

Equity Research

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Heat Biologics, Inc. (HTBX-\$9.85)

Rating: BUY

Target Price: \$15.00

Reporting 2Q:13 EPS; Updating Model to Reflect Manufacturing Transfer Costs

<u>EPS</u>	<u>1Q</u>	<u>2Q</u>	<u>3Q</u>	<u>4Q</u>
2012A	(0.47)A	(0.06)A	(0.51)A	(0.39)A
2013E	(1.66)A	(0.92)A	(0.14)E	(0.16)E
<i>Prev</i>	—	(0.38)E	(0.15)E	(0.20)E
2014E	(0.26)E	(0.35)E	(0.41)E	(0.40)E
<i>Prev</i>	(0.38)E	(0.36)E	—	(0.39)E
<u>REV</u>	<u>1Q</u>	<u>2Q</u>	<u>3Q</u>	<u>4Q</u>
2012A	0.0A	0.0A	0.0A	0.0A
2013E	0.0A	0.0A	0.0E	0.0E
2014E	0.0E	0.0E	0.0E	0.0E
<u>FY</u>	<u>2012A</u>	<u>2013E</u>	<u>2014E</u>	
EPS	(3.03)A	(1.65)E	(1.42)E	
<i>Prev</i>	—	(1.55)E	(1.53)E	
REV	0.0A	0.0E	0.0E	

- **2Q:13 EPS Reflects Manufacturing Change.** Heat Biologics ("Heat") reported EPS of (\$0.92), a larger loss than our forecast of (\$0.38), due to expenses associated with the transfer of manufacturing from the University of Miami to Lonza. We are adjusting our 2013 EPS forecast to (\$1.65) to account for the higher expenses in the quarter (R&D came in at \$1.1 million versus our forecast of \$0.5 million). The change in manufacturing was expected, and we have accounted for this as well as changes such as share count and R&D expense. Given Heat's status as a newly public company, we do believe that quarterly figures could fluctuate, and while we have made some adjustments to our current model, we think additional changes could occur throughout 2013.
- **Expecting New Clinical and Regulatory Head.** Heat disclosed in its 10-Q filing that the company has extended an offer to a new full-time head of Clinical and Regulatory Affairs, as previously the position was part-time. With this change, the prior head of Clinical & Regulatory Affairs is no longer with the company. Since clinical trials of HS-110 and HS-410 are expected to commence enrolling patients before the end of this year, we do not envision that this personnel change will have an impact on trial initiations.
- **Clinical Catalysts are Valuation Drivers.** We expect the Phase II HS-110 NSCLC study and the Phase I HS-110 superficial bladder study to begin in 4Q:13. As the HS-110 study will be a two-stage design, the first stage could read out within 9-12 months of initiation, providing a potential catalyst for the shares. The superficial bladder cancer study should also provide catalysts within the next 12-24 months.
- **Cash Runway into 2015.** Following the company's initial public offering in July 2013, Heat should have sufficient capital to fund clinical development into 2015. The company, we believe, has roughly \$25 million, and this also suggests enough cash to bring another clinical candidate forward. Our current financial model assumes additional equity offerings through 2018.
- **Valuation Expansion Based on Clinical Trial Progress -** We believe shares of Heat will benefit from the advancement of clinical trials and news flow regarding such progress. Our 12-month price target is \$15, and our rating remains BUY.

Current Statistics

Market Cap (\$Mil)	\$60.9
Avg. Daily Trading Volume (3 mo.):	NA
Shares Out (Mil):	6.187
52 Wk. Range	\$11.23-\$9.01

Summary

Heat Biologics is a development stage company with a proof-of-concept study in non-small cell lung cancer (NSCLC) about to get underway. The company is working in the evolving field of therapeutic cancer vaccines with a unique approach that seeks to harness the immune-provoking activity of the gp96 heat shock protein (HSP). This approach could offer broad cancer antigen coverage in a cost effective manner relative to other approaches in the field today. While the company is at an earlier stage of development versus others in the field, and this is reflected in the current valuation, we see opportunity for expansion based on clinical progress, which we think is likely. The company's technology is unique and has broad potential, in our opinion, and there is an actionable milestone catalyst calendar through 2015. We like Heat for its:

- **Broad Antigen Coverage Technology** – Heat Biologics' vaccines utilize Immune Pan Antigen Cytotoxic Therapy (*ImPACT*) technology, which is a method of engineering allogenic (not originating from the patient) "off the shelf" tumor cells to secrete antigens that stimulate the immune system. The technology allows the immune system to identify a variety of tumor-specific antigens, increasing the likelihood that tumor cells will be recognized and killed.
- **Actionable Milestones Within the Next 24 Months** – We expect Heat Biologics to begin clinical studies evaluating HS-110 and HS-410 in NSCLC and bladder cancer, respectively, by the end of 2013. While both studies are expected to be completed by late 2015/early 2016, they consist of multiple parts that provide interim data over the duration of the studies. The studies could therefore provide multiple catalysts for valuation expansion.
- **Targeting Areas of Unmet Need** – Heat Biologics will focus development on NSCLC and bladder cancer in the near term. We believe that the field of immunotherapy in cancer has evolved, learning from prior clinical failures that trials in the sickest of patients, with the highest of disease burdens, may be the least likely to derive benefit from treatment. Hence, in both NSCLC and bladder cancer, Heat Biologics is evaluating HS-110 and HS-410 in patients that have finished systemic treatment and presumably have a lower burden of disease.
- **Applications Outside of Cancer** – Heat's *ImPACT* technology stimulates a cytotoxic T-cell response, and this suggests potential utility in infectious diseases such as HIV. Early feasibility studies have been conducted, though this is not a focus for the company at this time.

Valuation

In valuing Heat, we looked at a comparative analysis of enterprise value versus several peer groups (recent IPOs, similar stage of development, cancer vaccine developers and recent IPOs). Heat is currently valued at a steep discount to all of the peer groups. Heat trades at a significant discount to peers; cancer immunotherapy companies, companies with Phase II assets and recent IPOs. This discount could be a function of dependence on a single technology (*ImPACT*) or earlier stage of development versus immunotherapy peers. But we also believe that as Heat's candidates advance into clinical trials, greater value will accrue to the shares. Typical biotech valuations for Phase II candidates are in the \$150-250 million range and \$100 million for Phase I assets. Based on Heat's Phase II ready HS-110 and Phase I/II ready HS-410 programs, we believe the shares could have compelling upside.

On the basis of advancing milestones, we think the company's EV could expand and drive share price gains. Based on enterprise value expansion observed for peer companies of upwards of 50%, we think the same can be experienced by Heat Biologics. On that basis, we believe Heat shares could trade to \$15 based on the advancement of candidates in clinical trials.

Risks

Heat Biologics is a development stage company and investment is subject to risk. These risks include but are not limited to:

- HS-110 could fail to show an efficacy improvement in its Phase II study in NSCLC. The company uses an off-the-shelf supply of tumor cells and it is unclear whether or not these cells can stimulate an immune response against the patient's own tumor.
- HS-110 could also demonstrate a poor safety profile. HS-110 may secrete antigens that stimulate an immune response against normal cells.
- Heat may be unable to secure additional financing. We believe that the company has sufficient cash to fund development of HS-110 and HS-410 through initial stages of development, and additional fund raising may be dependent upon a positive clinical outcome from clinical trials.
- The clinical landscape is crowded with hundreds of oncology clinical trials, especially in NSCLC. It is possible that other technologies show greater benefit to patients than Heat's product candidates, thus rendering potential products obsolete or non-competitive.
- Heat will be switching the manufacturing process from the University of Miami to Lonza between the second and third portions of the Phase II trial evaluating HS-110 in NSCL. However, we cannot exclude the possibility that the switch may not be seamless.

Exhibit 1: Annual Sales and Earnings
Heat Biologics

<i>All figures in millions</i>	2018E	2017E	2016E	2015E	2014E	2013E
Revenue	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Product Sales	0.00	0.00	0.00	0.00	0.00	0.00
Grants	0.00	0.00	0.00	0.00	0.00	0.00
Cost of Goods Sold	0.00	0.00	0.00	0.00	0.00	0.00
Gross Profit	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
<i>Gross Profit Margin</i>	<i>NM</i>	<i>NM</i>	<i>NM</i>	<i>NM</i>	<i>NM</i>	<i>NM</i>
Operating Expenses						
G&A	7.11	6.87	6.29	5.52	4.97	1.33
R&D	11.14	9.60	7.81	6.01	4.96	2.61
Total Operating Expenses	18.25	16.47	14.10	11.52	9.93	3.94
Profit (Loss) from Operations	(\$18.25)	(\$16.47)	(\$14.10)	(\$11.52)	(\$9.93)	(\$3.94)
<i>Operating Profit Margin</i>	<i>NM</i>	<i>NM</i>	<i>NM</i>	<i>NM</i>	<i>NM</i>	<i>NM</i>
Interest Income (Expense)	(\$0.08)	(\$0.06)	(0.13)	(0.12)	(0.06)	(0.10)
Other Income (Expense)	0.03	0.07	0.11	0.10	0.33	0.02
Income (Loss) from Continuing Operations	(\$18.30)	(\$16.46)	(\$14.12)	(\$11.54)	(\$9.66)	(\$4.02)
<i>Pretax Margin</i>	<i>NM</i>	<i>NM</i>	<i>NM</i>	<i>NM</i>	<i>NM</i>	<i>NM</i>
Income Tax Paid (Benefit)	0.00	0.00	0.00	0.00	0.00	0.00
Net Income (Loss)	(\$18.30)	(\$16.46)	(\$14.12)	(\$11.54)	(\$9.66)	(\$4.02)
Non-controlling Interest	(\$1.37)	(\$1.23)	(\$1.06)	(\$0.87)	(\$0.62)	(\$0.20)
Net Income to Heat Biologics	(\$16.93)	(\$15.23)	(\$13.06)	(\$10.68)	(\$9.04)	(\$3.83)
Beneficial Conversion Charge	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	(\$2.30)
Net Attributable to Common Shareholders	(\$16.93)	(\$15.23)	(\$13.06)	(\$10.68)	(\$9.04)	(\$6.13)
<i>Net Margin</i>	<i>NM</i>	<i>NM</i>	<i>NM</i>	<i>NM</i>	<i>NM</i>	<i>NM</i>
Diluted Earnings (Net Loss) Per Share	(\$1.59)	(\$1.78)	(\$1.59)	(\$1.62)	(\$1.42)	(\$1.65)
<i>Shares Outstanding</i>	10.64	8.56	8.23	6.60	6.35	3.72

Source: Heat Biologics, Cantor Fitzgerald research

Exhibit 2: Sales and Earnings by Quarter

Heat Biologics

<i>All figures in millions</i>	2014E	4Q14E	9Mos14E	3Q14E	6Mos14E	2Q14E	1Q14E	CY2013E	4Q2013E	9Mos13E	3Q13E	6Mos13A	2Q13A	1Q13A
Revenue	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Product Sales	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grants	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cost of Goods Sold	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Gross Profit	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
<i>Gross Profit Margin</i>	<i>NM</i>	<i>NM</i>	<i>NM</i>	<i>NM</i>	<i>NM</i>	<i>NM</i>	<i>NM</i>	<i>NM</i>	<i>NM</i>	<i>NM</i>	<i>NM</i>	<i>NM</i>	<i>NM</i>	<i>NM</i>
Operating Expenses														
SG&A	4.97	1.20	3.77	1.39	2.38	1.16	1.22	1.33	0.31	1.02	0.31	0.71	0.44	0.27
R&D	4.96	1.59	3.38	1.44	1.93	1.38	0.56	2.61	0.51	2.10	0.46	1.64	1.14	0.50
Total Operating Expenses	9.93	2.79	7.15	2.83	4.31	2.54	1.78	3.94	0.82	3.12	0.77	2.35	1.58	0.77
Profit (Loss) from Operations	(\$9.93)	(\$2.79)	(\$7.15)	(\$2.83)	(\$4.31)	(\$2.54)	(\$1.78)	(\$3.94)	(\$0.82)	(\$3.12)	(\$0.77)	(\$2.35)	(\$1.58)	(\$0.77)
<i>Operating Profit Margin</i>	<i>NM</i>	<i>NM</i>	<i>NM</i>	<i>NM</i>	<i>NM</i>	<i>NM</i>	<i>NM</i>	<i>NM</i>	<i>NM</i>	<i>NM</i>	<i>NM</i>	<i>NM</i>	<i>NM</i>	<i>NM</i>
Interest Income (Expense)	(0.06)	(0.02)	(0.04)	(0.02)	(0.02)	(0.01)	(0.01)	(0.10)	(0.01)	(0.09)	(0.03)	(0.06)	(0.03)	(0.03)
Other Income (Expense)	0.33	0.04	0.29	0.03	0.26	0.16	0.10	0.02	0.04	(0.02)	0.03	(0.05)	(0.06)	0.01
Income (Loss) from Continuing Operations	(\$9.66)	(\$2.77)	(\$6.89)	(\$2.82)	(\$4.07)	(\$2.39)	(\$1.68)	(\$4.02)	(\$0.79)	(\$3.23)	(\$0.77)	(\$2.46)	(\$1.67)	(\$0.79)
<i>Pretax Margin</i>	<i>NM</i>	<i>NM</i>	<i>NM</i>	<i>NM</i>	<i>NM</i>	<i>NM</i>	<i>NM</i>	<i>NM</i>	<i>NM</i>	<i>NM</i>	<i>NM</i>	<i>NM</i>	<i>NM</i>	<i>NM</i>
Income Tax Paid (Benefit)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Net Income (Loss)	(\$9.66)	(\$2.77)	(\$6.89)	(\$2.82)	(\$4.07)	(\$2.39)	(\$1.68)	(\$4.02)	(\$0.79)	(\$3.23)	(\$0.77)	(\$2.46)	(\$1.67)	(\$0.79)
Non-controlling Interest	(\$0.62)	(\$0.21)	(\$0.42)	(\$0.21)	(\$0.20)	(\$0.18)	(\$0.02)	(\$0.20)	(\$0.06)	(\$0.14)	(\$0.06)	(\$0.08)	(\$0.05)	(\$0.02)
Net Income to Heat Biologics (Loss)	(\$9.04)	(\$2.56)	(\$6.48)	(\$2.61)	(\$3.86)	(\$2.21)	(\$1.66)	(\$3.83)	(\$0.73)	(\$3.10)	(\$0.71)	(\$2.38)	(\$1.62)	(\$0.76)
Beneficial Conversion Charge	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	(\$2.30)	\$0.00	(\$2.30)	\$0.00	(\$2.30)	\$0.00	(\$2.30)
Net Attributable to Common Shareholders	(\$9.04)	(\$2.56)	(\$6.48)	(\$2.61)	(\$3.86)	(\$2.21)	(\$1.66)	(\$6.13)	(\$0.7)	(\$5.40)	(\$0.71)	(\$4.68)	(\$1.6)	(\$3.1)
<i>Net Margin</i>	<i>NM</i>	<i>NM</i>	<i>NM</i>	<i>NM</i>	<i>NM</i>	<i>NM</i>	<i>NM</i>	<i>NM</i>	<i>NM</i>	<i>NM</i>	<i>NM</i>	<i>NM</i>	<i>NM</i>	<i>NM</i>
Basic & Diluted Net Loss Per Share	(\$1.42)	(\$0.40)	(\$1.02)	(\$0.41)	(\$0.61)	(\$0.35)	(\$0.26)	(\$1.65)	(\$0.12)	(\$1.88)	(\$0.14)	(\$2.59)	(\$0.92)	(\$1.66)
<i>Shares Outstanding</i>	<i>6.35</i>	<i>6.39</i>	<i>6.33</i>	<i>6.36</i>	<i>6.32</i>	<i>6.33</i>	<i>6.31</i>	<i>3.72</i>	<i>6.28</i>	<i>2.86</i>	<i>4.97</i>	<i>1.81</i>	<i>1.76</i>	<i>1.86</i>

<i>Year/Year Percent Change</i>	CY14/ CY13	4Q14/ 4Q13	9Mos14/ 9Mos13	3Q14/ 3Q13	6Mos14/ 6Mos13	2Q14/ 2Q13	1Q14/ 1Q13	CY13/ CY12	4Q13/ 4Q12	9Mos13/ 9Mos12	3Q13/ 3Q12	6Mos13/ 6Mos12	2Q13/ 2Q12	1Q13/ 1Q12
SG&A	274.7	287.1	270.9	348.4	237.0	164.7	355.0	NA	NA	NA	NA	NA	NA	NA
R&D	90.2	213.9	60.4	213.9	17.5	20.2	11.3	NA	NA	NA	NA	NA	NA	NA
Total Operating Expenses	152.4	241.7	129.0	268.0	83.5	60.2	131.3	NA	NA	NA	NA	NA	NA	NA
Shares Outstanding	70.7	1.7	121.2	28.0	249.0	259.3	239.3	NA	NA	NA	NA	NA	NA	NA

Source: Heat Biologics, Cantor Fitzgerald research

Exhibit 3: Pipeline and Milestones
Heat Biologics

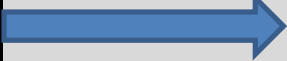



Candidate	Indication	Description	Phase of Development				Next Event	Timeframe
			PreClinical	Phase I	Phase II	Phase III		
HS-110	NSCLC	Allogenic vaccine consisting of a lung cancer cell line genetically modified to "pump-out" cancer antigens bound to gp96, a heat shock protein					Initiate Phase II study	4Q:13
HS-410	Bladder Cancer Adjuvant	Allogenic vaccine consisting of a bladder cancer cell line genetically modified to "pump-out" cancer antigens bound to gp96, a heat shock protein					Initiate Phase I/II study	4Q:13
HS-310	Ovarian Cancer	Allogenic vaccine consisting of an ovarian cancer cell line genetically modified to "pump-out" cancer antigens bound to gp96, a heat shock protein					Initiate Phase I/II study	2014
HS-510	Triple Negative Breast Cancer	Allogenic vaccine consisting of a breast cancer cell line genetically modified to "pump-out" cancer antigens bound to gp96, a heat shock protein					Initiate Phase I/II study	2014

Exhibit 3: Select Biotechnology Stocks (all market capitalization ranges)

Biotechnology	Mara Goldstein - 212.610.2215
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Mkt Cap. Range	Company (a)	Ticker	Rating	Price 9/4/13	Market Cap. (mil)	52-Week		Performance			Earnings Per Share (b)			Revenue Per Share (b)			Per Share Cash (b)	EV (b) (mil)	Short Interest
						High	Low	YTD	QTD	1-Year	2012A	2013E	2014E	2012A	2013E	2014E			
Small Cap	Agenus	AGEN	NC	\$2.84	\$84.5	\$5.40	\$2.45	-33.0%	-25.7%	-40.7%	(\$0.51)	(\$1.30)	(\$0.76)	\$0.54	\$0.13	\$0.24	\$0.45	\$80.3	1,630,079
	Agiost	AGIO	NC	27.10	816.5	33.45	22.34	NA	NA	NA	(1.11)	(1.26)	(1.06)	0.83	0.83	1.15	3.84	816.6	529,769
	Astex	ASTX	NC	8.55	811.8	9.39	2.14	193.8%	96.6%	178.5%	0.08	(0.29)	(0.69)	0.88	0.64	0.32	1.41	677.8	6,027,358
	Cleveland BioLabs	CBLI	BUY	1.72	77.4	2.95	1.23	27.4%	13.9%	-10.4%	(0.69)	(0.51)	(0.52)	0.10	0.17	0.31	0.30	76.1	1,941,497
	Curis	CRIS	NC	4.35	355.4	4.63	2.66	18.9%	27.2%	2.1%	(0.21)	(0.16)	(0.26)	0.21	0.18	0.21	0.70	328.6	6,190,967
	Endocyte	ECYT	NC	15.03	541.8	19.00	7.50	58.2%	9.0%	44.9%	(0.48)	(0.73)	(0.37)	0.96	1.76	3.11	3.07	431.1	2,481,960
	Epizyme	EPZM	NC	29.75	845.4	45.72	18.60	NA	-0.7%	NA	(0.72)	(1.52)	(0.65)	1.59	1.50	2.00	5.23	696.7	659,702
	Galena Biopharma	GALE	BUY	2.37	200.1	3.00	1.23	49.1%	7.2%	24.1%	(0.53)	(0.53)	(0.53)	0.00	0.00	0.00	0.27	177.1	14,066,296
	Heat Biologics	HTBX	BUY	9.85	60.0	11.23	9.01	NA	NA	NA	(3.03)	(1.55)	(1.53)	0.00	0.00	0.00	3.78	36.9	2,318
	Merrimack Pharmaceut	MACK	NC	3.81	389.4	11.11	3.26	-38.8%	-44.9%	-52.1%	(1.28)	(1.20)	(1.11)	0.48	0.63	0.66	0.61	367.5	11,933,462
	NewLink Genetics	NLNK	BUY	17.08	439.0	23.67	10.60	43.4%	-15.3%	12.4%	(1.12)	(1.42)	(2.13)	0.07	0.04	0.18	2.31	387.0	3,355,520
	Oncothyron	ONTY	BUY	1.73	109.8	6.24	1.55	-14.8%	6.1%	-66.7%	(0.53)	(0.59)	(0.65)	0.00	0.00	0.00	0.80	58.8	5,930,905
	Sunesis Pharma	SNSS	BUY	4.97	256.9	6.85	2.30	18.6%	-9.6%	57.8%	(0.91)	(0.86)	(0.71)	0.07	0.10	0.15	1.19	229.3	7,078,396
	Verastem	VSTM	BUY	14.16	362.4	18.82	6.25	43.0%	0.1%	62.8%	(1.70)	(1.78)	(2.03)	0.00	0.00	0.00	2.24	305.0	903,193
	Average				\$382.2			33.3%	5.3%	19.3%	(\$0.91)	(\$0.98)	(\$0.93)	\$0.41	\$0.43	\$0.59	\$1.87	\$333.5	\$4,480,815.9
Mid Cap	Ariad	ARIA	NC	\$20.75	\$3,840.97	\$25.40	\$15.35	3.3%	6.2%	-2.3%	(\$1.34)	(\$1.62)	(\$1.30)	\$0.00	\$0.34	\$0.94	\$1.90	\$3,545.8	17,804,182
	Celldex	CLDX	BUY	23.99	1,942.9	25.10	5.02	242.7%	46.6%	308.7%	(1.01)	(1.04)	(0.99)	0.14	0.05	0.01	2.28	1788.4	7,873,169
	Dendreon	DNDN	HOLD	2.85	449.46	7.22	2.69	-51.0%	-33.7%	-41.6%	(2.65)	(1.64)	(0.77)	2.06	2.19	2.27	2.19	833.9	53,892,764
	Exelixis	EXEL	NC	5.37	987.79	5.56	4.29	11.1%	15.1%	12.9%	(0.92)	(1.32)	(1.36)	0.26	0.18	0.21	1.98	959.7	40,334,705
	Immunogen (c)	IMGN	HOLD	17.09	1,454.5	20.25	10.85	26.7%	-0.6%	16.3%	(0.95)	(0.90)	(0.71)	0.19	0.43	0.65	2.01	1,259.2	8,822,513
	Incyte	INCY	NC	35.17	5,383.2	37.46	15.43	106.9%	53.4%	81.2%	(0.34)	(0.27)	0.34	1.94	2.28	3.40	2.76	5,238.6	11,572,933
	Medivation	MDVN	NC	60.50	4,550.3	60.80	41.89	17.5%	16.3%	12.6%	(0.56)	(0.87)	0.40	0.80	2.42	3.23	3.27	4,506.0	3,311,684
	ONYX Pharma	ONXX	NC	123.82	9,092.1	136.87	68.12	60.2%	-5.7%	65.0%	(2.50)	(1.68)	0.56	6.09	4.93	8.66	10.22	8,522.3	4,181,735
	Pharmacyclis	PCYC	NC	118.42	8,662.3	121.49	44.91	92.7%	38.7%	82.5%	0.17	(0.43)	0.48	0.11	1.12	1.91	6.90	8,157.3	970,807
	Seattle Genetics	SGEN	SELL	44.16	5,380.6	44.83	21.05	82.9%	35.0%	53.9%	(0.46)	(0.93)	0.02	1.16	1.70	1.55	2.87	5,042.5	16,165,773
	Spectrum Pharm	SPPI	NC	8.10	512.8	13.52	6.92	-30.5%	3.3%	-35.3%	1.46	(0.35)	(0.07)	3.05	4.23	2.45	1.97	438.5	20,202,401
	Average				\$3,841.5			51.1%	15.9%	50.4%	(\$0.83)	(\$1.00)	(\$0.31)	\$1.44	\$1.81	\$2.30	\$3.49	\$3,662.9	16,830,242
Large Cap	Alexion	ALXN	NC	\$112.49	\$21,998.3	\$125.65	\$81.82	12.4%	17.3%	5.3%	\$2.13	\$3.02	\$3.33	\$5.80	\$7.82	\$9.77	\$5.72	\$21,015.9	2,866,564
	Amgen	AMGN	NC	112.93	85,076.5	116.25	80.60	26.7%	15.8%	34.3%	6.51	7.33	8.16	22.92	25.32	29.23	25.32	86,973.5	8,374,397
	Biogen Idec	BIIB	NC	227.70	54,117.9	242.64	134.00	51.8%	4.5%	55.2%	6.53	8.54	10.81	23.21	28.61	33.38	2.81	54,180.4	2,661,623
	Celgene	CELG	BUY	145.59	59,877.7	149.92	71.23	79.5%	22.4%	105.2%	4.91	5.95	7.43	13.15	14.81	17.61	9.92	59,414.5	3,990,494
	Gilead	GILD	NC	61.07	93,475.3	64.04	29.37	62.7%	18.2%	109.0%	1.95	1.95	3.02	6.34	7.04	8.82	1.49	98,777.1	58,251,214
	Regeneron	REGN	NC	268.64	25,980.2	283.99	136.13	48.3%	16.7%	79.7%	6.75	7.02	8.89	14.25	19.99	25.66	5.56	25,916.0	3,352,740
	Vertex	VRTX	NC	78.38	18,247.8	89.96	38.44	79.6%	-2.5%	42.5%	(0.50)	(2.30)	(1.73)	6.56	5.06	4.22	6.40	17,382.9	3,487,139
	Average				\$51,253.4			51.6%	13.2%	61.6%	\$4.04	\$4.50	\$5.70	\$13.18	\$15.37	\$17.83	\$8.73	\$37,280.4	11,854,882
Indices	S&P 500	SP50	NA	1,655.1		1,709.67	1,343.35	13.2%	2.5%	17.9%	NM	109.9	122.0	NM	1,148.7	1,198.7			
	Dow Jones Ind	DJII	NA	14,937.5		15,658.43	12,438.44	11.4%	-0.3%	14.5%	NM	1,105.3	1,196.8	NM	11,127.9	11,609.5			
	NASDAQ Comp	COMP	NA	3,658.8		3,694.19	2,810.80	17.6%	6.5%	19.2%	NM	184.9	213.6	NM	1,960.7	2,095.6			
	Amex Biotech Index	BTK	NA	2,156.9		2,194.75	1,391.58	34.5%	7.6%	45.3%	NM	68.7	90.4	NM	282.9	322.1			
	NASDAQ Biotech	NBI	NA	2,109.4		2,117.49	1,329.03	42.7%	13.2%	46.9%	NM	49.1	71.9	NM	299.1	341.1			
Mkt Cap. Range	Company	Ticker	Rating	Price Change From		P/E			Price/Sales			Price/Debt			EV/			Sales	
				High	Low	2012A	2013E	2014E	2012A	2013E	2014E	Cash	Debt	BV	EBITDA	Net Inc.	FCF		BV
Mid	Spectrum Pharm	SPPI	NC	-40.1%	17.1%	5.5	(23.0)	(109.6)	2.66	1.92	3.30	NA	NM	\$1.71	4.6	(19.7)	7.0	1.6	1.5
Large	Alexion	ALXN	NC	-10.5%	37.5%	52.8	37.2	33.8	19.40	14.38	11.51	19.65	NM	11.11	51.1	35.5	54.1	18.5	10.6
Large	Amgen	AMGN	NC	-2.9%	40.1%	17.3	15.4	13.8	4.93	4.65	4.46	3.86	3.56	4.48	12.2	15.8	21.3	5.0	4.6
Large	Biogen Idec	BIIB	NC	-6.2%	69.9%	34.9	26.7	21.1	9.81	7.96	6.82	81.05	74.18	7.74	25.0	26.7	33.3	9.8	7.7
Large	Celgene	CELG	BUY	-2.9%	104.4%	29.7	24.5	19.6	11.07	9.83	8.27	14.67	16.55	10.73	28.1	24.3	31.2	10.8	10.6
Large	Gilead	GILD	NC	-4.6%	108.0%	31.3	31.2	20.2	9.63	8.68	6.93	40.87	NA	9.97	23.5	33.0	35.3	10.2	10.5
Large	Regeneron	REGN	NC	-5.4%	97.3%	39.8	38.3	30.2	18.85	13.44	10.47	48.33	54.89	20.99	NM	38.2	NM	18.8	20.9
Large	Vertex	VRTX	NC	-12.9%	103.9%	(156.8)	NM	NM	11.95	15.48	18.58	12.26	45.87	17.04	410.3	(32.5)	88.4	11.4	16.24
Large Cap Only (d)						7.0	28.9	19.8	12.2	10.6	9.6	\$31.53	\$39.01	\$11.72	91.7	20.1	43.9	12.1	11.6

(a) All companies listed on NASDAQ

(b) All figures consensus estimates except for rated companies. Rated companies are Cantor Fitzgerald estimates. EPS and revenue per share exclude option expense and other one-time items, when available, otherwise EPS actual and estimates reflect non GAAP format.

(c) ImmunoGen CY estimates represent fiscal year-end (June) figures.

(d) Excludes Spectrum Pharmaceuticals (SPPI)

Source: Cantor Fitzgerald research, FactSet

Company Description

Heat Biologics is a development-stage company focused on therapeutic cancer vaccines employing the company's proprietary technology that harnesses the immune-provoking ability of gp96, a heat shock protein, in an allogenic, "off the shelf", vaccine.

Companies Mentioned:

Agenus Inc. (AGEN - NASDAQ): NC
 Agios Pharmaceuticals, Inc. (AGIO - NASDAQ): NC
 Alexion Pharmaceuticals Inc. (ALXN - NASDAQ): NC
 Amgen Inc. (AMGN - NASDAQ): NC
 Ariad Pharmaceuticals Inc. (ARIA - NASDAQ): NC
 Astex Pharmaceuticals Inc. (ASTX - NASDAQ): NC
 Biogen Idec (BIIB - NASDAQ): NC
 Celgene Corporation (CELG - NASDAQ): BUY
 Celldex Therapeutics, Inc. (CLDX - NASDAQ): BUY
 Cleveland BioLabs, Inc. (CBLI - NASDAQ): BUY
 Curis Inc. (CRIS - NASDAQ): NC
 Dendreon Corporation (DNDN - NASDAQ): HOLD
 Endocyte Inc. (ECYT - NASDAQ): NC
 Epizyme, Inc. (EPZM - NASDAQ): NC
 Exelixis Inc. (EXEL - NASDAQ): NC
 Galena Biopharma (GALE - NASDAQ): BUY
 Gilead Sciences Inc. (GILD - NASDAQ): NC
 Heat Biologics, Inc. (HTBX - NASDAQ): BUY
 ImmunoGen, Inc. (IMGN - NASDAQ): HOLD
 Incyte Corporation (INCY - NASDAQ): NC
 Medivation Inc. (MDVN - NASDAQ): NC
 Merrimack Pharmaceuticals Inc. (MACK - NASDAQ): NC
 NewLink Genetics Corporation (NLNK - NASDAQ): BUY
 Oncothyreon Inc. (ONTY - NASDAQ): BUY
 ONYX Pharmaceuticals Inc. (ONXX - NASDAQ): NC
 Pharmacyclics Inc. (PCYC - NASDAQ): NC
 Regeneron Pharmaceuticals Inc. (REGN - NASDAQ): NC
 Seattle Genetics, Inc. (SGEN - NASDAQ): SELL
 Spectrum Pharmaceuticals Inc. (SPPI - NASDAQ): NC
 Sunesis Pharmaceuticals, Inc. (SNSS - NASDAQ): BUY
 Verastem, Inc. (VSTM - NASDAQ): BUY
 Vertex Pharmaceuticals Inc. (VRTX - NASDAQ): NC
 Lonza (private)

Disclosures Appendix

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Rating	Cantor		IB Serv./Past 12 Mos.	
	Count	Percent	Count	Percent
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HOLD [H]	47	34.81	4	8.51
SELL [S]	13	9.63	2	15.38