

Kite Pharma, Inc.

KITE - BUY - First Patient Dosed with KTE-C19 in Refractory NHL

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SECTOR: Biopharmaceuticals

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This morning, KITE (BUY, \$51.99) announced that the first patient has been treated with KTE-C19 in its Phase 1/2 clinical trial in refractory aggressive non-Hodgkin lymphoma (NHL). After speaking with the KITE CEO, we learned that the patient was a DLBCL patient infused at a medical center in Tampa, and importantly, this would be the first patient treated with KTE-C19 cells that were grown, processed, and frozen outside of the NCI. Specifically, KITE has invested extensively in training and developing manufacturing processes with NeoStem's (NBS, NC, \$2.30) Progenitor Cell Therapy (PCT), a contract development and manufacturing organization (CDMO). KTE-C19 is a CAR-T cell therapy with chimeric antigen receptors directed toward CD19 antigen expressed on cancerous B cells, and the patients being treated in this study have failed two lines of chemotherapy and have no other approved treatment option. These patients have been given a survival prognosis of 3-5 months after failing two lines of chemotherapy. According to ClinicalTrials.gov, the trial's estimated enrollment is 124 patients. KITE anticipates evaluating KTE-C19 in NHL, CLL, and ALL, and the company believes the trial initiated today in NHL will be a pivotal study. We estimate that the company will ramp up enrollment and will be able to file with the FDA for approval in late 2016.

KITE catalyst calendar		
Product	Event	Status
KTE-C19	Initiate Ph 1/2 trials in DLBCL, PMBCL, TFL, MCL	1H15, est. 2016 filing and 2017 launch
	Initiate Ph 2 trials in ALL, CLL	2H15; est. 2017 completion
EGFRvIII CAR	Initiate Ph 2 trials in glioblastoma	est. 2018 completion
NY-ESO-1 TCR	Initiate Ph 2 trials in solid tumors (lung, melanoma, bladder, ovarian, synovial sarcomas)	est. 2017 completion
HPV-16 E6 TCR	Initiate Ph 2 trials in cervical/head and neck cancer	est. 2019 completion
HPV-16 E7 TCR	Initiate Ph 1 trials in cervical/head and neck cancer	est. 2019 completion
NY-ESO-1 TCR	Initiate Ph 2 trials in solid tumors (lung, melanoma, bladder, ovarian, synovial sarcomas)	est. 2017 completion
HPV-16 E6 TCR	Initiate Ph 2 trials in cervical/head and neck cancer	est. 2019 completion
HPV-16 E7 TCR	Initiate Ph 1 trials in cervical/head and neck cancer	est. 2019 completion
MAGE A3/A6 TCR	Initiate Ph. 1 and Ph. 2 in multiple metastatic cancers that express MAGE-A3-DP4 antigen	est. 2017 completion
MAGE A3 TCR	Initiate Ph. 1 in multiple metastatic cancers and Ph.2 in metastatic melanoma	est. 2018 completion
SSX2 TCR	Pre-IND, targeting head and neck cancer, hepatocellular carcinoma, melanoma, prostate cancer and sarcoma	N/A

*Source: KITE reports and Guggenheim Securities, LLC estimates

ANALYST CERTIFICATION

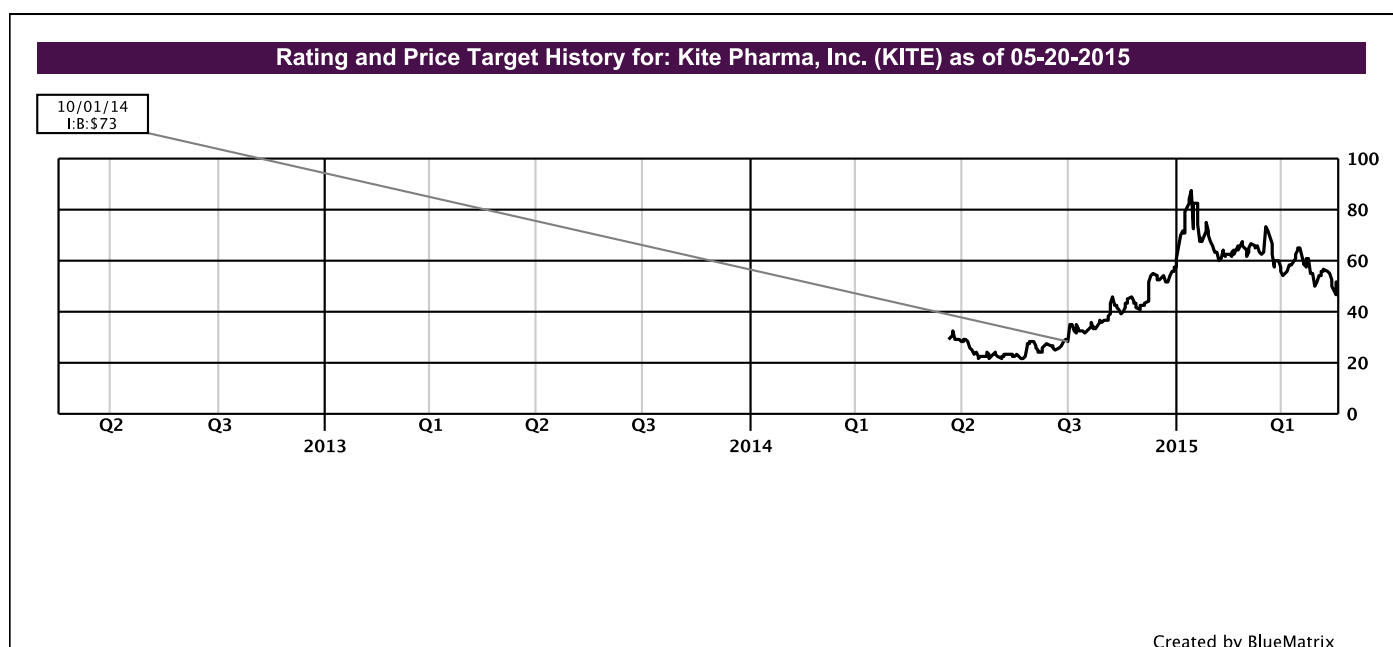
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