COMPANY UPDATE
Biotechnology
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# CHIMERIX INC (NASDAQ:CMRX)

# Chimerix R&D Day Highlights

**CMRX hosted an R&D day which featured a review of CMX001's Ph. II adenovirus study, and physician discussion of the state of dsDNA virus therapy in transplant patients. We continue to think CMX001 is one of the more promising product candidates in small cap biotech, and remain at Outperform.**

## CMX001's Phase II Adenovirus Data Presented.

CMX001 100mg BIW produced a rapid decrease in viremia in AdV patients with high baseline viral load, and a trend toward lower all-cause mortality. These data suggest that CMX001 is an effective AdV antiviral. However, as previously disclosed, the study's primary endpoint of proportion of patients with treatment failure was not hit (21% for CMX001 BIW vs 33% for placebo, p=0.45). CMRX thinks the trial may have used too liberal of a definition of progression. CMRX expects future trials will likely test prophylactic rather than preemptive therapy, and will probably examine progression due to a number of dsDNA viruses. CMRX will meet with the FDA during Q4 to discuss a pediatric development plan, and will provide an update early in 2014.

## CMX001's Phase III SUPPRESS Trial Underway.

In Ph. II CMX001 decreased the proportion of patients with CMV events from 37% (placebo) to 10% (100mg BIW CMX001, p = 0.002). SUPPRESS will enroll 450 CMV seropositive adult patients and randomize them 2:1 to 100mg BIW CMX001 or placebo. In the SUPPRESS trial, CMX001 dosing will begin immediately upon transplantation while in Ph. II dosing had to wait for evidence of engraftment. With the majority of CMV events occurring within weeks of transplantation, this design should improve CMX001's efficacy. The primary endpoint of the study is failure to prevent CMV reactivation through wk 24. The trial is powered to detect a 50% decrease in CMV reactivation in CMX001 vs. placebo with greater than 85% power.

## Physicians Eager For New Antivirals.

Both physicians at yesterday's meeting indicated there is a need for safe and effective antivirals for transplant patients, and that any approved therapies will be used in a wide range of patients.

Please see addendum of this report for important disclosures.

**Recommendation**

| | |
|---|---|
| Rating: | Outperform |
| Price Target (in $): | $27.00 |
| Expected Return: | 35.2% |
| Dividend: | NA |
| Enterprise Value (MM): | $404.5 |

**Earnings Per Share**

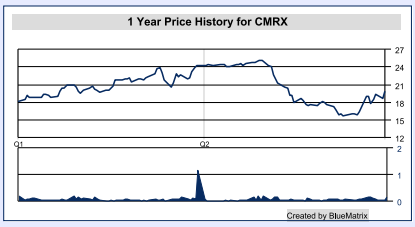
| | 2012A | 2013E | 2014E |
|---|---|---|---|
| Q1 | $0.00 | *$(22.58)A* | *$(0.39)* |
| Q2 | $0.00 | *$(0.91)A* | *$(0.40)* |
| Q3 | $0.00 | *$(0.35)* | *$(0.33)* |
| Q4 | $0.00 | *$(0.37)* | *$(0.34)* |
| FY | *$(1.62)* | *$(1.75)* | *$(1.45)* |
| P/E | NM | NM | NM |

**Stock Statistics as of 09/17/2013 (in $)**

| | |
|---|---|
| Price: | $19.97 |
| 52W Range: | $27.00-$14.00 |
| Shares Out (MM): | 25.9 |
| Market Cap (MM): | $514.8 |
| Net Debt (MM): | $12.7 |

**Fundamentals**

| | |
|---|---|
| Revenue (MM) ('12A) | 33.7 |
| Revenue (MM) ('13E) | 5.1 |
| Revenue (MM) ('14E) | 7.5 |
| EV/S ('12) | 12.0x |
| EV/S ('13) | 79.3x |
| EV/S ('14) | 53.9x |



## Investment Thesis

Chimerix is a biopharmaceutical company focused on the discovery and development of novel antivirals. Chimerix has a propriety lipid technology that has been shown to improve the potency of antivirals, and has produced two clinical stage candidates. Lead candidate CMX001 is a phospholipid derivative of GILD's cidofovir that can potently kill a wide range of dsDNA viruses. It has successfully completed a Phase II trial for the prophylaxis against CMV reactivation in hematopoietic stem cell transplant (HSCT) patients. The Phase III SUPPRESS trial began in September 2013, supporting a U.S. launch by 2016. Our consultants think CMX001 is safe, well tolerated, and potent, and is consequently likely to succeed in its Phase III SUPPRESS trial. Moreover, they think there is a need for a prophylactic to prevent infection with CMV and other dsDNA viral infections in transplant patients, and therefore expect CMX001 to be widely adopted once available. We project that CMX001 will achieve worldwide sales of $330MM in HSCT alone by 2019, with Chimerix achieving profitability in 2017. CMX001 is also in development for the prevention of viral infection in solid organ transplant patients, and as a bioterrorism measure to prevent smallpox. Behind CMX001 is CMX157, a phospholipid derivative of GILD's tenofovir that partner Merck is developing for the treatment of HIV. We believe that Chimerix is undervalued based just on CMX001's potential as a CMV prophylactic in HSCT patients, with no contribution from other indications or other pipeline programs. We expect Chimerix' stock to outperform over the next 12 months as CMX001 progresses through development.

**Upcoming Chimerix Milestones**

| Event | Timing |
|---|---|
| Meeting with FDA to define pediatric development plan for CMX001 | Q4:13 |
| Data from Study 350 of CMX001 in transplant patients with severe, life threatening dsDNA infections | 2013 |
| Negotiation with BARDA over continued funding of CMX001's smallpox program | 2014 |
| Data from Phase III SUPPRESS trial of CMX001 as prophylactic against CMV in adult HSCT | H2:15 |

Source: Cowen and Company

## Chimerix Quarterly P&L ($MM)

| | Q1:13A | Q2:13A | Q3:13E | Q4:13E | 2013E | Q1:14E | Q2:14E | Q3:14E | Q4:14E | 2014E |
|---|---|---|---|---|---|---|---|---|---|---|
| CMX-001 | - | - | - | - | - | - | - | - | - | - |
| CMX-157 Royalty | - | - | - | - | - | - | - | - | - | - |
| Collaboration and Licensing Revenue | - | - | - | - | - | - | - | 2.5 | 2.5 | 5.0 |
| Contract And Grant Revenue | 1.8 | 0.8 | 1.3 | 1.3 | 5.1 | 0.6 | 0.6 | 0.6 | 0.7 | 2.5 |
| Total Revenue | 1.8 | 0.8 | 1.3 | 1.3 | 5.1 | 0.6 | 0.6 | 3.1 | 3.2 | 7.5 |
| COGS | - | - | - | - | - | - | - | 0.3 | 0.3 | 0.5 |
| *Gross Margin* | | | | | | | | | | |
| R&D | 6.5 | 6.3 | 7.5 | 8.1 | 28.4 | 8.2 | 8.4 | 8.7 | 9.0 | 34.3 |
| SG&A | 1.8 | 2.2 | 2.5 | 2.5 | 9.0 | 2.7 | 2.9 | 3.1 | 3.3 | 12.0 |
| Other | | | | | | | | | | |
| Operating Expenses | 8.3 | 8.5 | 10.0 | 10.6 | 37.4 | 10.9 | 11.3 | 12.1 | 12.6 | 46.8 |
| Operating Income / (Loss) | (6.5) | (7.7) | (8.8) | (9.4) | (32.3) | (10.3) | (10.7) | (9.0) | (9.4) | (39.3) |
| Interest Income, net | (0.4) | (0.4) | (0.2) | (0.2) | (1.2) | 0.2 | 0.1 | 0.1 | 0.1 | 0.5 |
| Other Income | (2.2) | (4.4) | | | | | | | | |
| Pretax net income | (9.1) | (12.5) | (9.0) | (9.6) | (33.5) | (10.1) | (10.6) | (8.9) | (9.3) | (38.8) |
| Accretion of redeemable convertible preferred stock | (25.5) | (8.6) | | | | | | | | |
| Taxes | - | - | - | - | - | - | - | - | - | - |
| *Tax Rate* | *0%* | *0%* | *0%* | *0%* | *0%* | *0%* | *0%* | *0%* | *0%* | *0%* |
| GAAP Net Income | (34.6) | (21.0) | (9.0) | (9.6) | (33.5) | (10.1) | (10.6) | (8.9) | (9.3) | (38.8) |
| **GAAP EPS** | **$ (22.58)** | **$ (0.91)** | **$ (0.35)** | **$ (0.37)** | **$ (1.75)** | **$ (0.39)** | **$ (0.40)** | **$ (0.33)** | **$ (0.34)** | **$ (1.45)** |
| Diluted Shares Outstanding (MM) | 1.5 | 23.1 | 25.9 | 26.0 | 19.1 | 26.2 | 26.6 | 27.0 | 27.3 | 26.8 |

Source: Cowen and Company

## Chimerix Annual P&L ($MM)

| | 2012A | 2013E | 2014E | 2015E | 2016E | 2017E | 2018E |
|---|---|---|---|---|---|---|---|
| CMX-001 | - | - | - | - | 45.0 | 135.0 | 240.0 |
| CMX-157 Royalty | - | - | - | - | - | - | - |
| Collaboration and Licensing Revenue | 17.4 | - | 5.0 | 15.5 | 20.0 | 20.0 | 20.0 |
| Contract And Grant Revenue | 16.3 | 5.1 | 2.5 | - | - | - | - |
| Total Revenue | 33.7 | 5.1 | 7.5 | 15.5 | 65.0 | 155.0 | 260.0 |
| COGS | - | - | 0.5 | 1.6 | 3.6 | 10.8 | 19.2 |
| *Gross Margin* | | *0%* | *0%* | *0%* | *0%* | *0%* | *0%* |
| R&D | 27.8 | 28.4 | 34.3 | 38.0 | 45.0 | 55.0 | 65.0 |
| SG&A | 8.7 | 9.0 | 12.0 | 13.0 | 28.0 | 34.0 | 40.0 |
| Other | - | - | - | - | - | - | - |
| Operating Expenses | 36.5 | 37.4 | 46.8 | 52.6 | 76.6 | 99.8 | 124.2 |
| Operating Income / (Loss) | (2.8) | (32.3) | (39.3) | (37.1) | (11.6) | 55.2 | 135.8 |
| Interest Income, net | (0.8) | (1.2) | 0.5 | 1.0 | 1.0 | 2.0 | 6.0 |
| Other Income | | | | | | | |
| Pretax net income | (4.4) | (33.5) | (38.8) | (36.1) | (10.6) | 57.2 | 141.8 |
| Accretion of redeemable convertible preferred stock | | | | | | | |
| Taxes | - | - | - | - | - | - | - |
| *Tax Rate* | *-* | *0%* | *0%* | *0%* | *0%* | *0%* | *0%* |
| GAAP Net Income | (8.8) | (33.5) | (38.8) | (36.1) | (10.6) | 57.2 | 141.8 |
| **GAAP EPS** | **(1.62)** | **(1.75)** | **(1.45)** | **(1.20)** | **(0.35)** | **1.65** | **3.95** |
| Diluted Shares Outstanding (MM) | 5.4 | 19.1 | 26.8 | 30.0 | 30.5 | 34.8 | 35.9 |

Source: Cowen and Company

## Chimerix DCF Analysis ($MM)

| | |
|---|---|
| Financial Year End | 12/31/2012 |
| Valuation Date | 9/17/2013 |
| **Discount Rate** | **10.0%** |
| **Terminal Growth Rate** | **-20.0%** |

**Chimerix: DCF Valuation**

| $MM | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **CMX-001** | 0 | 0 | 0 | 45 | 135 | 240 | 330 | 347 | 364 | 382 | 401 | 421 | 442 |
| *Growth (%)* | | | | | *20%* | *10%* | *5%* | *5%* | *5%* | *5%* | *5%* | *5%* | *5%* |
| **CMX-157 Royalty** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| *Growth (%)* | | | | | | | | | | | | | |
| **Collaboration and Licensing Revenue** | 0 | 5 | 16 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 |
| *Growth (%)* | | | | | | | | | | | | | |
| **Contract And Grant Revenue** | 5 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| *Growth (%)* | | | | | | | | | | | | | |
| **Total Revenues** | 5 | 8 | 16 | 65 | 155 | 260 | 350 | 367 | 384 | 402 | 421 | 441 | 462 |
| *Growth (%)* | | | | | *138%* | *68%* | *35%* | *5%* | *5%* | *5%* | *5%* | *5%* | *5%* |
| **COGS** | 0 | 1 | 2 | 4 | 11 | 19 | 26 | 30 | 31 | 33 | 34 | 36 | 37 |
| *COGS as a % of sales* | | | | *8%* | *8%* | *8%* | *8%* | *9%* | *9%* | *9%* | *8%* | *8%* | *8%* |
| **R&D** | 28 | 34 | 38 | 45 | 55 | 65 | 75 | 55 | 50 | 44 | 46 | 44 | 46 |
| *R&D as a % of Revenues* | | | | *69%* | *35%* | *25%* | *21%* | *15%* | *13%* | *11%* | *11%* | *10%* | *10%* |
| **SG&A** | 9 | 12 | 13 | 28 | 34 | 40 | 45 | 51 | 54 | 48 | 51 | 53 | 55 |
| *SG&A as a % of Revenues* | | | | *43%* | *22%* | *15%* | *13%* | *14%* | *14%* | *12%* | *12%* | *12%* | *12%* |
| **Operating Income** | -32 | -39 | -37 | -12 | 55 | 136 | 204 | 230 | 249 | 277 | 290 | 308 | 323 |
| **Tax** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 69 | 75 | 83 | 87 | 93 | 97 |
| *Tax rate* | *0%* | *0%* | *0%* | *0%* | *0%* | *0%* | *0%* | *30%* | *30%* | *30%* | *30%* | *30%* | *30%* |
| NOL/ Tax Assets Utilized | | | | | | | | | | | | | |
| *Tax rate* | | | | | | | | | | | | | |
| **Taxes Paid** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 69 | 75 | 83 | 87 | 93 | 97 |
| **Approx Free Cash Flow** | (32) | (39) | (37) | (12) | 55 | 136 | 204 | 161 | 174 | 194 | 203 | 216 | 226 |
| Years | 0.28 | 1.28 | 2.28 | 3.28 | 4.28 | 5.28 | 6.28 | 7.28 | 8.28 | 9.28 | 10.28 | 11.28 | 12.28 |
| Discount Factor | 0.97 | 0.88 | 0.80 | 0.73 | 0.66 | 0.60 | 0.55 | 0.50 | 0.45 | 0.41 | 0.38 | 0.34 | 0.31 |
| **NPV of Cash flows** | (31) | (35) | (30) | (8) | 37 | 82 | 112 | 81 | 79 | 80 | 76 | 74 | 70 |

**Terminal Value Calculation**

| | |
|---|---|
| Final year FCF | 0 |
| Perpetual Growth Rate | -20.0% |
| **Terminal Value** | **0** |
| Discount Factor | 0 |
| **Present Value of Terminal Value** | **0** |
| **Present Value of Cash Flows** | **586** |
| **Enterprise Value** | **586** |
| Add: Net cash | 115 |
| **Market Value** | **701** |
| Fully Diluted Shares Outstanding | 25.9 |
| **Value per Fully Diluted Share** | **$27.08** |

Source: Cowen and Company

# Valuation Methodology & Investment Risks

## Valuation Methodology

**Biotechnology:**

In calculating our 12-month target price, we employ one or more valuation methodologies, which include a discounted earnings analysis, discounted cash flow analysis, net present value analysis and/or a comparable company analysis. These analyses may or may not require the use of objective measures such as price-to-earnings or price-to-sales multiples as well as subjective measures such as discount rates.

We make investment recommendations on early stage (pre-commercial) biotechnology companies based upon an assessment of their technology, the probability of pipeline success, and the potential market opportunity in the event of success. However, because these companies lack traditional financial metrics, we do not believe there are any good methodologies for assigning a specific target price to such stocks.

## Investment Risks

**Biotechnology:**

There are multiple risks that are inherent with an investment in the biotechnology sector. Beyond systemic risk, there is also clinical, regulatory, and commercial risk. Additionally, biotechnology companies require significant amounts of capital in order to develop their clinical programs. The capital-raising environment is always changing and there is risk that necessary capital to complete development may not be readily available.

## Company Specific Risks

Much of Chimerix valuation rests on the potential of its developmental-stage candidates, most specifically CMX001 and CMX157. Projecting future sales for any product is difficult, and this is particularly the case for candidates that are still in clinical development. Chimerix' stock could be impacted by changes in the regulatory, commercial, or competitive environment for any. Moreover, a number of antiviral candidates have failed during clinical trials, and both CMV and HIV are an extremely competitive spaces. There can be no assurance that any of Chimerix candidates, even if successfully developed, will generate meaningful revenue. Therefore Chimerix product portfolio must be considered high risk.

# Addendum

## STOCKS MENTIONED IN IMPORTANT DISCLOSURES

| Ticker | Company Name |
|---|---|
| CMRX | Chimerix Inc |

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## COWEN AND COMPANY RATING DEFINITIONS

***Cowen and Company Rating System effective May 25, 2013***

**Outperform (1):** The stock is expected to achieve a total positive return of at least 15% over the next 12 months

**Market Perform (2):** The stock is expected to have a total return that falls between the parameters of an Outperform and Underperform over the next 12 months

**Underperform (3):** Stock is expected to achieve a total negative return of at least 10% over the next 12 months

**Assumption:** The expected total return calculation includes anticipated dividend yield

***Cowen and Company Rating System until May 25, 2013***

**Outperform (1):** Stock expected to outperform the S&P 500

**Neutral (2):** Stock expected to perform in line with the S&P 500

**Underperform (3):** Stock expected to underperform the S&P 500

**Assumptions:** Time horizon is 12 months; S&P 500 is flat over forecast period

***Cowen Securities, formerly known as Dahlman Rose & Company, Rating System until May 25, 2013***

**Buy** – The fundamentals/valuations of the subject company are improving and the investment return is expected to be 5 to 15 percentage points higher than the general market return

**Sell** – The fundamentals/valuations of the subject company are deteriorating and the investment return is expected to be 5 to 15 percentage points lower than the general market return

**Hold** – The fundamentals/valuations of the subject company are neither improving nor deteriorating and the investment return is expected to be in line with the general market return

## COWEN AND COMPANY RATING ALLOCATION

Distribution of Ratings/Investment Banking Services (IB) as of 06/30/13

| Rating | Count | Ratings Distribution | Count | IB Services/Past 12 Months |
|---|---|---|---|---|
| Buy (a) | 380 | 58.37% | 48 | 12.63% |
| Hold (b) | 247 | 37.94% | 2 | 0.81% |
| Sell (c) | 24 | 3.68% | 1 | 4.17% |

(a) Corresponds to "Outperform" rated stocks as defined in Cowen and Company, LLC's rating definitions. (b) Corresponds to "Market Perform" as defined in Cowen and Company, LLC's ratings definitions. (c) Corresponds to "Underperform" as defined in Cowen and Company, LLC's ratings definitions.

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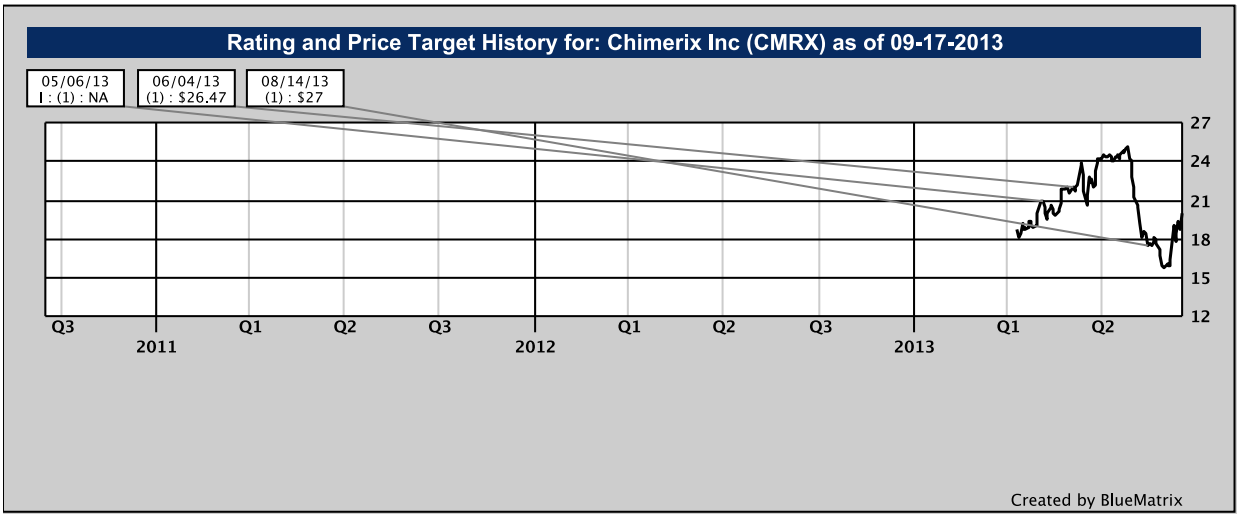


**Legend for Price Chart:**

I = Initation | 1 = Outperform | 2 = Market Perform | 3 = Underperform | T = Terminated Coverage | $xx = Price Target | NA = Not Available