

Karyopharm Therapeutics Inc. (KPTI)

Incremental Update on Selinexor Myeloma Data at EHA

MARKET DATA

Price	\$47.12
52-Week Range:	\$15.50 - \$47.87
Shares Out. (M):	29.8
Market Cap (\$M):	\$1,404.2
Average Daily Vol. (000):	128.0
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: \$47.12 | Target Price: \$50.00

INVESTMENT HIGHLIGHTS

Additional details from the poster presentation of Selinexor plus dexamethasone underscore the clinically meaningful impact of the combination; reiterate our Market Outperform rating and \$50 price target. Recall that 4/8 patients treated with the combination achieved objective response (50% ORR, 13% CR), while 6/8 patients (75%) achieved clinical benefit. In addition to being multiply relapsed/refractory (median 5.5 prior lines of therapy), several patients treated in the combination arm were positive for higher risk factors, including high FLC-λ ratio and IgA expression. Compared with the relatively modest activity of selinexor or dexamethasone as monotherapy, these new data imply an exquisitely potent synergistic effect between selinexor and dexamethasone-one that may ultimately prove broadly applicable across heme malignancy as well as to other drug combinations with agents targeting nuclear receptors, in our view. We derive our \$50 PT through a synthesis of our DCF, SOTP, and CAGR valuation methodologies.

Signs of synergy from selinexor plus dexamethasone combination. Recall (shown in Figure 1) that single-agent activity selinexor in multiple myeloma had been relatively modest, achieving 6% partial response and 12% clinical benefit at higher doses (≥35mg/m² BIW). Contrasted with, in our view, a clear activity signal in the combination with dex (50% ORR, 75% CBR), it would appear that complementary actions are at work. This assertion is supported by preclinical experiments in myeloma mouse xenografts (data not shown) showing modest tumor growth inhibition from single-agent treatment converting tumor regressions after selinexor and dex are given in combination. While the exact mechanism involved remains to be determined, it could potentially stem from a nuclear retention of glucocorticoid receptor (dexamethasone's target molecule) due to XPO1 inhibition. We note that synergistic activity with dex has precedent in multiple myeloma, particularly with Pomalyst (CELG, MO, \$205 PT) where ORR improved from ~9% to 30% from the combination with dex.

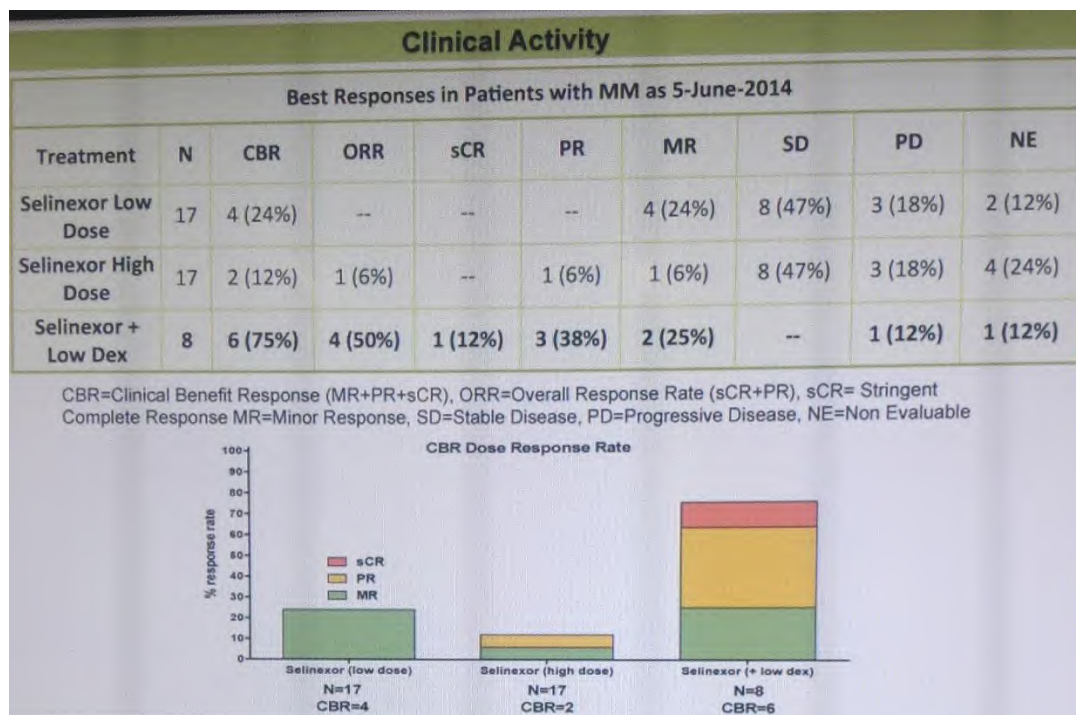
Our model anticipates conservative use of selinexor in the treatment of R/R MM, predominantly in 3L+, contributing \$5.72 NPV to our SOTP valuation of \$41.212. We derive our \$50 PT through a synthesis of DCF, SOTP, and CAGR valuation methodologies.

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



FIGURE 1. Selinexor Activity, Alone and in Combination with Dexamethasone

Source: EHA 2014

FIGURE 2. Baseline Characteristics Among Patients Receiving Combo Therapy

Patients with Rel/Ref MM Treated with Twice Weekly Oral Selinexor 45mg/m ² + Dexamethasone 20mg							
Patient	Age	MM Type	Maximal Δ	Response	# Prior Tx	Prior Therapies	Study Days
076	63	IgG-κ	-73%	PR	7	Dox+Vinc+Dex, TD, Carfil-Dex, VRD, Cyclo-Pred-BCNU, Doxil-Carfil-Dex	122+
077	62	FLC-λ		NE	5	Len-Dex, ASCT, VRD, Carfil-Cyclo-Dex, Carfil-Cyclo-Dex-Len	15
079	65	FLC-κ	-53%	PR	3	TD-ASCT, CyBor-D, Len-Dex	45
081	55	FLC-κ	-98%	sCR	5	VAD-ASCT, ASCT, Cyclo-Pred, Pom-Carfil-Dex	107+
084	59	IgG-κ	-81%	PR	7	Vel-Dex, VD-ASCT, Len-Dex, Vel-dex, Carfil, Pom-Dex, Carfil, DT-PACE	81+
090	65	IgG-κ		PD	4	Vel-Lenalid-Dex, Cyclo-Bortez-Dex, Carfil-Dex - ASCT, Pom-Carfil-Dex	38
092	69	IgA-κ	-48%	MR	6	VRD-ASCT, Reolysin, TGO2, Carfil-Dex, Carfil-Cyclo-Dex, Carfil-Pom-Dex	51+
093	43	IgG-κ	-32%	MR	7	VAD, VTD+ASCT, Vel-Rev-Dex, Investigational, Carfil-Panob, Len-Elotu-Dex, Pom-Dex	46+

Source: EHA 2014

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.

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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.

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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.

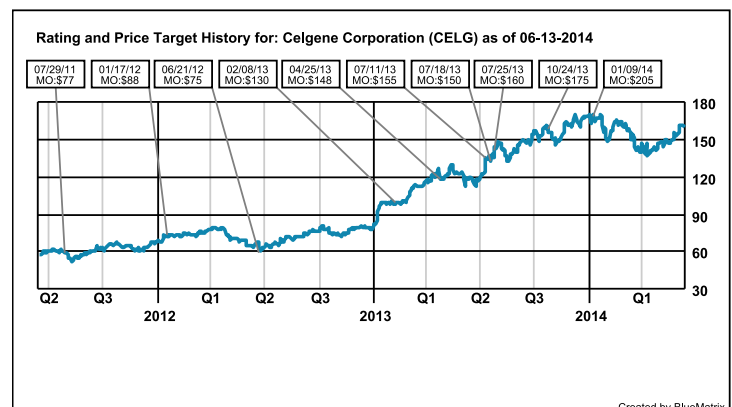
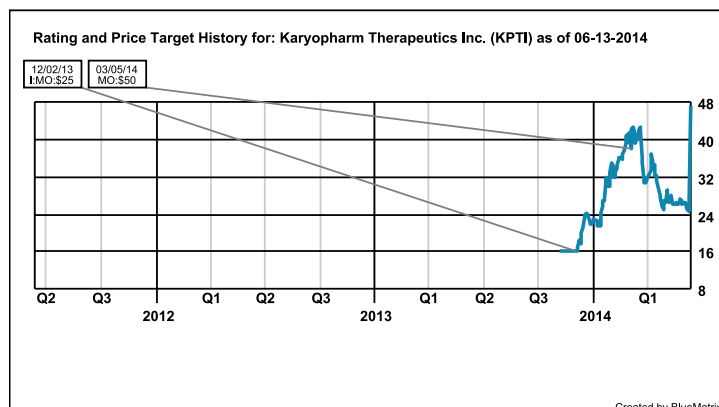
Market Underperform (MU): JMP Securities expects the stock price to underperform relevant market indices over the next 12 months.

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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	261	58.92%	Buy	261	58.92%	98	37.55%
MARKET PERFORM	Hold	135	30.47%	Hold	135	30.47%	19	14.07%
MARKET UNDERPERFORM	Sell	4	0.90%	Sell	4	0.90%	0	0%
COVERAGE IN TRANSITION		43	9.71%		43	9.71%	0	0%
TOTAL:		443	100%		443	100%	117	26.41%

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.



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