

Karyopharm Therapeutics Inc. (KPTI)

KPTI Outlines Registration Strategy in DLBCL, AML, and Richter's

MARKET DATA

Price	\$26.48
52-Week Range:	\$15.50 - \$47.87
Shares Out. (M):	29.8
Market Cap (\$M):	\$789.1
Average Daily Vol. (000):	235.0
Cash (M):	\$156
Cash/Share:	\$5.24
Enterprise Value (M):	\$785
Float (M):	14.6
LT Debt (M):	\$0

Source: Thomson Reuters and JMP Securities LLC

MARKET OUTPERFORM | Price: \$26.48 | Target Price: \$50.00

INVESTMENT HIGHLIGHTS

We reiterate our Market Outperform rating and \$50 price target after Karyopharm details selinexor heme malignancy registration strategy with selinexor at an investor event in conjunction with ASCO. On the heels of compelling activity signals in DLBCL (29% ORR, with responses in 'double hit' patients), AML (16% ORR in a heavily pretreated population), and Richter's syndrome (100% disease control), registration trials in each of these indications were outlined: 1) **SOPRA** – a 150-patient, randomized Phase II trial in R/R elderly AML not suitable for intensive chemotherapy versus physicians' choice (LDAC, HMA therapy or BSC). Primary endpoint of overall survival by ITT, with 80% power to show median OS improvement of three to 5.4 months; 2) **SADAL** – a 150-patient, single-arm Phase II trial of selinexor plus low dose dexamethasone in $\geq 3L$ R/R DLBCL, in all subsets. Primary endpoints of ORR and duration of response, with a lower bound confidence limit of 20%; and 3) **SIRRT** – a 50 patient, single-arm Phase II study in CLL patients transforming to Richter's syndrome (10-20% of CLL patients) and relapsing after chemotherapy. Primary endpoint of ORR (targeting $\geq 20\%$ with DOR of ≥ 4 months).

We note that while the DLBCL registration strategy reflects a shift from prior guidance-going from a randomized to single-arm study design- we believe it retains the capacity to support accelerated approval, which can subsequently be secured by a confirmatory trial in combination with standard therapy. Our valuation is derived through DCF and SOTP valuation methodologies.

FY DEC		2013A	2014E	2015E
Revenue (\$M)	1Q	--	\$0.2A	\$0.0
	2Q	\$0.4	\$0.0	\$0.0
	3Q	\$0.0	\$0.0	\$0.0
	4Q	\$0.0	\$0.0	\$0.0
	FY	\$0.0	\$0.0	\$0.0
EPS	1Q	--	(\$0.46)A	--
	2Q	(\$5.39)	(\$0.44)	--
	3Q	(\$3.66)	(\$0.46)	--
	4Q	(\$0.47)	(\$0.53)	--
	FY	(\$5.59)	(\$1.89)	(\$5.18)

Source: Company reports and JMP Securities LLC

STOCK PRICE PERFORMANCE



In our view, the modified registration strategy for DLBCL is better suited for patient enrollment and fits a paradigm established by other drugs in the heme space. Moving SADAL from a randomized trial versus physician's choice chemotherapy to a single-arm design was based upon physician feedback indicating a reluctance to randomize patients to an ineffective, poorly tolerated chemo regimen. Pending additional feedback from regulators, Karyopharm anticipates being able to file for accelerated approval on the basis of meaningful single-arm ORR, to be confirmed by a randomized study (potentially chemoimmunotherapy +/- selinexor). While in the contrast to prior expectations, we note there are multiple successful precedents to this approach, in particular Pomalyst (CELG, MO, \$205 PT), Velcade (Takeda and JNJ, NC), and Kyprolis (AMGN, NC) in multiple myeloma. Based on the objective response and clinical benefit rates seen to date in DLBCL (29% and 70%, respectively) at a suboptimal mean drug exposure, we maintain a high degree of confidence in selinexor's potential to satisfy regulators' threshold for meaningful activity in a single-arm \geq third-line study (in the neighborhood of $\sim 30\%$, in our view).

Michael G. King, Jr.
mking@jmpsecurities.com
(212) 906-3520

Eric Joseph, PhD
ejoseph@jmpsecurities.com
(212) 906-3514

FOR DISCLOSURE AND FOOTNOTE INFORMATION, REFER TO JMP FACTS AND DISCLOSURES SECTION.

Company Description

Karyopharm Therapeutics (KPTI) is a Natick, MA-based, clinical-stage biopharmaceutical company focused on the discovery and development of novel first-in-class drugs directed against nuclear transport targets for the treatment of cancer and other major diseases. Karyopharm's Selective Inhibitors of Nuclear Export (SINE) compounds function by preventing the export of tumor suppressor proteins from the nucleus, driving accumulation and restoration of function. The company's lead pipeline candidate, selinexor (KPT-330), is a Phase I orally available small molecule inhibitor of XPO1, set to initiate pivotal Phase II/III evaluation in various hematologic malignancies in 2014. Karyopharm is also developing selinexor and SINE as potential therapies for autoimmune and inflammatory disease, viral infections, and wound healing.

Investment Risks

Clinical. Drug development is an inherently risky business. Clinical trials always carry a risk of failure and Karyopharm's assets (Selinexor (KPT330), KPT-350, PAK4 inhibitor, verdinexor or future drug candidates) may fail to demonstrate meaningful enough levels of efficacy in current or future clinical trials.

Regulatory and commercial. The ability of Karyopharm to market its drugs depends upon the drugs obtaining approval from the FDA and foreign regulatory agencies. Failure to achieve approval or delays in the timelines to approval could negatively impact the company's share price.

Competitive. Hematologic malignancies including multiple myeloma, indolent non-Hodgkin lymphoma and acute myeloid leukemia represent increasingly competitive fields and Karyopharm faces competition from both commercial and development-stage companies with product(s) or product candidates addressing similar clinical indications. Some of these companies may possess substantially greater R&D and commercial resources than Karyopharm. As such, there is no assurance Karyopharm will be competitive or differentiated from other drug products.

Financial. Following its IPO, Karyopharm ended 1Q14 with approximately \$156MM in cash and cash equivalents. We anticipate the company is likely to seek additional equity financing in the form of a secondary offering in order to complete the development of its drug candidates, creating dilution risk for existing shareholders.

JMP FACTS AND DISCLOSURES

Analyst Certification:

The research analyst(s) who prepared this report does/do hereby certify that the views presented in this report are in accordance with my/our personal views on the securities and issuers discussed in this report. As mandated by SEC Regulation AC no part of my/our compensation was, is or will be directly or indirectly related to the specific views or recommendations expressed herein. This certification is made under the obligations set forth in SEC Regulation AC. Any other person or entity may not use it for any other purpose. This certification is made based on my/our analysis on the date of this report's publication. I/We assume no obligation to update this certification to reflect any facts, circumstances or events that may subsequently come to my/our attention. Signed Michael G. King and Eric Joseph

JMP Securities Disclosures:

JMP Securities currently makes a market in the securities of Karyopharm Therapeutics Inc., Amgen Inc. and Celgene Corporation

JMP Securities was manager or co-manager of a public offering of securities for Karyopharm Therapeutics Inc. (KPTI) in the past 12 months, and received compensation for doing so.

JMP Securities Investment Opinion Definitions:

Market Outperform (MO): JMP Securities expects the stock price to outperform relevant market indices over the next 12 months.

Market Perform (MP): JMP Securities expects the stock price to perform in line with relevant market indices over the next 12 months.

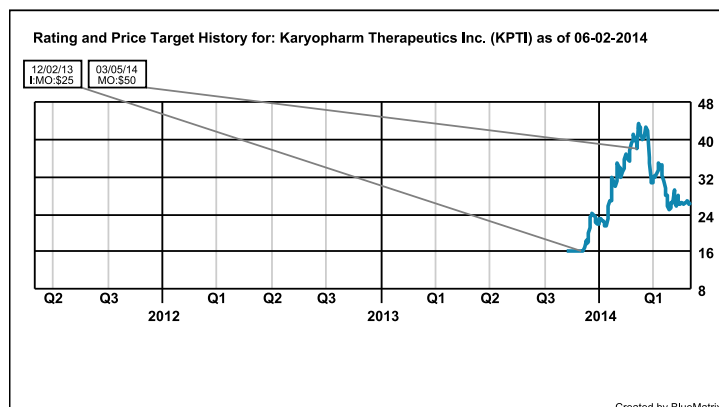
Market Underperform (MU): JMP Securities expects the stock price to underperform relevant market indices over the next 12 months.

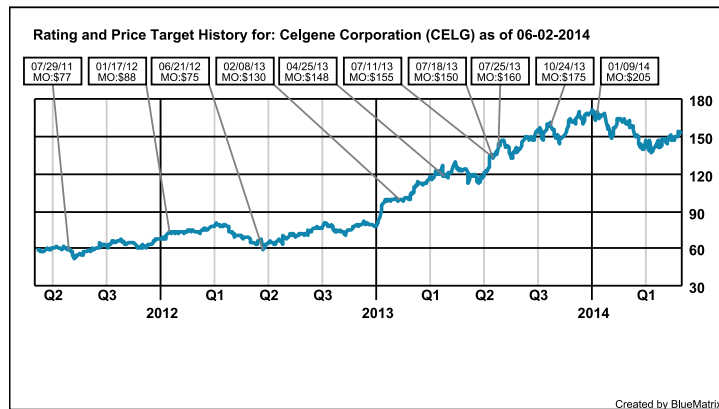
JMP Securities Research Ratings and Investment Banking Services: (as of June 2, 2014)

JMP Rating	Regulatory Equivalent	# Co's Under Coverage	% of Total	Regulatory Equivalent	# Co's Under Coverage	% of Total	# Co's Receiving IB Services in Past 12 Months	% of Co's With This Rating
MARKET OUTPERFORM	Buy	259	58.73%	Buy	259	58.73%	99	38.22%
MARKET PERFORM	Hold	134	30.39%	Hold	134	30.39%	16	11.94%
MARKET UNDERPERFORM	Sell	5	1.13%	Sell	5	1.13%	0	0%
COVERAGE IN TRANSITION		43	9.75%		43	9.75%	0	0%
TOTAL:		441	100%		441	100%	115	26.08%

Stock Price Chart of Rating and Target Price Changes:

Note: First annotation denotes initiation of coverage or 3 years, whichever is shorter. If no target price is listed, then the target price is N/A. In accordance with NASD Rule 2711, the chart(s) below reflect(s) price range and any changes to the rating or price target as of the end of the most recent calendar quarter. The action reflected in this note is not annotated in the stock price chart. Source: JMP Securities.





JMP Disclaimer:

JMP Securities LLC (the "Firm") compensates research analysts, like other Firm employees, based on the Firm's profitability, which includes revenues from the Firm's institutional sales, trading, and investment banking departments as well as on the quality of the services and activities performed that are intended to benefit the Firm's institutional clients. These data have been prepared by JMP Securities LLC for informational purposes only and are based on information available to the public from sources that we believe to be reliable, but we do not guarantee their accuracy or completeness. Any opinions and projections expressed herein reflect our judgment at this date and are subject to change without notice. These data are neither intended nor should be considered as an offer to sell or a solicitation or a basis for any contract for the purchase of any security or other financial product. JMP Securities LLC, its affiliates, JMP Group LLC, Harvest Capital Strategies LLC, and their respective partners, directors, officers, and associates may have a long or short position in, may act as a market maker for, or may purchase or sell a position in the securities mentioned herein. JMP Securities LLC or its affiliates may be performing, have performed, or seek to perform investment banking, advisory, or other services and may have acted as manager or co-manager for a public offering of securities for any company mentioned herein. The reader should assume that JMP Securities LLC will solicit business from the company covered in this report. Members of our Sales and Trading Department provide oral and/or written market opinions and trading strategies to our clients that reflect their personal opinions about stocks that are the subject of the firm's research reports. Our research analysts discuss trading strategies with clients that sometimes reflect short-term expectations for the price of the securities that are the subject of research reports. These trading strategies are distinct from the analysts' fundamental rating for the stock, which is based upon the analysts' view compared to other stocks under coverage for the relevant time period. © Copyright 2014. All rights reserved by JMP Securities LLC. JMP Securities LLC is a member of FINRA, NASDAQ, and SIPC.

Jeffrey H. Spurr
Director of Research
 (415) 835-3903

RESEARCH PROFESSIONALS

FINANCIAL SERVICES

Alternative Asset Managers

Devin Ryan	(212) 906-3578
Brian McKenna	(212) 906-3545

Commercial & Specialty Finance

Christopher York	(415) 835-8965
Hannah Kim, CFA	(415) 835-8962

Consumer Finance

David M. Scharf	(415) 835-8942
Jeremy Frazer	(312) 768-1796

Financial Processing & Outsourcing

David M. Scharf	(415) 835-8942
Jeremy Frazer	(312) 768-1796

Insurance

Matthew J. Carletti	(312) 768-1784
Christine Worley	(312) 768-1786

Investment Banks & Brokers

Devin Ryan	(212) 906-3578
Brian McKenna	(212) 906-3545

Mortgage Operating Companies

REITs: Agency, Hybrid, & Commercial Mortgage

Steven C. DeLaney	(404) 848-7773
Trevor Cranston, CFA	(415) 869-4431
Charter Robinson	(757) 613-8955
Benjamin Zucker	(212) 906-3529

HEALTHCARE

Biotechnology

Liisa A. Bayko	(312) 768-1785
Heather Behanna, PhD	(312) 768-1795
Andrew Prigodich	(312) 768-1788
Jason N. Butler, PhD	(212) 906-3505
Caroline Palomeque	(212) 906-3509
Michael G. King, Jr.	(212) 906-3520
Eric Joseph, PhD	(212) 906-3514

Healthcare Services & Facilities

Peter L. Martin, CFA	(415) 835-8904
Aaron Hecht	(415) 835-3963
Arthur Kwok	(415) 835-8908

Life Science Tools & Diagnostics

J. T. Haresco, III, PhD	(415) 869-4477
Marie T. Casey, PhD	(415) 835-3955

Medical Devices

J. T. Haresco, III, PhD	(415) 869-4477
Marie T. Casey, PhD	(415) 835-3955

Medical Devices & Supplies

David Turkaly	(212) 906-3563
John Gillings	(212) 906-3564

REAL ESTATE

Housing & Land Development

Peter L. Martin, CFA	(415) 835-8904
Aaron Hecht	(415) 835-3963
Bharathwajan Iyengar	(415) 835-3902

Lodging & Leisure

Robert A. LaFleur	(212) 906-3510
Whitney Stevenson	(212) 906-3538

Property Services

Mitch Germain	(212) 906-3546
Peter Lunenburg	(212) 906-3537

REITs: Healthcare, Residential, & Specialty

Peter L. Martin, CFA	(415) 835-8904
Aaron Hecht	(415) 835-3963
Arthur Kwok	(415) 835-8908

REITs: Office, Industrial, & Diversified

Mitch Germain	(212) 906-3546
Peter Lunenburg	(212) 906-3537

Residential Services

Peter L. Martin, CFA	(415) 835-8904
Aaron Hecht	(415) 835-3963
Bharathwajan Iyengar	(415) 835-3902

TECHNOLOGY

Communications Equipment & Internet Security

Erik Suppiger	(415) 835-3918
John Lucia	(415) 835-3920

Internet & Digital Media

Ronald V. Josey III	(212) 906-3528
Andrew Boone	(415) 835-3957
Michael Wu	(415) 835-8996

Software

Patrick Walravens	(415) 835-8943
Peter Lowry	(415) 869-4418
Caitlin Schields	(415) 835-8960
Greg McDowell	(415) 835-3934

Wireless & Cloud Computing Technologies

Alex Gauna	(415) 835-8998
------------	----------------

ADDITIONAL CONTACTS

Thomas R. Wright
Director of Equities
 (212) 906-3599

Dan Wychulis
Director of Institutional Sales
 (617) 235-8530

600 Montgomery Street, Suite 1100
 San Francisco, CA 94111
www.jmpsecurities.com