

Karyopharm Therapeutics Inc. (KPTI)

Improving DLBCL Response Rates Shine in Selinexor Phase I CLL/NHL Update

MARKET DATA

Price	\$16.91
52-Week Range:	\$15.50 - \$19.09
Shares Out. (M):	27.6
Market Cap (\$M):	\$466.7
Average Daily Vol. (000):	506.0
Cash (M):	\$153
Cash/Share:	\$5.56
Enterprise Value (M):	\$474
Float (M):	12.2
LT Debt (M):	\$0

Source: Thomson Reuters and JMP Securities LLC

MARKET OUTPERFORM | Price: \$16.91 | Target Price: \$25.00

INVESTMENT HIGHLIGHTS

Updated selinexor Phase I NHL/CLL data in NHL show 27% partial response rate and 45% stable disease in DLBCL with expansion cohort enrollment; reiterate Market Outperform rating on Karyopharm Therapeutics and \$25 price target based on DCF, SOTP and comparable valuation methodologies. The data were presented by clinical investigator Dr. John Kuruvilla of Princess Margaret Hospital, Toronto, in an oral presentation at ASH yesterday (Abstract #90). Overall response rates across all CLL/NHL were marginally improved compared to prior reporting in September (27% vs. 25%), with the incremental benefit favoring patients with DLBCL (27% vs. 20%). Recall refractory DLBCL is one of two indications in which potential registration directed trials are expected to begin during 1H14 and for which we have accounted in our model.

Additional takeaways on efficacy. Compared to prior reporting from Arm 1 in the Phase I trial of selinexor, six additional patients with DLBCL refractory to prior chemotherapy and bone marrow transplant were evaluable for treatment effect for a total of eleven patients. Partial response was observed in three of eleven patients compared to one-fifth of patients in September. Five of eleven patients, compared to two of four patients previously, were noted for stable disease, with the potential to convert to partial response pending completed CT scans. Overall, we believe the maturing activity profile with selinexor in DLBCL bode well for further development through registration directed trials in the indication. Clinical activity in Richter's syndrome (one-fourth partial response and three-fourths stable disease) and follicular lymphoma (1/6 partial response and 4/6 stable disease) are also encouraging.

Updates on safety. Across all dose cohorts, adverse event rates were largely in line with prior reporting, although direct comparisons of updated safety results were precluded by the exclusion of Arm I patients with multiple myeloma and Waldenstrom's. Of note, reported Grade 3/4 neutropenia was 30% compared to 29% previously, while Grade 3/4 thrombocytopenia declined slightly to 27% compared to a prior 31%. With the exception of Grade ≥3 fatigue increasing to 10% (compared to ~3% previously), non-hematological adverse events were consistent with prior results, including nausea (63%), fatigue (57%), anorexia (55%), vomiting (37%) and diarrhea (33%).

Commencement of registration-directed trials during 2014 should catapult shares to the next level of valuation. In our view, when Karyopharm enters registration-directed trials next year, the valuation of the stock should be more reflective of other late-stage oncology companies steered by management teams that have successfully demonstrated significant value creation in the space. The "elite three" we would compare KPTI to include Clovis Oncology (CLVS, NC), Puma Biotechnology (PBYI, NC) and Tesaro (TSRO, NC). While none of these companies is a perfect comparable for

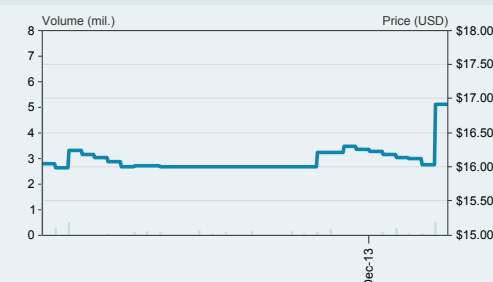
FY DEC	2012A	2013E	2014E
Revenue (\$M) 1Q	--	--	\$0.0
2Q	--	\$0.4A	\$0.0
3Q	--	\$0.0	\$0.0
4Q	--	\$0.0	\$0.0
FY	\$0.6	\$0.0	\$0.0
EPS 1Q	--	--	(\$0.30)
2Q	--	(\$5.39)A	(\$0.35)
3Q	--	(\$0.31)	(\$0.44)
4Q	--	(\$0.29)	(\$0.55)
FY	(\$8.95)	(\$1.22)	(\$1.64)

EPS 2013 Q2: Results are for six months ended June 30, 2013

Revenue (\$M) 2013 Q2: Results are for six months ended June 30, 2013

Source: Company reports and JMP Securities LLC

STOCK PRICE PERFORMANCE



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.

KPTI, we believe the valuation of the shares belongs amongst these peers based on the quality of the scientific and clinical data, as well as management's track record of value creation in the biotechnology industry.

FIGURE 1. Summarized Selinexor Phase I NHL/CLL Outcomes

Diagnosis*	Patients Evaluated	Partial Response (PR) (%)	Stable Disease (SD) (%)	Progressive Disease (%)	Withdrew Consent (%)	Not Evaluable (%)	Total PR and SD (%)
CLL	4	2 (50%)	2 (50%)	--	--	--	4 (100%)
Richter's Syndrome	4	1 (25%)	3 (75%)	--	--	--	4 (100%)
NHL							
DLBCL	11	3 (27%)	5 (45%)	2 (18%)	--	1 (9%)	8 (72%)
MCL	3	1 (33%)	1 (33%)	--	--	1 (33%)	2 (67%)
FL	6	1 (17%)	4 (66%)	--	1 (17%)	--	5 (83%)
Transformed FL	2	--	--	2 (100%)	--	--	--
Total	30	8 (27%)	15 (50%)	4 (13%)	1 (3.3%)	2 (6.7%)	23 (77%)

Source: Karyopharm company report

FIGURE 2. Upcoming Milestones

Timing	Drug	Milestones
Dec 7-10	Selinexor	Updated Phase I and pre-clinical data presentations at ASH <ul style="list-style-type: none"> • Oral presentation of Phase I data in CLL and NHL (#90) • Oral presentation of XPO1 inhibition in AML (#237) • Oral presentation of preclinical efficacy in MM +/- carfilzomib (#279) • Three poster presentations of pre-clinical and Phase I AML results (#3165, #3785, #3932,)
1H14	Selinexor	Initiation of first pivotal Phase II/III study in (elderly R/R AML, DLBCL, or MM)
1H14	Selinexor	Initiation of second pivotal Phase II/III study in (second potential indication)
1H14	Selinexor	Initiation of first Phase II trial in solid tumor indication (potentially gynecological malignancies)
1H14	Selinexor	Initiation of second Phase II trial in solid tumor indication (squamous cell cancer, e.g., head and neck, lung or esophageal cancer)
2H14	KPT-350	IND completion for use in inflammation, auto-immune and anti-viral indications
2H14	PAK Inhibitor	IND completion for use in oncology indications

Source: Karyopharm company reports

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 security of Karyopharm Therapeutics Inc.

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

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.

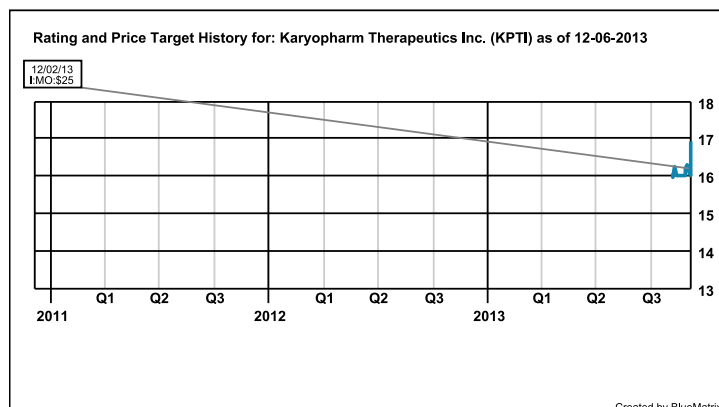
Market Underperform (MU): JMP Securities expects the stock price to underperform relevant market indices over the next 12 months.

JMP Securities Research Ratings and Investment Banking Services: (as of December 6, 2013)

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	228	54.68%	Buy	228	54.68%	89	39.04%
MARKET PERFORM	Hold	139	33.33%	Hold	139	33.33%	25	17.99%
MARKET UNDERPERFORM	Sell	5	1.20%	Sell	5	1.20%	0	0%
COVERAGE IN TRANSITION		45	10.79%		45	10.79%	0	0%
TOTAL:		417	100%		417	100%	114	27.34%

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 and complete surveys from clients that sometimes reflect short-term expectations for the price of the securities that are the subject of research reports. Those trading strategies and survey responses 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 2013. 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

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

Mortgage Finance

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
 Christopher T. Radom, PhD (212) 906-3519
 Caroline Palomeque (212) 906-3509
 Michael G. King, Jr. (212) 906-3520
 Eric Joseph, PhD (212) 906-3514
 Joseph A. Knowles (212) 906-3525

Healthcare Services & Facilities

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

Medical Devices & Supplies

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

Medical Devices & Molecular Diagnostics

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

REAL ESTATE

Housing & Land Development

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

Lodging

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

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

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

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
 Michael Wu (415) 835-8996

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