

March 17, 2015

Tokai Pharmaceuticals, Inc.

Expands Collaboration With Qiagen; Initiation of ARMOR3-SV Next

On Monday, March 16, after markets closed, Tokai announced an expansion of its collaboration agreement with Qiagen (QGEN \$25.47; Market Perform). Building on the original agreement with Qiagen to develop and commercialize a companion diagnostic assay for galeterone, Tokai's Phase III candidate for metastatic castration-resistant prostate cancer (mCRPC), today's expansion of the agreement grants Tokai exclusive rights to Qiagen's circulating tumor cell (CTC) enrichment technology that will be used as part of the companion diagnostic paired with galeterone. We see this expanded agreement as a positive in further strengthening the intellectual property surrounding galeterone. We note that this technology is a key element for the development of the companion diagnostic to be used in the Phase III ARMOR3-SV trial, as it allows for the efficient detection of AR-V7, an androgen receptor (AR) splice variant in CTCs. This technology was also used in the AR-V7 assay methods developed by The Johns Hopkins University, which Tokai licensed in January 2015.

The development of the companion diagnostic is going through final validation, and the FDA has signed off on the validation plan. Tokai management recently commented that the consistency of the assay to date was close to 100%. Both Tokai and Qiagen have confirmed today that ARMOR3-SV is on track to start in first half 2015.

- **High consistency achieved and validation is to be completed soon.** The companion diagnostic is a RT-PCR (reverse-transcriptase polymerase chain reaction) assay to quantify AR-V7 RNA in CTCs from the patient's blood. All patients whose CTCs had AR-V7 levels above a defined threshold via the assay were resistant to both Xtandi and Zytiga in the clinic.
- **AR-V7 screening could become standard of care.** If ARMOR3-SV is successful, it is likely that AR-V7 screening becomes standard of care in M1 patients when selecting treatment options, in our opinion, and the next step would be to push galeterone earlier into the treatment paradigm.
- **Cell-free method in development to test AR-V7 positivity in M0 patients.** The companion diagnostic to be used in ARMOR3-SV detects AR-V7 variants from the patients' circulating tumor cells (CTCs). For patients who are not yet metastatic, such as M0 patients, there would be no CTCs to capture. Tokai commented that a cell-free assay is now in development with Qiagen to enable testing AR-V7 variants in M0 patients, so as to potentially push galeterone into this stage of patients in the future.

Key catalysts driving value in the next 12-24 months: 1) finalization of the companion diagnostic assay; 2) initiation of the pivotal ARMOR3-SV study in chemo-naïve mCRPC patients with AR-V7 in first half 2015; and 3) top-line data from ARMOR3-SV by year-end 2016.

Tokai Pharmaceuticals, Inc. is a biopharmaceutical company based in Cambridge, Massachusetts, focused on the development of galeterone and an androgen receptor-degradation platform to address prostate cancer and potentially other hormone-driven cancers.

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Stock Rating: **Outperform**
Company Profile: **Aggressive Growth**
Price Target: \$44.00

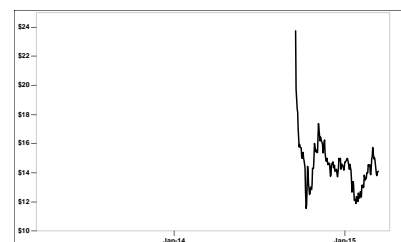
Symbol: TKAI (NASDAQ)
Price: \$13.90 (52-Wk.: \$10-\$30)
Market Value (mil.): \$305
Fiscal Year End: December
Long-Term EPS Growth Rate:
Dividend/Yield: None

	2014A	2015E	2016E
Estimates			
EPS FY	\$-3.60	\$-1.61	\$-2.37
CY		\$-1.61	\$-2.37
Sales (mil.)	0	0	0
Valuation			
FY P/E	NM	NM	NM
CY P/E		NM	NM

Trading Data (FactSet)	
Shares Outstanding (mil.)	2
Float (mil.)	10
Average Daily Volume	97,554

Financial Data (FactSet)	
Long-Term Debt/Total Capital (MRQ)	0.0
Book Value Per Share (MRQ)	4.7
Return on Equity (TTM)	-34.9

Two-Year Price Performance Chart



Sources: FactSet, William Blair & Company estimates

We maintain our Outperform rating and price target at \$44 (exhibit 1). Our Outperform rating is centered on our belief that Tokai's lead asset, galeterone, will become an essential component of the armamentarium against prostate cancer. We estimate worldwide sales for galeterone will reach \$1.8 billion in the United States and Europe in 2027 in the AR-V7 variant population alone. Assuming an 85% probability of success, our probability-adjusted NPV model suggests a fair value for Tokai shares at \$44.

Key risks to our Outperform rating and price target include: 1) clinical risk of the Phase III program; 2) regulatory risk related to receiving approval for galeterone in the United States and Europe; 3) development and approval of the companion diagnostic; 4) reimbursement risk; and 5) financing risk.

Exhibit 1
Tokai Pharmaceuticals, Inc.
Sum-of-the-Parts Fair Value
(dollars in thousands, except shares)

Drug	Peak Sales	Stage of Development	Estimated Launch Date	Probability of Commercialization	Percentage of Sales to Company	Probability-Adjusted NPV	Value per Share	Percentage of Fair Value
Galeterone	\$ 1,814,414	Pre-Phase III	H1:2018	85%	100% US; 25% ex-US	\$923,238	\$41.78	94.5%
Subtotal						\$923,238	\$41.78	94.5%
Net Cash at year-end 2015						\$61,539	\$2.78	6.3%
Net Present Value of additional Gain (Loss)*						(\$8,000)	(\$0.36)	(0.8%)
Sum-of-Parts Fair Value						\$976,778	\$44.20	100.0%

Sources: William Blair & Company, L.L.C. estimates

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William Blair was a manager or co-manager of a public offering of equity securities for Tokai Pharmaceuticals, Inc. within the prior 12 months.

William Blair is a market maker in the security of Tokai Pharmaceuticals, Inc.

William Blair intends to seek investment banking compensation in the next three months from Tokai Pharmaceuticals, Inc.

Within the past 12 months William Blair has provided or is providing investment banking services to or has an investment services relationship with Tokai Pharmaceuticals, Inc.

Additional information is available upon request.

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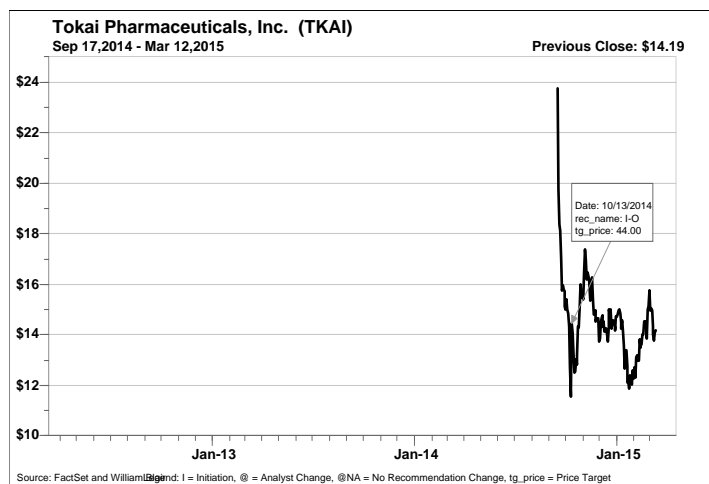
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DOW JONES: 17,977.42

S&P 500: 2,081.19

NASDAQ: 4,929.51



Current Rating Distribution (as of 02/28/15)

Coverage Universe	Percent	Inv. Banking Relationships*	Percent
Outperform (Buy)	65	Outperform (Buy)	16
Market Perform (Hold)	32	Market Perform (Hold)	2
Underperform (Sell)	2	Underperform (Sell)	0

*Percentage of companies in each rating category that are investment banking clients, defined as companies for which William Blair has received compensation for investment banking services within the past 12 months.

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