

Biotechnology

| KIIE - NASDAQ | June 24, 2015 |
|--------------------------|-------------------|
| Closing Price 06/23/2015 | \$62.72 |
| Rating: | Buy |
| 12-Month Target Price: | \$87.00 |
| 52-Week Range: | \$21.00 - \$89.21 |
| Market Cap (M): | \$2,701 |
| Shares O/S (M): | 43 |
| Float: | 74.3% |
| Avg. Daily Volume (000): | 1,270 |
| Dividend: | \$0.00 |
| Dividend Yield: | 0.00% |
| Risk Profile: | High |
| Fiscal Year End: | December |

| Total Revenues ('000) | | | |
|-----------------------|--------|--------|---------|
| | 2015E | 2016E | 2017E |
| 1Q | 2,881A | 3,600 | 63,720 |
| 2Q | 3,900 | 3,600 | 71,561 |
| 3Q | 4,100 | 3,900 | 66,634 |
| 4Q | 4,119 | 3,900 | 74,475 |
| FY | 15,000 | 15,000 | 276,390 |

| Total Expenses ('000) | | | |
|-----------------------|---------|---------|---------|
| | 2015E | 2016E | 2017E |
| 1Q | 18,431A | 23,903 | 57,705 |
| 2Q | 24,200 | 27,020 | 64,997 |
| 3Q | 26,300 | 24,942 | 60,286 |
| 4Q | 29,400 | 28,060 | 67,578 |
| FY | 98,331 | 103,925 | 250,566 |

| GAAP EPS | | | |
|----------|---------|--------|-------|
| | 2015E | 2016E | 2017E |
| 1Q | (0.36)A | (0.48) | 0.14 |
| 2Q | (0.48) | (0.55) | 0.15 |
| 3Q | (0.52) | (0.49) | 0.15 |
| 4Q | (0.59) | (0.57) | 0.16 |
| FY | (1.95) | (2.09) | 0.61 |



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Kite Pharma, Inc.

Buy

Kite Investor Day: Kite is Becoming a Fully Integrated T-Cell Therapy Company

Summary

- Kite management held the company's first investor day in NYC on June 23, 2015.
- The event was highlighted by a lecture from the pioneer of cancer immunotherapy, Dr. Steven A. Rosenberg, M.D., Ph.D., Chief, Surgery Branch, of the National Cancer Institute (NCI) who was the first to use CAR-T and TCRbased therapies in patients to treat cancer.
- Dr. Rosenberg and Kite work together through a CRADA (collaborative research and development agreement) to develop CARs and TCRs. The CRADA allows Kite to view data from each and every patient almost weekly, for multiple CARs and TCRs in development. If Kite like's what they see they can license and take over. We believe TCR data in HPV-cancers (human papillomavirus) attracted bluebird (BLUE-\$174.31-Buy) to partner.
- The potential of TCR-based T cell therapy was also an important topic. We believe TCRs are Kite's strength, are likely to have success in solid tumors before CAR-T and are undervalued by investors.
- We left impressed. Kite has assembled the key components to become in our opinion, the first fully integrated T-cell Company; CAR-T, TCRs, top academic partners, pharma partnerships with Amgen (AMGN-\$161.69-NR) and bluebird, European presence and manufacturing. Plus we see a TCR-heavy pipeline that is under valued and the driver of a valuation gap between Kite and its nearest competitor, Juno (JUNO-\$51.40-Buy). bluebird saw the value, we think more could follow.

Details

Kite's CAR and TCR Pipeline is Accelerating. Kite already has 6 candidates in clinical testing. Kite's lead product, KTE-C19 (targeting CD19+ B cell cancers), is currently in an ongoing phase I/II study, with 3 additional phase II 'pivotal' studies expected to initiate in 2H15. Overall reponses of 76% were achieved in patients that would have otherwise died (they remain alive over a year later). Approval could come by 2017. In HPV-cancers, the first generation HPV-16 E6 TCR IND is expected to be filed in 1H16 and another, HPV-16 E7, is entering the clinic in 2015 as part of the CRADA. bluebird has come aboard to incorporate gene editing and lentiviral vectors for a next-gen HPV TCR. IND submissions for new CARs with Amgen are expected in 2H16. Plus, multiple CARs and TCRs are in ongoing studies under the CRADA, where Kite can select candidates at anytime to move forward...stay tuned

CARs Move Over For TCRs. TCRs target small peptide fragments from inside the tumor cell whereas CARs are limited to whole proteins exclusively on the cell surface (not that many). The key is to understand what a tumor is. Its a heterogenous mix of mutated cells, with numberous mutations <code>inside</code> the cell. Thus, in theory, every mutated peptide fragment could end up on the cell surface and bind a unique TCR (T-cell). Kite can find it and use it to generate a high affinity engineered TCR T-cell that is injected back into the patient to target that specific mutation on that tumor. The acquisition of T-Cell Factory in Europe brought the TCR-GENErator platform that allows the high throughput generation of potential TCR candidates. While Kite already has four TCRs with the NCI, the TCR-GENErator platform will likely add more. Many believe TCRS will have success against solid tumors before CARs.

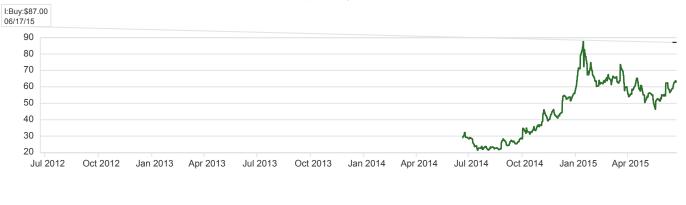
Valuation. We believe KTE-C19 could launch in 2017, and we assume a platform value. Additionally, we believe the market undervalues the potential of TCR-based T-cell therapy in solid tumors, one of Kite's strengths, relative to CAR-T cell therapy which we believe drives a valuation gap between Kite and its competitors. We apply a discount rate of 15% to our free cash flow estimates to derive a \$87 target.

| Related Companies Mentioned in this Report | | | | |
|---|------|-----|----------|----------|
| Company Ticker Rating 12 Month Price Target Price 06/23 | | | | |
| bluebird bio, Inc. | BLUE | Buy | \$190.00 | \$174.31 |
| Juno Therapeutics, Inc. | JUNO | Buy | \$78.00 | \$51.40 |

DISCLOSURES

Kite Pharma, Inc. Rating History as of 06/23/2015





- Target Price

Closing Price

bluebird bio, Inc. Rating History as of 06/23/2015



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Juno Therapeutics, Inc. Rating History as of 06/23/2015





| Maxim | Group LLC Ratings Distribution | | As of: 06/23/15 |
|-------|---|---------------------------------------|--|
| | | % of Coverage Universe with Rating | % of Rating for which Firm Provided Banking Services in the Last 12 months |
| Buy | Fundamental metrics and/or identifiable catalysts exist such that we expect the stock to outperform its relevant index over the next 12 months. | 75% | 46% |
| Hold | Fundamental metrics are currently at, or approaching, industry averages. Therefore, we expect this stock to neither significantly outperform nor underperform its relevant index over the next 12 months. | 24% | 17% |
| Sell | Fundamental metrics and/or identifiable catalysts exist such that we expect the stock to underperform its relevant index over the next 12 months. | 2% | 0% |
| | *See valuation section for company specific relevant indices | | |

I, Jason McCarthy, Ph.D., attest that the views expressed in this research report accurately reflect my personal views about the subject security and issuer. Furthermore, no part of my compensation was, is, or will be directly or indirectly related to the specific recommendation or views expressed in this research report.

The research analyst(s) primarily responsible for the preparation of this research report have received compensation based upon various factors, including the firm's total revenues, a portion of which is generated by investment banking activities.

Maxim Group makes a market in Kite Pharma, Inc., bluebird bio, Inc. and Juno Therapeutics, Inc.

KITE: For Kite we use BTK (Biotechnology Index) as the relevant index

BLUE: For bluebird bio, we use the BTK (Biotechnology Index) as the relevant index.

JUNO: For Juno Therapeutics we use the BTK (biotechnology index) as the relevant index.

Valuation Methods

KITE: We believe KTE-C19 could launch in 2017 for B cell cancers. Our therapeutic models go out to 2020. Additional TCR and CAR candidates add upside. We use a discount rate of 15% for our valuation metrics based on the likelihood of accelerated approval(s) in no-option, salvage cancers. Free Cash Flow, Discounted EPS and Sum-of-the Parts models are equally weighted to derive a price target.

BLUE: Our model assumes gene therapy products (Lenti-D and LentiGlobin) will be approved and launched in 2018. The pipeline, including potential CAR-T and gene-editing-based indications, are not valued at this time and could add additional upside. A 30% discount rate is applied to our free-cash-flow, discounted-EPS, and sum-of-the-parts models, which are equally weighted to arrive at our price target.

JUNO: We expect approvals of JCAR015 (2017) and JCAR017 (2018) in ALL and NHL, respectively. We believe these products/indications are valued in the stock today. The CAR-T and TCR pipeline adds significant upside beyond the current valuation. We use a discount rate of 15% in our Free Cash Flow, Discounted EPS and Sum-Of-The-Parts models and weight each metric equally to arrive at our price target.

Price Target and Investment Risks

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KITE: Kite Pharma faces multiple risks including 1) Developmental risk; Kit'e products are currently in the early stages of clinical development and may not be successful. 2) Regulatory risk; Kite's products are subject to the regulation by the FDA and may not produce sufficient data for product approvals. 3) Commercial risk; the company, while building commercial infrastructure now, may not be able to support a commercial product launch. 4) Financial risk; Kite Pharma is not a profitable entity and may need to raise additional capital.

BLUE: bluebird bio faces multiple risks including: (1) development – the gene therapy products are in the early stages of development and may not be successful in current and/or future clinical studies; (2) regulatory – the FDA has yet to approve a gene therapy in the U.S.; the company's ongoing and future studies may not be sufficient to gain approval; (3) commercial – the company lacks the commercial infrastructure to support a product launch, if approved; and (4) financial – the company is not yet profitable and may need to raise additional capital to fund product development.

JUNO: Juno faces multiple risks 1) Regulatory; there are currently no approved CAR-T therapies. As safety of therapy has become a concern in ongoing studies, pathways to approval may have more rigorous requirements. 2) Competitive; the CAR-T space has become highly competitive, with several company's targeting the same indication with similar products. 3) Development; clinical data that was positive in smaller trails may not be repeated in larger trials. 4) Commercial; CAR-T therapies are expensive to produce and Juno lacks commercial infrastructure. Additionally, side effects in early products, notable cytokine release syndrome, may limit product utility to small groups of patients.

RISK RATINGS

Risk ratings take into account both fundamental criteria and price volatility.

Speculative – <u>Fundamental Criteria:</u> This is a risk rating assigned to early-stage companies with minimal to no revenues, lack of earnings, balance sheet concerns, and/or a short operating history. Accordingly, fundamental risk is expected to be significantly above the industry. <u>Price Volatility:</u> Because of the inherent fundamental criteria of the companies falling within this risk category, the price volatility is expected to be significant with the possibility that the investment could eventually be worthless. Speculative stocks may not be suitable for a significant class of individual investors.

High – <u>Fundamental Criteria:</u> This is a risk rating assigned to companies having below-average revenue and earnings visibility, negative cash flow, and low market cap or public float. Accordingly, fundamental risk is expected to be above the industry. <u>Price Volatility:</u> The price volatility of companies falling within this category is expected to be above the industry. High-risk stocks may not be suitable for a significant class of individual investors.

Medium – <u>Fundamental Criteria:</u> This is a risk rating assigned to companies that may have average revenue and earnings visibility, positive cash flow, and is fairly liquid. Accordingly, both price volatility and fundamental risk are expected to approximate the industry average.

Low – <u>Fundamental Criteria:</u> This is a risk rating assigned to companies that may have above-average revenue and earnings visibility, positive cash flow, and is fairly liquid. Accordingly, both price volatility and fundamental risk are expected to be below the industry.

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