Scimitar Equity

ASTM

Aastrom Biosciences, Inc.

January 23, 2012

Renewed Momentum and Appreciation pre Anticipated Offering; Valuation Versus Share Pricing

Update

Valuation: **$4.21**

SOTP Value: **$6.78**

Price at 1/20/12: **$1.97**

Market Capitalization: **$76.09M**

Enterprise Value: **$64.26M**

Cash: **$11.9M (Q3/11)**

Debt: **$100 K**

Shares Outstanding: **38.64 M**

Float: **38.43M**

52 Week Range: **$2.01 - $3.47**

Avg Volume (10 day): **270,414**

Avg Volume (3 mos): **277,732**

Institutional Ownership: **11%**

Insider Ownership: **0.63%**

Short Ratio: **13.8%**

Shares Short: **3.02M**

Beta: **0.73**

Fiscal Year End: **December 31**

Exchange: **NASDAQ**

Aastrom Biosciences (ASTM) develops autologous cellular therapies for the treatment of severe and chronic cardiovascular diseases.

- **Much has been written by various analysts and pundits, as shares of ASTM trade to the upside … even … in anticipation of an offering and still the trading volume remains up.**
- **Shares of ASTM had declined nearly 30% over the past months, despite very positive results from the P2b RESTORE-CLI trial. At the end of the year, a selling wave moved across most sector companies exacerbated by investors looking to sell, square and cover positions which created less liquid conditions in many markets.**
- **ASTM has experienced a recent rise and fall in share price; current $1.97, 1/20/12 <having hit $2.15 on 1/19/12> from the end-of-year price of $1.82.**
- **ASTM has made significant progress during the past 12 months and is now in a much stronger position to execute on clinical programs while anticipating an IRB approval to begin clinical trial of their autologous cell therapies, ixmyelocel-T.**
- **Critical Limb Ischemia (CLI) has a potentially enormous market opportunity. In the US alone, there are an estimated 250,000 CLI patients potentially heading toward a major amputation or even death as a result of their severe disease and the lack of treatment options. 1 year mortality in this population is high, estimated at 25%. The number jumps to 70% at year 5.**
- **The blended valuation model implies a pricing of $4.21 given the average weighted shares outstanding of 38.64M.**
- **We derived our current valuation by using a Blended Price Valuation Table which includes a Sum of the Parts (SOTP) analysis, a direct comparable analysis layered with a sector comparable analysis. Our SOTP scenario is extremely conservative (with a 10% discount) and details a Sum of The Parts value of $6.78 and when merged with a direct comparables implied value analysis of $3.56 reinforced by a stem cell sector implied value perspective of $1.94 implies a blended valuation of $4.21 given the current shares outstanding of 38.64 M.**
- **The Average Blended Price Valuation of $4.21 is significantly above this stocks current price of $1.97 and is still below of the 52 week trading range of $2.01 - $3.47. We note the average market capitalization of designated comparables is $137.48M or about 1.8 X the multiple of ASTM's market cap of $76.09. In a review of their overall sector stem cell companies, ASTM has a 1.2 X multiple and an implied fair value of $2.30.**
- **Another interesting statistic is that over the past year, CEO Tim Mayleben has bought personally (open market purchase) 133, 000 shares.**
- **I believe the current market pricing is just beginning to re-actualize ASTM's valuation and share price's potential having finished the calamitous and volatile year for all stem cell sector companies at $1.94.**

Henry McCusker
617.559.1080
hwm@scimitarequity.com

Please read the important Disclosures Section at the end of this review!

Risks

ASTM's operations and financial results are subject to various risks and uncertainties, financial condition, results of operations, cash flows, and trading price of its common stock. ASTM has incurred a cumulative net loss totaling approximately **$250M,** and continues to incur losses. These losses have resulted principally from costs incurred in R&D (including clinical trials) of cell culture technologies and cell manufacturing system, G&A expenses and the prosecution of patent applications. ASTM expect to continue to incur significant operating losses over the next several years and at least until and probably after product sales increase, primarily owing to R&D programs, including preclinical studies and clinical trials and the establishment of marketing and distribution capabilities necessary to support commercialization efforts for products. With only **$6-8M** in cash with a projected burn rate of **$6 M per quarter**, ASTM will need to raise a significant amount of additional funds, or through a collaborative partner (or both), to finance the clinical activities of cell product candidates for additional indications.

Insider and Institutional Holdings

HOLDER	% OUTSTANDING
Management, Directors and Officers	1%
Institutional Holdings	**12.20%**
Mindshare Capital Mngt	**2.14%**
BlackRock Institutional Trust Company	**4 %**
The Vanguard Group, Inc.	**2.14%**
CALPERS	**0.34%**
Northern Trust Corporation	**0.17%**
Geode Capital Management	**0.48%**
Fuller & Thaler Asset Mngt	**0.75%**
Bank of New York Mellon Corporation	**0.07%**
Commonwealth Equity Services	**0.17%**
BlackRock Fund Advisors	**0.18%**
Fidelity (Spartan Extended and Market)	**0.46%**

Capitalization

Financial Instruments (As of 1/23/12)	**# of Shares**
Number of Common Shares Outstanding	38.64 M
Conversion of Preferred into Common Warrants Outstanding (15.3M) and Options (8.1M)	23.4 M
Fully Dilutive Total	**62.04 M**

Valuation Analysis

Valuation should be understood in terms of an objective quantitative model and a comprehensive qualitative explanation that enlightens investors to expectation and potential. Given the lack of a specific valuation or an estimate formula for stem cell companies, we are blending different models for a valuation, or as some refer to a price target to come up with a true measurement tool. We retain the discounted cash flow analysis, but most of these companies generate losses per share layered by multiple dilutive financings hoping for the holy grail of an approved therapy.

Direct Comparables:

Direct Stem Cell Company Comparables

Company	Ticker	Price	Market Cap ($M)	EV($M)
Advanced Cell Technology	ACTC.OB	$0.15	$247.32	$240.58
Bioheart	BHRT.OB	$0.04	$3.53	$9.04
Osiris Therapeutics	OSIR	$5.59	$183.50	$131.65
Pluristem Therapeutics	PSTI	$2.64	$115.58	$69.77
Average of Comparables		$2.10	$137.48	$112.76
Aastrom Bioscience	ASTM	$1.97	$76.09	$64.09
Implied Multiples			1.8x	
Implied Fair Value ASTM			$3.56	

Sector Comparables:

Stem Cell Sector Comparables

Company	Ticker	Price	Market Cap ($M)	EV ($M)
Athersys	ATHX	$2.01	$49.22	$32.68
Stem Cells	STEM	$0.80	$11.46	-$468.83
Geron Corporation	GERN	$1.73	$227.45	$88.45
Opexa Therapeutics	OPXA	$0.95	$21.78	$13.26
Neuralstem	CUR	$1.06	$51.60	$47.41
NeoStem	NBS	$0.65	$79.42	$82.96
BioTime	BTX	$5.35	$261.89	$235.66
Intl. Stem Cell Corporation	ISCO.OB	$0.49	$39.43	$36.77
Brainstorm	BCLI.OB	$0.24	$30.17	$28.78
ReNeuron Group	RENE.L	$5.30	$52.48	N/A
Cytori Therapeutics	CYTX	$2.75	$152.17	$135.65
Average of Comparables		$1.94	$87.13	$23.30
Aastrom Bioscience	ASTM	$1.97	$76.09	$64.26
Implied Multiples			1.2x	
Implied Fair Value ASTM			$2.30	

Please Read these Important Disclosures!

Reg. AC, Analyst Certification

I, Henry W. McCusker, hereby certify that all the views expressed in this review accurately reflect my personal views about ASTM or companies and its or their securities. No part of my compensation was, is, or will be, directly or indirectly, related to the specific recommendations or views contained in this review. http://www.scimitarequity.com/disclosure/index.jsp

Legal Disclaimer, Regulatory and Company Specific Disclosure

The information, opinions, scientific data, quantitative and qualitative statements contained in these reviews have been obtained from research, trade and statistical services as well as other sources believed to be reliable. The information, opinions, rankings or recommendations contained in these reviews are submitted solely for advisory and informational purposes. The majority of the companies covered by Scimitar are development stage companies that are not profitable, and may not be profitable in the foreseeable future. These companies have an increased degree of volatility relative to the overall market. Risk-averse investors, and all other investors, should be aware of the risks associated with these companies and read all 10-K's and 10-Q's before considering any investment. These reviews do not represent a recommendation to undertake transactions in the subject securities. The reviews do not represent an offer to buy or sell a security or a solicitation to do so.
http://www.scimitarequity.com/content/disclosure/company-specific-disclosure.jsp
http://www.scimitarequity.com/disclosure/regulatory_disclosure.jsp
http://www.scimitarequity.com/disclosure/company_specific_disclosure.jsp
http://www.scimitarequity.com/disclosure/legal_disclaimer.jsp

Transparency of Analysts Performance and Compensation for Products and Services

To maximize transparency in analyst certification, we are required to disclose any potential conflicts of interest thus insuring independence. We do not accept payment of any fees in company stock or any form of security. Scimitar Equity, LLC (Scimitar) makes publicly available an excel format statement of yearly payments by covered companies. Scimitar "clearly and prominently" articulates a statement of financial sponsorship for any up-date and remuneration of preparing this research review. http://www.scimitarequity.com/disclosure/company_specific_disclosure.jsp

Valuation, Estimates, and Models Methodology Versus Stock Ranking

In these current volatile market/economic times; Scimitar has stepped back from making specific price targets. Valuation should be understood in terms of an objective quantitative model and a comprehensive qualitative explanation that enlightens investors to expectation and potential. Models reflect current judgment only; they are neither all-inclusive nor can they be guaranteed. Analysis and models are subject to change based on share pricing, share/capitalization increases or decreases, regulatory status and certainly market conditions. http://www.scimitarequity.com/content/disclosure/valuation-methodology.jsp

Terms of Use Privacy Policy and Obtaining Current Disclosures

Scimitar is committed to respecting the rights of those individuals viewing or utilizing this website, and the protection of any information that might be collected or that which you as a subscriber may choose to share. Applicable current disclosures can be downloaded from our website, by writing to or calling: Scimitar Equity, LLC. 6 Barley Lane Wayland, MA 01778 Tel: 617.559.1080
http://www.scimitarequity.com/disclosure/privacy.jsp
http://www.scimitarequity.com/disclosure/disclosures_supporting_reporting.jsp
info@scimitarequity.com