Karyopharm Therapeutics Inc. (KPTI)

Incremental Positive Selinexor Phase I Update in AML

MARKET OUTPERFORM | Price: $26.25 | Target Price: $50.00

MARKET DATA

Price	$26.25
52-Week Range:	$15.50 - $47.87
Shares Out. (M):	29.8
Market Cap ($M):	$782.3
Average Daily Vol. (000):	374.0
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

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

INVESTMENT HIGHLIGHTS

Overall AML response rate of 16% is impressive, in our view, given a heavily pretreated patient population that is progressing on existing therapy; reiterate Market Outperform rating on Karyopharm Therapeutics and $50 price target based on DCF and SOTP valuation methodologies. Updated selinexor Phase I AML data were presented during the poster presentation today at ASCO. Overall objective response rates improved modestly compared to prior abstract data, increasing from 12% (4/32 pts) to 16% (10/63 pts). That said, we maintain our view that the ORR understates the clinical benefit of selinexor given the degree of prior therapy, particularly among elderly patients (median of three or prior therapies). As observed in NHL, we draw added comfort from selinexor's improving safety profile with the increasing cycle of therapy. Taken together, we believe these data bode well for selinexor's chance at success in the registration Phase II AML study currently underway.

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FIGURE 1. Upcoming Milestones

Timing	Drug	Catalyst
1H14	Selinexor	Initiation of second Phase II trial in solid tumor indication (squamous cell cancer, head and neck, lung and esophageal cancer)
3Q14	Selinexor	Initiation of second pivotal Phase II/III study in (3L+ DLBCL)
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: JMP Securities LLC and Company Reports

FIGURE 2. Best Response on Study

Best Responses in Patients with AML as 13-May-2014									
N	DCR	ORR	CR	CR(i)	PR	MLFS	SD	PD	NE
63	31	10	5	2	1	2	21	16	16
%	49%	16%	8%	3%	2%	3%	33%	25%	25%

Source: Yee et al, ASCO 2014

FIGURE 3. Responder Patient Characteristics

Patient ID	Age	Dose (mg/m^2)	Doses/ Cycle	Prior MDS	Flt3	NPM	Cytogenic Risk	Prior Therapies	Response	Days on Study
138	39	40	8	N	N	N	Favorable	DAU, CYT, MITO,	CR	172+
111	70	23	10	Y	N	N	Intermediate	DEC, CYT	CR	157
505	82	40	8	N	N	N	Adverse	CYT	CR	142
501	71	16.8	10	N	Y	Y	Intermediate	DAU, CYT	CR	113
133	81	40	8	N	N	N	Favorable	DEC	CR	78
102	70	16.8	10	N	N	N	Intermediate	VID, DEC	CR(i)	81
150	61	40	8	N	Unk	Unk	Intermediate	DAU, CYT	CR(i)	94+
121	77	30	8	N	N	N	Adverse	VID, CYT	MLFS	170
155	83	40	8	Y	N	N	Intermediate	VID, DEC	MLFS	67+
114	70	30	8	N	N	N	Intermediate	CYT, IDA	PR	87

Source: Yee et al, ASCO 2014

FIGURE 4. Stable Disease Patient Characteristics

Patient ID	Age	Dose (mg/m^2)	Doses/ Cycle	Prior MDS	Flt3	NPM	Cytogenic Risk	Prior Therapies	Days on Study
110	73	23	10	N	N	N	Favorable	CYT, FLU, IDA, FIL, VID, DAU, MIT	312
147	79	40	8	Y	N	N	Intermediate	No Priors	107+
149	63	70	8	N	N	N	Intermediate	DAU, CYT, EPO, MIT, ROS	95+
108	67	16.8	10	N	N	N	Intermediate	CYT, DAU, VID	93
113	88	23	10	N	N	N	Unk	VID	74
156	49	70	8	N	N	N	Adverse	CYT, DAU	70+
126	89	30	10	N	N	N	Adverse	VID, DEC	65
507	69	70	8	Y	N	N	Intermediate	DAU, CYT	62
136	49	55	8	N	Unk	Unk	Adverse	LEN, IDA, CYT, DEC	58
148	72	40	8	Y	N	N	Intermediate	DAU, CYT	56
142	37	55	8	N	N	N	Favorable	DAU, CYT, VOS, FLU, IDA	56

Source: Yee et al, ASCO 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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Market Outperform (MO): JMP Securities expects the stock price to outperform relevant market indices over the next 12 months.

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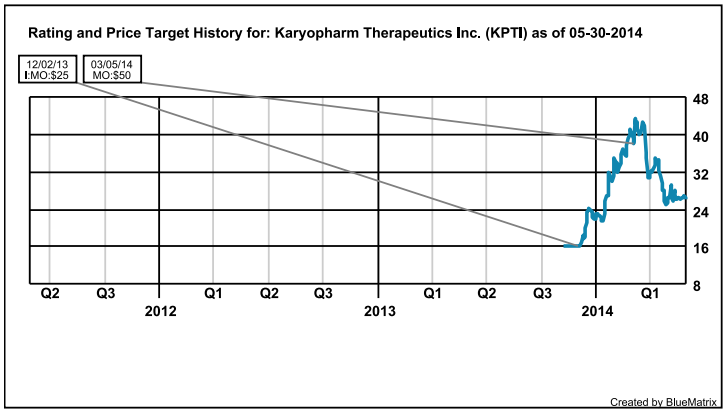
MARKET OUTPERFORM	Buy	258	*58.64%*	Buy	258	*58.64%*	98	*37.98%*
MARKET PERFORM	Hold	134	*30.45%*	Hold	134	*30.45%*	16	*11.94%*
MARKET UNDERPERFORM	Sell	5	*1.14%*	Sell	5	*1.14%*	0	*0%*
COVERAGE IN TRANSITION		43	*9.77%*		43	*9.77%*	0	*0%*
TOTAL:		440	*100%*		440	*100%*	114	*25.91%*

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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