO, Karyopharm's first-in-class, nuclear export inhibitor, became commercially available to patients in the U.S on July 9, 2019 and generated net product sales of $12.8 million in the third quarter. As of September 30, 2019, over 500 XPOVIO prescriptions have been fulfilled, driven by strong demand from both academic and community-based oncologists. In less than 3 months on the market, XPOVIO has been prescribed by more than 300 unique physicians and healthcare accounts.

  Third quarter sales were driven by a combination of new patient starts, prescription refills, and initial channel inventory to Karyopharm's distribution partners. Patient demand for XPOVIO continued to increase in each subsequent month of the quarter following its accelerated approval by the U.S. Food and Drug Administration (FDA) in July. Rapid insurance coverage for XPOVIO has been a key contributor to its early commercial success with XPOVIO already being added to numerous national commercial and Medicare formularies and coverage

policies. Based on prescription fulfillment data through the specialty pharmacy channel, Karyopharm estimates that approximately 60% of XPOVIO prescriptions have been dispensed to patients with Medicare coverage and 35% to patients with commercial insurance, with the remaining 5% of patients having either Medicaid or another form of prescription coverage.

- **XPOVIO Receives Accelerated Approval from the FDA.** On July 3, 2019, the FDA approved XPOVIO for use in combination with dexamethasone for the treatment of adult patients with relapsed or refractory multiple myeloma who have received at least four prior therapies and whose disease is refractory to at least two proteasome inhibitors, at least two immunomodulatory agents, and an anti-CD38 monoclonal antibody. XPOVIO is the first of a novel drug class designated selective inhibitors of nuclear export (SINE) and is the first ever nuclear export inhibitor approved for human use. This first indication received accelerated approval based on response rate. As with all accelerated approvals, continued approval for the treatment of myeloma may be contingent upon verification and description of clinical benefit in a confirmatory trial. The ongoing Phase 3 BOSTON study is intended to serve as the confirmatory trial for the accelerated approval of XPOVIO.

- **XPOVIO Phase 2b STORM Study Results Published in the New England Journal of Medicine.** Results from Karyopharm's Phase 2b STORM study evaluating XPOVIO in patients with heavily pretreated, triple class refractory multiple myeloma were published in the *New England Journal of Medicine* on August 22, 2019. In STORM, XPOVIO achieved a 26% overall response rate, median overall survival (OS) of 8.6 months, and a median survival of 15.6 months in the 39% of patients with a minimal response or better.

- **XPOVIO Granted Seven Years Orphan Drug Market Exclusivity by FDA.** In September 2019, Karyopharm received confirmation from the FDA that the Company is entitled to seven years of orphan-drug exclusivity for XPOVIO's approved indication for the treatment of patients with relapsed or refractory multiple myeloma, pursuant to section 527 of the Federal Food, Drug, and Cosmetic Act.

- **Five Abstracts Presented at the 17th International Myeloma Workshop (IMW).** Multiple data presentations at this year's IMW, held September 12-15, 2019, continue to reinforce the potential clinical utility of XPOVIO as a new therapeutic option for patients with relapsed or refractory multiple myeloma. One key abstract, in particular, titled, "Outcomes of Triple Class Refractory Penta-Exposed Multiple Myeloma (MM)," (Cornell, *et al*) compared the OS rate from the retrospective MAMMOTH study (Gandhi, 2019), which evaluated outcomes from patients with relapsed or refractory multiple myeloma after their disease became refractory to CD38 monoclonal antibodies, with a similarly-matched cohort of patients from Karyopharm's Phase 2b STORM study. Patients in STORM, who received selinexor and dexamethasone as first line of therapy after their disease became triple class refractory (n=64), compared to matched patients receiving currently available therapies from the MAMMOTH cohort (n=128), showed an unadjusted hazard ratio (HR) of 0.64 (p=0.043). An adjusted analysis, which takes into consideration differences in baseline characteristics between the two groups, showed a HR of 0.55 (p=0.009).

- **Decision from European Medicines Agency (EMA) for Marketing Authorization Application (MAA) Expected in Early 2020.** In January 2019, Karyopharm submitted an MAA to the EMA requesting conditional approval for selinexor, in combination with dexamethasone, as a new treatment for patients with heavily pretreated

multiple myeloma based on the results of the Phase 2b STORM study. The Company expects to receive a decision on the MAA in early 2020.

- **Pivotal Phase 3 BOSTON Study On Track.** Karyopharm's pivotal, randomized Phase 3 BOSTON study is progressing and patient enrollment was completed in January 2019. Top-line data are expected in early 2020 contingent upon the occurrence of progression-free survival (PFS) events, the primary endpoint of the study. The BOSTON study is evaluating 100mg of selinexor dosed *once* weekly in combination with the proteasome inhibitor Velcade® (bortezomib) (*once* weekly) and low dose dexamethasone (SVd), compared to standard *twice* weekly Velcade and low dose dexamethasone (Vd) in patients with multiple myeloma who have had one to three prior lines of therapy. Data from the BOSTON study, if positive, are expected to be used to support regulatory submissions to the FDA and EMA requesting the use of selinexor in combination with Velcade and dexamethasone in patients with multiple myeloma who have received at least one prior therapy.

Selinexor in Diffuse Large B-Cell Lymphoma (DLBCL)

- **NDA Expected to be Submitted by End of 2019.** Following the positive results from the Phase 2b SADAL study that were first presented at the America Society of Hematology 2018 Annual Meeting and then updated in June at the 2019 International Conference on Malignant Lymphoma, Karyopharm expects to submit a New Drug Application (NDA) to the FDA by the end of 2019 requesting accelerated approval for selinexor as a treatment for patients with relapsed or refractory DLBCL after at least two prior multi-agent therapies and who are ineligible for stem cell transplantation including CAR-T (chimeric antigen receptor modified T cell) therapy. The Company also expects to submit an MAA to the EMA in 2020 requesting conditional approval for selinexor in the same indication. In addition to orphan drug designation, selinexor was granted fast track designation for this indication by the FDA in 2018.

Selinexor in Solid Tumors

- **Ongoing Phase 3 Portion of the Phase 2/3 SEAL Study in Liposarcoma.** Karyopharm previously reported positive results from the Phase 2 portion of the randomized, blinded Phase 2/3 SEAL study evaluating single-agent selinexor versus placebo in patients with previously treated, advanced unresectable dedifferentiated liposarcoma. Enrollment is currently ongoing in the Phase 3 portion of the SEAL study. Top-line data from the Phase 3 portion of the SEAL study are anticipated in 2020. Assuming a positive outcome on the primary endpoint of PFS, the Company intends to use the data from the SEAL study to support NDA and MAA submissions requesting approval for selinexor for patients with advanced unresectable dedifferentiated liposarcoma.

Corporate and Financial Updates

- **Executed Royalty Agreement with HealthCare Royalty Partners for up to $150 Million.** In September 2019, Karyopharm executed a royalty agreement with HealthCare Royalty Partners (HCR) for up to $150 million to support the ongoing development and commercialization of XPOVIO. Under the terms of the agreement, Karyopharm received $75 million in September 2019 and is eligible to receive an additional $75 million upon the achievement of future regulatory and commercial milestones, as well as closing conditions. In exchange for the first $75 million, HCR will receive a tiered royalty in the mid-single digits based on worldwide net revenues of XPOVIO and any other future products beginning in October 2019.

Third Quarter 2019 Financial Results

Net product revenue for the quarter ended September 30, 2019 was $12.8 million, which reflects the first quarter of recorded sales for XPOVIO. Karyopharm did not have any product revenue for the quarter ended September 30, 2018.

License and other revenue for the third quarter 2019 was $0.3 million, compared to $0.2 million for the third quarter of 2018.

Cost of sales for the third quarter 2019, was $1.0 million, which reflects the costs of XPOVIO® units sold and third-party royalties on our net product revenue. Karyopharm did not have any cost of sales for the third quarter 2018.

Research and development expense for the third quarter 2019 was $26.3 million, compared to $36.4 million for the third quarter of 2018. Karyopharm expects research and development expense to be relatively consistent for the final quarter of 2019 compared to the third quarter of 2019. For the third quarter 2019, selling, general and administrative expense was $25.3 million, compared to $13.0 million for the third quarter 2018. The increase in selling, general and administrative expenses compared to the prior year period was due primarily to the hiring of the Karyopharm commercial team and related activities to support the U.S. commercial launch of XPOVIO.

Karyopharm reported a net loss of $41.4 million, or $0.67 per share, for the third quarter 2019, compared to a net loss of $48.1 million, or $0.79 per share, for the third quarter 2018. Net loss includes non-cash stock-based compensation expense of $3.7 million and $4.8 million for the 2019 and 2018 quarters, respectively.

Cash, cash equivalents, restricted cash and investments as of September 30, 2019 totaled $270.3 million, compared to $330.9 million as of December 31, 2018.

2019 Financial Outlook

Based on its current operating plans, Karyopharm expects its non-GAAP operating expenses, which excludes stock-based compensation expense, for the full year 2019 to be in the range of $200 million to $210 million. Karyopharm has not reconciled the full year 2019 outlook for non-GAAP operating expenses to full year 2019 outlook for GAAP operating expenses because Karyopharm cannot reliably predict without unreasonable efforts the timing or amount of the factors that substantially contribute to the projection of stock compensation expense, which is excluded from the full year 2019 outlook for non-GAAP operating expenses.

The Company expects that its existing cash, cash equivalents and investments, and the revenue it expects to generate from XPOVIO product sales, will be sufficient to fund its planned operations into the middle of 2021.

Additional key activities expected in the remainder of 2019 include supporting the ongoing multiple myeloma regulatory filing for selinexor in Europe, progressing the pivotal Phase 3 BOSTON study in multiple myeloma and submitting an NDA in the U.S. in DLBCL.

Non-GAAP Financial Information

Karyopharm uses a non-GAAP financial measure, non-GAAP operating expense, to provide operating expense guidance. Karyopharm believes this non-GAAP financial measure is useful to investors because it provides greater transparency regarding Karyopharm's operating performance as it excludes non-cash stock compensation expense. This non-GAAP financial measure should not be considered a substitute or an alternative to GAAP total

operating expense and should not be considered a measure of Karyopharm's liquidity. Instead, non-GAAP operating expense should only be used to supplement an understanding of Karyopharm's operating results as reported under GAAP.

Conference Call Information

Karyopharm will host a conference call today, Monday, November 4, 2019, at 8:30 a.m. Eastern Time, to discuss the third quarter 2019 financial results, recent accomplishments, clinical developments and business plans. To access the conference call, please dial (855) 437-4406 (local) or (484) 756-4292 (international) at least 10 minutes prior to the start time and refer to conference ID 3353586 . A live audio webcast of the call will be available under "Events & Presentations" in the Investor section of the Company's website, http://investors.karyopharm.com/events-presentations. An archived webcast will be available on the Company's website approximately two hours after the event.

Important Safety Information

The most common adverse reactions observed in patients treated with XPOVIO (incidence ≥20%) are thrombocytopenia, fatigue, nausea, anemia, decreased appetite, decreased weight, diarrhea, vomiting, hyponatremia, neutropenia, leukopenia, constipation, dyspnea, and upper respiratory tract infection.

The treatment discontinuation rate due to adverse reactions was 27%; 53% of patients had a reduction in the XPOVIO dose, and 65.3% had the dose of XPOVIO interrupted. The most frequent adverse reactions requiring permanent discontinuation in 4% or greater of patients who received XPOVIO included fatigue, nausea, and thrombocytopenia. The rate of fatal adverse reactions was 8.9%.

The full Prescribing Information for XPOVIO is available at www.XPOVIO.com.

About Karyopharm Therapeutics

Karyopharm Therapeutics Inc. (Nasdaq: KPTI) is an oncology-focused pharmaceutical company dedicated to the discovery, development, and commercialization of novel first-in-class drugs directed against nuclear export 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). Karyopharm's lead compound, XPOVIO® (selinexor), received accelerated approval from the FDA in July 2019 in combination with dexamethasone as a treatment for patients with heavily pretreated multiple myeloma. A Marketing Authorization Application for selinexor is also currently under review by the European Medicines Agency. 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 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 Karyopharm's expectations relating to XPOVIO for the treatment of patients with heavily pretreated multiple myeloma, commercialization of XPOVIO or any of its drug candidates, submissions to, and the review and potential approval of selinexor by, regulatory authorities, including the anticipated timing of such submissions and actions and the potential availability of

accelerated approval pathways, and the therapeutic potential of and potential clinical development plans for Karyopharm's drug candidates, especially selinexor. Such statements are subject to numerous important factors, risks and uncertainties, many of which are beyond Karyopharm's control, that may cause actual events or results to differ materially from Karyopharm's current expectations. For example, there can be no guarantee that Karyopharm will successfully commercialize XPOVIO; that regulators will agree that selinexor qualifies for conditional approval in the E.U. as a result of data from the STORM study or accelerated or conditional approval in the U.S. or EU, respectively, based on the SADAL study in patients with relapsed or refractory DLBCL, or that any of Karyopharm's drug candidates, including selinexor, will successfully complete necessary 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 the development or commercialization of 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: adoption of XPOVIO in the commercial marketplace, the timing and costs involved in commercializing XPOVIO or any of Karyopharm's drug candidates that receive regulatory approval; the ability to retain regulatory approval of XPOVIO or any of Karyopharm's drug candidates that receive regulatory approval; 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; the ability of Karyopharm or its third party collaborators or successors in interest to fully perform their respective obligations under the applicable agreement and the potential future financial implications of such agreement; 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 September 30, 2019, which was filed with the Securities and Exchange Commission (SEC) on November 4, 2019, 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.

Velcade® is a registered trademark of Takeda Pharmaceutical Company Limited

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Karyopharm Therapeutics Inc.

CONDENSED CONSOLIDATED BALANCE SHEETS

(unaudited)

(in thousands, except share and per share amounts)

	September 30, 2019	December 31, 2018
Assets		
Current assets:		
Cash and cash equivalents	$ 168,004	$ 118,021
Short-term investments	99,525	210,178
Accounts receivable	7,928	—
Inventory	100	—
Prepaid expenses and other current assets	5,310	6,413
Total current assets	280,867	334,612
Property and equipment, net	3,240	3,863
Operating lease right-of-use assets	10,904	—
Long-term investments	2,022	2,001
Restricted cash	712	716
Total assets	$ 297,745	$ 341,192
Liabilities and stockholders' equity		
Current liabilities:		
Accounts payable	$ 3,068	$ 4,332
Accrued expenses	32,421	32,493
Deferred revenue	1,053	9,362
Operating lease liabilities	1,583	—
Deferred rent	—	390
Other current liabilities	1,077	327
Total current liabilities	39,202	46,904
Convertible senior notes	107,962	102,664
Deferred royalty obligation	73,589	—
Operating lease liabilities, net of current portion	13,643	—
Deferred revenue, net of current portion	3,479	4,532
Deferred rent, net of current portion	—	3,922
Total liabilities	237,875	158,022
Stockholders' equity:		
Preferred stock, $0.0001 par value; 5,000,000 shares authorized; none issued and outstanding	—	—
Common stock, $0.0001 par value; 200,000,000 shares authorized; 62,705,481 shares issued and outstanding at September 30, 2019; 100,000,000 shares authorized; 60,829,308 shares issued and outstanding at December 31, 2018	6	6
Additional paid-in capital	884,585	857,156
Accumulated other comprehensive loss	(30)	(244)
Accumulated deficit	(824,691)	(673,748)
Total stockholders' equity	59,870	183,170
Total liabilities and stockholders' equity	$ 297,745	$ 341,192

Karyopharm Therapeutics Inc.

CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS

(unaudited)

(in thousands, except share and per share amounts)

	Three Months Ended, September 30,		Nine Months Ended September 30,	
	2019	2018	2019	2018
Revenues:				
Product revenue, net	$ 12,821	$ —	$ 12,821	$ —
License and other revenue	328	239	9,976	30,130
Total revenues	13,149	239	22,797	30,130
Operating expenses:				
Cost of sales	1,013	—	1,013	—
Research and development	26,270	36,427	90,761	122,482
Selling, general and administrative	25,267	12,966	77,032	30,076
Total operating expenses	52,550	49,393	168,806	152,558
Loss from operations	(39,401)	(49,154)	(146,009)	(122,428)
Other income (expense):				
Interest income	1,137	1,098	4,320	2,260
Interest expense	(3,093)	—	(9,180)	—
Other income (expense)	10	(13)	(36)	(20)
Total other (expense) income, net	(1,946)	1,085	(4,896)	2,240
Loss before income taxes	(41,347)	(48,069)	(150,905)	(120,188)
Income tax provision	(20)	(14)	(38)	(9)
Net loss	$ (41,367)	$ (48,083)	$ (150,943)	$ (120,197)
Net loss per share—basic and diluted	$ (0.67)	$ (0.79)	$ (2.46)	$ (2.17)
Weighted-average number of common shares outstanding used in net loss per share—basic and diluted	62,092,841	60,586,511	61,297,249	55,465,261