Biotechnology

**MATN** - OTCQX February 13, 2017

| | |
|---|---|
| **Intraday Price 02/13/2017** | **$0.52** |
| Rating: | Buy |
| 12-Month Target Price: | $2.00 |
| 52-Week Range: | $0.27 - $1.02 |
| Market Cap (M): | 14 |
| Shares O/S (M): | 26.5 |
| Float: | 99.6% |
| Avg. Daily Volume (000): | 168 |
| Dividend: | $0.00 |
| Dividend Yield: | 0.00% |
| Risk Profile: | Speculative |
| Fiscal Year End: | December |

**Total Expenses ('000)**

| | 2016E | 2017E | 2018E |
|---|---|---|---|
| 1Q | 3,352A | 3,718 | 3,831 |
| 2Q | 3,670A | 3,880 | 3,997 |
| 3Q | 3,262A | 4,203 | 4,330 |
| 4Q | 3,850 | 4,365 | 4,497 |
| FY | 14,134 | 16,165 | 16,655 |

**GAAP EPS**

| | 2016E | 2017E | 2018E |
|---|---|---|---|
| 1Q | (0.13)A | (0.14) | (0.10) |
| 2Q | (0.14)A | (0.11) | (0.10) |
| 3Q | (0.12)A | (0.12) | (0.11) |
| 4Q | (0.14) | (0.13) | (0.11) |
| FY | (0.53) | (0.50) | (0.42) |


**Jason McCarthy, Ph.D.**
(212) 895-3556
jmccarthy@maximgrp.com

**Jason Kolbert**
(212) 895-3516
jkolbert@maximgrp.com

# Mateon Therapeutics inc

**Buy**

## Combining CA4P With Checkpoints, Positive Preclinical Data In Breast and Colon Cancers

### Summary

- **This morning, Mateon announced that lead oncology vascular disrupting agent (VDA), CA4P, demonstrated enhanced tumor killing when combined with anti-CTLA4, anti-PD1 or anti-PD-L1 checkpoints in preclinical models of breast cancer and colon cancer.**
- **In one breast cancer model, when CA4P was combined with anti-CTLA4, 7/8 mice were tumor free versus 1/8 in the CA4P-monotherapy and 2/8 in the anti-CTLA-4 monotherapy groups. In three of four follow up studies conducted in breast cancer and colon cancer models, CA4P combinations with checkpoints delayed tumor growth. What is important to note is that these were large tumor models. Recall that CA4P is a VDA and cuts off the blood supply deep inside the tumor and has demonstrated more efficient tumor killing in larger tumors as larger tumors are more dependent on their own blood supply to survive.**
- **Conclusion. Whether it is CAR-T, vaccines or DNA-based cytokines, we continue see the oncology space migrate towards combinations with checkpoints. However, this also includes small molecule VDAs, like CA4P, as well as chemotherapy. Demonstration of potential synergy with checkpoints in preclinical models is a positive and could provide the rationale for a clinical program, though in our view it is still early. Our focus remains on the phase II/III study of CA4P in combination with Avastin and chemotherapy in ovarian cancer. The next catalyst is data from the phase II portion of the study (N=80) which is expected in 1H17 and if positive could translate into proof of concept (POC).**

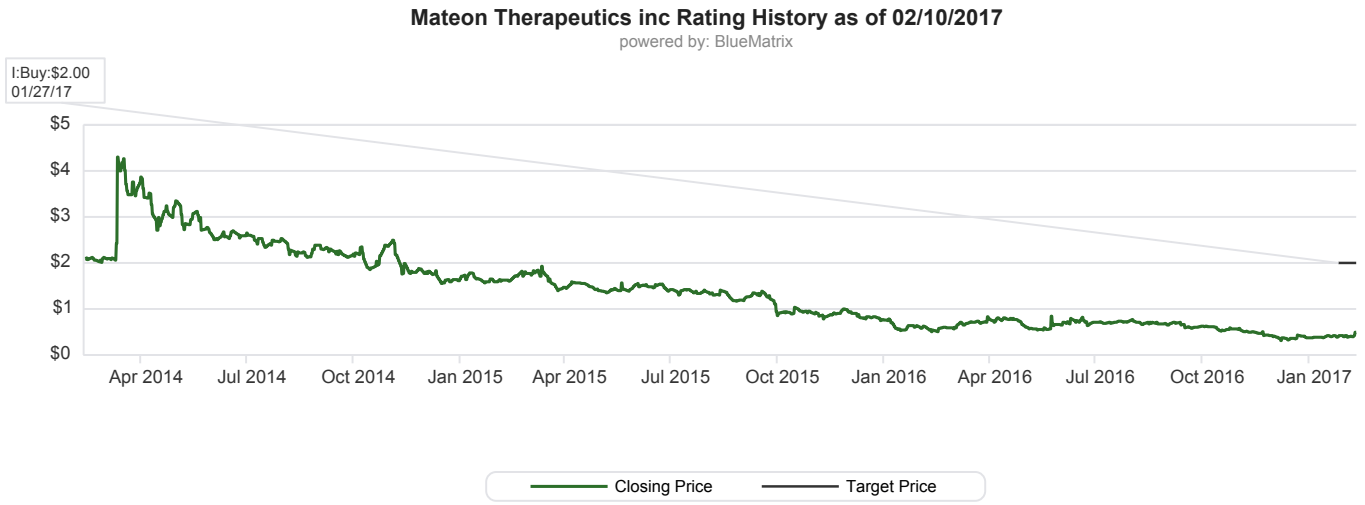
### Details

**Combretastatins: Cutting off the tumor lifeline.** Solid tumors of any type need a blood supply to survive. Blockbuster drugs like Avastin and other billion dollar anti-angiogenic agents (AAs; Afinitor, Sutent, and Nexavar) "prevent" the tumor from inducing the formation of new blood vessels (angiogenesis) and thus only are effective at the tumor rim. AAs cannot destroy existing blood vessels that feed the tumor core. Combretastatins, including CA4P, bind to "pathogenic" tubulin in the endothelial cells that line the blood vessels supplying tumors (not healthy blood vessels) causing them to swell and block blood flow. As blood can no longer get through and feed the tumor, the tumor dies. Upon injection the blood vessel is cutoff within minutes, followed by the necrosis of the tumor core.

**CA4P synergy with Avastin.** Multiple studies have found that while CA4P kills the tumor core, it does not prevent the outer rim of the tumor from sending out signals to induce angiogenesis—but Avastin does. In a P2 study (N=107) in recurrent ovarian cancer (rOC), a combination of CA4P and Avastin induced a statistically significant increase in progression free survival (PFS), 7.3 months vs. 4.8 months for Avastin alone ($P<0.05$, HR=0.685), as well as a trend in overall survival improvement (25.2 months vs. 22 months). In patients with platinum resistant disease (prOC, N=27) the difference in PFS widened to 6.7 months vs. 3.4 months ($P<0.01$, HR= 0.57). In platinum sensitive patients only (N=80) the difference was clinically meaningful, though not statistically significant, 7.6 months, vs. 6.1 months. Combined, the greatest effect of CA4P combined with Avastin appears to be prOC, as well as in patients with more advanced (i.e. measurable) diseases. In addition, this is the first published study in rOC to show beneficial effects of an AA combination. A P2/3 study (N=436) in prOC is underway.

**Valuation.** We assume CA4P launches in the U.S. in 2021 and 2022 in Europe for ovarian cancer, followed by additional indications in 2023. A 30% discount rate is applied to the free cash flow, discounted EPS, and sum-of-the-parts models which are equally weighted to derive a $2 price target.

## DISCLOSURES




| Maxim Group LLC Ratings Distribution | | As of: 02/12/17 | |
|---|---|---|---|
| | | % 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. | **78%** | **31%** |
| **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. | **20%** | **15%** |
| **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.

I, Jason Kolbert, 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 Mateon Therapeutics inc**

**Maxim Group expects to receive or intends to seek compensation for investment banking services from Mateon Therapeutics inc in the next 3 months.**

**MATN:** For Mateon Therapeutics we use the BTK (Biotechnology Index) as the relevant index

### Valuation Methods

**MATN:** Valuation. We assume CA4P launches in the U.S. in 2021 and 2022 in Europe for Ovarian Cancer, followed by additional indications in 2023. A 30% discount is applied to the FCF, Discounted EPS and SOP models which are equally weighted to derive a price target.

## Price Target and Investment Risks

**MATN:** Aside from general market and other economic risks, risks particular to our price target and rating for MateonTherapeutics include: 1) No assurances of regulatory approval(s) and or timing of such; 2) No assurances of the company's ability to penetrate the market - note that company does not currently generate revenues; 3) The company may need to raise additional capital to finance operations.

## RISK RATINGS

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

**Speculative** – Fundamental Criteria: 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. Price Volatility: 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** – Fundamental Criteria: 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. Price Volatility: 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** – Fundamental Criteria: 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** – Fundamental Criteria: 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.

## DISCLAIMERS

Some companies that Maxim Group LLC follows are emerging growth companies whose securities typically involve a higher degree of risk and more volatility than the securities of more established companies. The securities discussed in Maxim Group LLC research reports may not be suitable for some investors. Investors must make their own determination as to the appropriateness of an investment in any securities referred to herein, based on their specific investment objectives, financial status and risk tolerance.

This communication is neither an offer to sell nor a solicitation of an offer to buy any securities mentioned herein. This publication is confidential for the information of the addressee only and may not be reproduced in whole or in part, copies circulated, or disclosed to another party, without the prior written consent of Maxim Group, LLC (“Maxim”).

Information and opinions presented in this report have been obtained or derived from sources believed by Maxim to be reliable, but Maxim makes no representation as to their accuracy or completeness. The aforementioned sentence does not apply to the disclosures required by FINRA Rule 2241. Maxim accepts no liability for loss arising from the use of the material presented in this report, except that this exclusion of liability does not apply to the extent that such liability arises under specific statutes or regulations applicable to Maxim. This report is not to be relied upon in substitution for the exercise of independent judgment. Maxim may have issued, and may in the future issue, other reports that are inconsistent with, and reach different conclusions from, the information presented in this report. Those reports reflect the different assumptions, views and analytical methods of the analysts who prepared them and Maxim is under no obligation to ensure that such other reports are brought to the attention of any recipient of this report.

Past performance should not be taken as an indication or guarantee of future performance, and no representation or warranty, express or implied, is made regarding future performance. Information, opinions and estimates contained in this report reflect a judgment at its original date of publication by Maxim and are subject to change without notice. The price, value of and income from any of the securities mentioned in this report can fall as well as rise. The value of securities is subject to exchange rate fluctuation that may have a positive or adverse effect on the price or income of such securities. Investors in securities such as ADRs, the values of which are influenced by currency volatility, effectively assume this risk. Securities recommended, offered or sold by Maxim: (1) are not insured by the Federal Deposit Insurance Company; (2) are not deposits or other obligations of any insured depository institution; and (3) are subject to investment risks, including the possible loss of principal invested. Indeed, in the case of some investments, the potential losses may exceed the amount of initial investment and, in such circumstances, you may be required to pay more money to support these losses.

ADDITIONAL INFORMATION IS AVAILABLE UPON REQUEST

# Corporate Headquarters

The Chrysler Building
405 Lexington Ave., 2nd FL
New York, NY 10174
Tel: 212-895-3500

Capital Markets/Syndicate: 212-895-3695

Corporate Finance: 212-895-3811

Equity/Options Trading: 212-895-3790

Equity Research: 212-895-3736

Event Driven/Risk Arb Group: 212-895-3878

Fixed Income Trading: 212-895-3875

Global Equity Trading: 212-895-3623

Institutional Sales: 212-895-3745

Institutional Sales Trading: 212-895-3873

Prime Brokerage: 212-895-3755

Wealth Management: 212-895-3624

## Woodbury, Long Island

20 Crossways Park Drive North
Suite 304
Woodbury, NY 11797
Tel: 516-393-8300

## Red Bank, New Jersey

246 Maple Avenue
Red Bank, NJ 07701
Tel: 732-784-1900

## San Francisco, Bay Area

### Lafayette, California

3732 Mt. Diablo Blvd
Suite 158
Lafayette, CA 94549
Tel: 415-762-0114

## Boca Raton, Florida

7900 Glades Road
Suite 505
Boca Raton, FL 33434
Tel: 561-465-2605