

Equity Research

Mara Goldstein

212-610-2215

mgoldstein@cantor.com

Heat Biologics, Inc. (HTBX-\$7.42)

Rating: BUY

Target Price: \$18.00

Worth the Wait; Outlining Phase II NSCLC Trial; Maintaining BUY

<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	(0.48)A	(0.36)E
2014E	(0.51)E	(0.48)E	(0.51)E	(0.52)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	0.0A	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	(2.59)E	(2.02)E	
REV	0.0A	0.0E	0.0E	

- **Outlining Clinical Strategy.** Heat Biologics ("Heat") outlined its Phase II trial design for HS-110, an immunotherapeutic treatment for non-small cell lung cancer (NSCLC), following the decision to delay initiation of the trial to incorporate protocol amendments. The revised design is in response to the potential for changes in clinical practice, namely the availability of checkpoint inhibitors.
- **Maintaining Flexibility.** A key rationale for altering the trial is to have the flexibility to explore HS-110 in novel combinations in later clinical studies. The addition of low-dose cyclophosphamide to HS-110 is designed to provide a window into HS-110's activity when combined with an agent that inhibits regulatory T cells (Tregs) at low doses, a similar effect of checkpoint inhibitors. Low dose cyclophosphamide is considered to be highly tolerable, and thus it is a reasonable regimen for both the active and control arms.
- **Enroll in 2014, Initial Data in 2017.** Based on company guidelines, the HS-110 trial should begin enrolling patients in 3Q:14 (n=123) and initial data -- antigen expression -- is expected in late 2016, with top-line efficacy data, including overall survival (OS) anticipated in 3Q:17. The study is well thought out and the hurdles for efficacy are high, but we believe that the endpoints are appropriate and that a positive Phase II trial would be particularly meaningful given hurdles for efficacy.
- **Looking for Partners.** Heat announced that the company is actively seeking partners to assist in development and/or commercialization of lead candidates, HS-110 and HS-410 (bladder cancer). The company is also looking for partnerships to explore its IMPACT technology with checkpoint inhibitors, as well as opportunities for out-licensing. Since we have little visibility as to the timing and structure of such events, we have not included any of these options in our financial model.
- **Clinical Trial Progress Drives Value.** We believe shares of HTBX will benefit as both the HS-110 and HS-410 clinical trials advance and provide updates. Our price target is \$18, which reflects a substantial rise in enterprise value (EV), based on the growth and advancement of the clinical trial programs.

Current Statistics

Market Cap (\$Mil)	\$47.2
Avg. Daily Trading Volume (3 mo.):	20,710
Shares Out (Mil):	6.366
52 Wk. Range	\$15.29-\$5.95

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. 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 allogeneic (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.
- **Continued News Flow Anticipated** – Heat Biologics has initiated the Phase I study of HS-410 in bladder cancer and will soon begin enrolling for the Phase II for HS-110 for NSCLC by 3Q:14. While Heat anticipates the Phase II trial for HS-110 to read out in 3Q:2017, antigen response data could be available in 2016. Similarly, we expect news flow from HS-410 including an enrollment update in 2014. Management has also indicated intent to announce a third product potentially in the near term. These 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 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 pipeline, we believe that the advancing clinical program could expand the company's EV. 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 experience valuation expansion to \$18 based on the advancement of candidates in clinical trials.

Exhibit 1: Peer Valuation Analysis

Sub Sector	Company	Ticker	Price	S/O	Mkt Cap	Pfd Shares	Min Int.	Debt	Cash	EV	HTBX Premium (Discount)
Cancer Vaccine Developers	Advaxis	ADXSD	\$4.90	14.02	\$68.68	\$0.00	\$0.00	\$0.23	\$20.55	48.35	(80.7%)
	Agenus	AGEN	4.30	62.17	267.34	0.00	0.00	0.00	27.35	239.99	(96.1%)
	Celldex Therapeutics	CLDX	24.6	89.25	2,191.1	0.00	0.00	0.00	302.98	1,888.15	(99.5%)
	Galena Biopharma	GALE	3.08	117.88	363.07	0.00	0.00	9.92	47.99	325.00	(97.1%)
	Immunocellular	IMUC	1.36	57.57	78.29	0.00	0.00	0.00	27.65	50.64	(81.6%)
	Inovio	INO	3.82	239.61	915.31	0.00	0.45	0.00	52.63	863.13	(98.9%)
	Newlink Genetics	NLNK	29.54	27.86	823.01	0.00	0.00	7.03	61.54	768.51	(98.8%)
	Oncothyreon	ONTY	3.60	70.73	254.63	0.03	0.00	0.00	60.03	194.63	(95.2%)
	Average									547.30	(98.3%)
Phase II Development Stage	Clovis	CLVS	\$86.76	33.9	\$2,941.16	\$0.00	\$0.00	\$0.00	\$323.23	2,617.94	(99.6%)
	Cytrx	CYTR	4.05	55.56	225.03	0.00	0.00	0.00	38.57	186.47	(95.0%)
	Epizyme	EPZM	27.40	32.75	897.4	0.00	0.00	0.00	123.56	773.79	(98.8%)
	Infinity Pharma	INFI	13.93	48.28	672.55	0.00	0.00	0.00	214.47	458.09	(98.0%)
	Oncomed	OMED	36.02	29.48	1,061.87	0.00	0.00	0.00	128.65	933.22	(99.0%)
	Oncosec	ONCS	0.81	212.21	171.89	0.00	0.00	0.99	15.19	157.68	(94.1%)
	Verastem	VSTM	12.59	25.82	325.11	0.00	0.00	0.00	99.93	225.18	(95.9%)
	Coronado Biosciences	CNDO	2.12	44.09	93.46	0.00	0.00	14.87	106.27	2.06	351.2%
	Progenics	PGNX	4.56	69.58	317.26	0.00	0.00	0.00	65.86	251.40	(96.3%)
	Average									622.87	(98.5%)
Recent IPOs	Tesaro Inc.	TSRO	\$37.15	35.97	1,336.07	0.00	0.00	0.00	130.31	1,205.76	(99.2%)
	Epizyme	EPZM	27.40	32.75	897.4	0.00	0.00	0.00	123.56	773.79	(98.8%)
	BlueBird Bio	BLUE	27.30	24.17	659.84	0.00	0.00	0.00	206.28	453.56	(97.9%)
	Merrimack Pharmaceuticals	MACK	5.61	103.04	578.04	0.00	0.00	0.00	155.20	422.84	(97.8%)
	Intercept Pharmaceuticals	ICPT	438.96	19.52	8,568.50	0.00	0.00	0.00	144.91	8,423.59	(99.9%)
	ChemoCentryx	CCXI	8.22	43.15	354.68	0.00	0.00	0.02	149.87	204.82	(95.5%)
	Regulus Therapeutics	RGLS	10.48	43.17	452.40	0.00	0.00	11.28	114.01	349.67	(97.3%)
	Receptos	RCPT	52.80	22.17	1,170.47	0.00	0.00	4.92	69.49	1,105.90	(99.2%)
	Stemline Therapeutics	STML	24.76	12.91	319.55	0.00	0.00	0.00	87.67	231.89	(96.0%)
	Enanta Pharmaceuticals	ENTA	39.72	18.36	729.38	0.00	0.00	0.00	91.90	637.48	(98.5%)
	Average									\$1,380.93	(99.3%)
	Heat Biologics*	HTBX	\$6.84	4.84	33.11	0.00	(0.22)	0.00	23.58	9.31	(98.7%)

Source: FactSet, Company data, Cantor Fitzgerald research

Risks

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

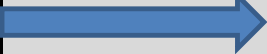
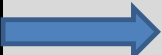



- HS-110 could fail to show an efficacy improvement in its Phase II study in NSCLC. The company uses an off-the-shelf supply of tumor cells, and it is unclear whether or not these cells can stimulate an immune response against the patient's own tumor.
- HS-110 could also demonstrate a poor safety profile. 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 2: Annual Sales and Earnings
Heat Biologics

<i>Exhibit 3: Pipeline and Milestones</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	2.12
R&D	14.18	12.23	9.94	7.65	6.32	4.21
Total Operating Expenses	21.29	19.10	16.23	13.16	11.29	6.34
Profit (Loss) from Operations	(\$21.29)	(\$19.10)	(\$16.23)	(\$13.16)	(\$11.29)	(\$6.34)
<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)	(0.15)
Other Income (Expense)	0.03	0.07	0.11	0.10	(0.12)	(0.04)
Income (Loss) from Continuing Operations	(\$21.34)	(\$19.09)	(\$16.25)	(\$13.18)	(\$11.47)	(\$6.53)
<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)	(\$21.34)	(\$19.09)	(\$16.25)	(\$13.18)	(\$11.47)	(\$6.53)
Non-controlling Interest	(\$1.60)	(\$1.43)	(\$1.22)	(\$0.99)	(\$0.68)	(\$0.29)
Net Income to Heat Biologics	(\$19.74)	(\$17.66)	(\$15.03)	(\$12.19)	(\$10.79)	(\$6.23)
Beneficial Conversion Charge	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	(\$2.66)
Net Attributable to Common Shareholders	(\$19.74)	(\$17.66)	(\$15.03)	(\$12.19)	(\$10.79)	(\$8.90)
<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	(\$1.86)	(\$2.06)	(\$1.83)	(\$2.20)	(\$2.02)	(\$2.59)
<i>Shares Outstanding</i>	10.64	8.56	8.23	5.55	5.34	3.43

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	3Q:14
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					Completion of enrollment	2H:14/1H:15
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
HS-210	Pancreatic						Initiate Phase I/II study	NA

Source: Heat Biologics, Cantor Fitzgerald research

Exhibit 4: Comparative Valuations

Biotechnology	Mara Goldstein - 212.610.2215
Cantor Fitzgerald	mgoldstein@cantor.com

Mkt Cap. Range	Company (a)	Ticker	Rating	Price 3/20/14	Market Cap. (mil)	52-Week High Low		Performance (b)			Earnings Per Share (c)			Revenue Per Share (c)			Per Share Cash	EV (mil)	Short Interest	
Small Cap	Agenus	AGEN	NC	\$4.30	\$267.3	\$5.40	\$2.40	54.7%	54.7%	3.4%	(\$0.51)	(\$1.12)	(\$0.47)	\$0.26	\$0.05	\$0.03	\$0.44	\$249.3	3,185,877	
	Ambit	AMBI	NC	10.36	185.2	21.44	6.22	4.8%	4.8%	NA	(16.59)	(1.25)	(1.96)	1.00	1.45	0.42	4.41	106.3	94,249	
	Cleveland BioLabs	CBLI	HOLD	0.72	36.7	2.28	0.63	-39.0%	-39.0%	-59.1%	(0.70)	(0.44)	(0.16)	0.07	0.17	0.23	0.29	40.7	780,373	
	Curis	CRIS	NC	3.20	275.0	4.74	2.44	11.5%	11.5%	-2.1%	(0.21)	(0.15)	(0.24)	0.20	0.17	0.15	0.80	236.5	5,405,116	
	Cyclacel	CYCC	NC	3.84	71.8	5.88	2.75	-7.9%	-7.9%	-33.2%	(1.68)	(1.47)	(1.12)	0.00	0.05	0.00	1.85	37.3	1,846,236	
	Dendreon	DNDN	HOLD	2.98	473.7	5.38	2.23	-2.0%	-2.0%	-43.5%	(2.65)	(1.95)	(0.93)	2.05	1.78	1.88	1.05	910.7	44,138,633	
	Endocyte	ECYT	NC	14.25	515.6	19.00	8.18	32.2%	32.2%	50.8%	(0.48)	(0.50)	(0.36)	0.96	1.79	2.07	-	515.6	4,992,974	
	Galena Biopharma	GALE	SELL	3.08	363.1	7.77	1.65	-39.4%	-39.4%	57.5%	(0.53)	(0.85)	(0.40)	0.00	0.02	0.11	0.40	323.3	22,580,151	
	Heat Biologics	HTBX	BUY	6.84	43.6	15.29	5.95	-6.3%	-6.3%	NA	NA	(2.37)	(1.62)	0.00	0.00	NA	3.70	19.8	149,648	
	ImmunoCellular	IMUC	NC	1.36	78.3	4.00	0.65	38.8%	38.8%	-49.1%	(0.35)	(0.16)	(0.25)	0.00	0.00	0.00	0.51	48.9	4,789,434	
	Merrimack Pharm.	MACK	NC	5.61	578.0	7.09	2.05	0.4%	0.4%	-8.8%	(1.28)	(1.32)	(1.19)	0.47	0.46	0.52	1.51	422.8	20,467,088	
	NewLink Genetics	NLKN	BUY	29.54	823.0	53.48	11.19	38.2%	38.2%	139.4%	(1.12)	(1.23)	(1.75)	0.06	0.04	0.05	1.87	778.1	3,884,390	
	Oncomed	OMED	NC	36.02	1,061.9	42.34	12.07	22.9%	22.9%	NA	(21.06)	(1.93)	0.01	0.84	1.28	2.84	1.92	1005.4	2,048,802	
	Oncothyreon	ONTY	HOLD	3.60	254.6	4.08	1.55	97.8%	97.8%	63.6%	(0.06)	(0.62)	(0.52)	0.00	0.00	0.00	0.87	193.3	6,127,628	
	Stemline	STML	NC	24.76	319.6	47.25	11.00	21.7%	21.7%	113.3%	(1.82)	(2.00)	(2.17)	0.00	0.00	0.00	7.18	226.9	672,992	
	Sunesis Pharma	SNSS	BUY	7.21	433.3	7.49	3.84	54.7%	54.7%	35.8%	(0.91)	(0.66)	(0.62)	0.06	0.13	0.13	1.33	362.8	6,965,921	
	Synta	SNTA	NC	4.75	405.8	10.74	3.70	-9.7%	-9.7%	-45.3%	(1.06)	(1.27)	(1.18)	0.00	0.00	0.00	0.62	352.4	14,570,786	
	Verastem	VSTM	BUY	12.59	325.1	18.82	8.27	0.9%	0.9%	41.3%	(1.70)	(1.82)	(1.79)	0.00	0.00	0.00	2.22	267.7	1,419,075	
Average				\$361.8				15.2%	15.2%	17.6%	(\$3.10)	(\$1.17)	(\$0.93)	\$0.33	\$0.41	\$0.50	\$1.72	\$338.8	8,006,632	
Mid Cap	Agios Pharmaceuticals	AGIO	NC	\$44.10	\$1,393.12	\$49.79	\$15.77	83.6%	83.6%	NA	(\$1.11)	(\$2.83)	(\$1.32)	\$0.79	\$0.81	\$1.21	\$6.14	\$1,199.2	2,174,447	
	Ariad	ARIA	NC	8.19	1,526.0	23.00	2.15	12.8%	12.8%	-60.8%	(1.34)	(1.49)	(1.08)	0.00	0.24	0.48	1.27	1297.9	40,167,501	
	Array Biopharma	ARRY	NC	5.28	662.4	7.10	4.03	7.1%	7.1%	29.4%	(0.33)	(0.57)	(0.69)	0.68	0.55	0.40	0.95	644.2	13,330,515	
	Celldex	CLDX	BUY	24.55	2,191.1	38.84	10.70	-0.2%	-0.2%	107.7%	(1.02)	(1.02)	(1.10)	0.13	0.05	0.01	1.53	2054.5	10,559,870	
	Clovis Oncology	CLVS	NC	86.76	2,941.2	93.33	27.15	46.6%	46.6%	214.1%	(2.97)	(2.95)	(3.92)	0.00	0.00	0.00	9.53	2617.9	1,323,463	
	Epizyme	EPZM	NC	27.40	897.4	45.72	18.10	35.2%	35.2%	NA	(0.72)	(0.22)	(1.48)	1.38	2.09	1.29	3.77	773.8	2,185,492	
	Exelixis	EXEL	NC	6.40	1,245.5	8.41	4.33	3.6%	3.6%	37.9%	(0.92)	(1.33)	(1.50)	0.24	0.16	0.13	-	1245.5	48,778,974	
	Immunogen (d)	IMGN	HOLD	16.52	1,415.3	20.25	12.55	10.3%	10.3%	2.9%	(0.95)	(0.87)	(0.72)	0.19	0.41	0.88	2.04	1240.2	8,921,461	
	Incyte	INCY	NC	64.84	10,733.4	70.86	18.23	26.6%	26.6%	187.8%	(0.34)	(0.56)	(0.48)	1.79	2.14	2.88	3.08	10885.5	6,270,549	
	Infinity Pharm	INFI	NC	13.93	672.6	50.40	11.30	3.6%	3.6%	-70.2%	(1.70)	(2.64)	(3.41)	0.98	0.00	0.01	4.44	458.1	3,816,129	
	Medivation	MDVN	NC	69.84	5,331.2	88.20	41.89	10.1%	10.1%	54.0%	(0.56)	(0.57)	0.80	2.38	3.58	7.10	3.00	5310.8	3,471,810	
	Pharmacylics	PCYC	NC	122.61	9,169.8	154.89	71.85	13.1%	13.1%	41.5%	0.17	0.87	0.16	1.10	3.48	5.63	8.50	8534.1	1,479,588	
	Seattle Genetics	SGEN	SELL	53.57	6,588.2	55.99	28.15	33.3%	33.3%	61.9%	(0.46)	(0.51)	(0.96)	1.71	2.19	1.88	3.04	6214.4	16,682,794	
	Average				\$3,443.6				22.0%	22.0%	55.1%	(\$0.94)	(\$1.13)	(\$1.21)	\$0.88	\$1.21	\$1.68	\$3.64	\$3,267.4	12,243,276
	Large Cap	Alexion	ALXN	NC	\$175.92	\$34,802.25	\$185.43	\$87.01	31.8%	31.8%	89.7%	\$2.13	\$3.08	\$4.51	\$5.73	\$7.84	\$10.78	\$7.66	\$33,400.4	3,313,164
Amgen		AMGN	NC	126.58	95,568.8	127.99	92.88	9.3%	9.3%	37.0%	6.51	7.60	8.15	22.87	24.74	25.99	25.70	108,295.8	10,152,742	
Biogen Idec		BIIB	NC	350.01	82,740.3	358.89	175.63	24.9%	24.9%	99.3%	6.53	8.96	11.33	23.34	29.32	36.39	5.17	82,114.1	2,981,895	
Celgene		CELG	BUY	150.84	61,244.1	174.66	110.53	-12.3%	-12.3%	35.8%	4.91	5.96	7.28	13.56	15.99	18.71	14.40	60,138.1	4,575,942	
Gilead		GILD	NC	76.54	117,736.1	84.88	44.26	1.8%	1.8%	72.5%	1.95	2.04	3.79	6.31	7.28	10.68	1.39	122,679.6	87,601,619	
Regeneron		REGN	NC	329.33	32,244.0	352.49	168.20	19.9%	19.9%	87.9%	6.75	8.17	9.83	14.08	21.50	27.23	7.09	32,055.6	3,864,178	
Vertex		VRTX	NC	77.80	18,343.1	89.96	51.28	5.4%	5.4%	49.9%	(0.50)	(1.98)	(2.37)	6.48	5.14	2.52	6.21	17,384.6	5,221,248	
Average				\$63,239.8				11.5%	11.5%	67.4%	\$4.04	\$4.83	\$6.07	\$13.19	\$15.97	\$18.90	\$9.66	\$39,987.7	16,815,827	
Indices	S&P 500	SP50	NA	1,860.8		1,883.57	1,536.03	1.6%	1.6%	20.2%	103.3	NA	119.1	NA	NA	1,176.5				
	Dow Jones Ind	DJII	NA	16,222.2		16,588.25	14,363.94	-1.3%	-1.3%	12.2%	1,042.2	NA	1,118.4	NA	NA	9,874.1				
	NASDAQ Comp	COMP	NA	4,307.6		4,371.71	3,154.96	4.0%	4.0%	33.4%	179.7	NA	208.2	NA	NA	2,116.1				
	Amex Biotech Index	BTX	NA	2,806.6		2,963.54	1,763.02	19.8%	19.8%	58.1%	72.5	NA	103.5	NA	NA	352.1				
NASDAQ Biotech	NBI	NA	2,711.9		2,872.29	1,611.11	14.3%	14.3%	67.9%	47.7	NA	75.4	NA	NA	356.7					
Mkt Cap. Range	Company	Ticker	Rating	Price Change From High Low		P/E 2012A 2013E 2014E			Price/Sales 2012A 2013E 2014E			Price/Debt BV			EV/FCF Sales BV					
Mid	Medivation	MDVN	NC	-20.8%	66.7%	NA	NA	86.8	29.34	19.53	9.84	23.30	25.58	68.80	(282.6)	(122.1)	NA	29.2	68.5	
Large	Alexion	ALXN	NC	-5.1%	102.2%	82.6	57.1	39.0	30.69	22.43	16.32	22.97	307.98	0.31	59.3	54.8	85.9	29.5	0.3	
Large	Amgen	AMGN	NC	-1.1%	36.3%	19.4	16.7	15.5	5.54	5.12	4.87	4.93	2.97	4.32	192.1	18.9	25.9	6.3	4.9	
Large	Biogen Idec	BIIB	NC	-2.5%	99.3%	53.6	39.1	30.9	15.00	11.94	9.62	67.67	138.84	NA	27.1	38.8	50.5	14.9	NA	
Large	Celgene	CELG	BUY	-13.6%	36.5%	30.7	25.3	20.7	11.12	9.43	8.06	10.47	12.92	11.06	25.7	24.9	31.5	10.9	10.9	
Large	Gilead	GILD	NC	-9.8%	72.9%	39.3	37.5	20.2	12.13	10.51	7.17	55.23	NM	10.33	24.8	39.1	43.9	12.6	10.8	
Large	Regeneron	REGN	NC	-6.6%	95.8%	48.8	40.3	33.5	23.39	15.32	12.09	46.46	63.78	25.73	40.0	40.1	NA	23.3	25.6	
Large	Vertex	VRTX	NC	-13.5%	51.7%	NA	NA	NA	12.01	15.13	30.89	12.52	36.21	16.92	(115.1)	(37.2)	88.4	11.4	NA	
	Large Cap Only					45.7	36.0	22.8	15.7	12.8	12.7	\$31.47	\$50.95	20.09	10.2	25.6	54.3	15.5	20.2	

(a) All companies listed on NASDAQ

(b) NA values returned for public companies with less than one year trading history. Figures reflect most current available time period.

(c) 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.

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 allogeneic, "off the shelf" vaccine.

Companies Mentioned:

Advaxis, Inc. (ADXS - OTC BB): NC
Agenus Inc. (AGEN - NASDAQ): NC
Agiros Pharmaceuticals, Inc. (AGIO - NASDAQ): NC
Alexion Pharmaceuticals Inc. (ALXN - NASDAQ): NC
Ambit Biosciences Corporation (AMBI - NASDAQ): NC
Amgen Inc. (AMGN - NASDAQ): NC
Ariad Pharmaceuticals Inc. (ARIA - NASDAQ): NC
Array BioPharma, Inc. (ARRY - NASDAQ): NC
Biogen Idec (BIIB - NASDAQ): NC
bluebird bio, Inc. (BLUE - NASDAQ): NC
Celgene Corporation (CELG - NASDAQ): BUY
Celldex Therapeutics, Inc. (CLDX - NASDAQ): BUY
ChemoCentryx Inc. (CCXI - NASDAQ): NC
Cleveland BioLabs, Inc. (CBLI - NASDAQ): HOLD
Clovis Oncology Inc. (CLVS - NASDAQ): NC
Coronado Biosciences Inc. (CNDO - NASDAQ): NC
Curis Inc. (CRIS - NASDAQ): NC
Cyclacel Pharmaceuticals, Inc. (CYCC - NASDAQ): NC
CytRx Corporation (CYTR - NASDAQ): NC
Dendreon Corporation (DNDN - NASDAQ): HOLD
Enanta Pharmaceuticals, Inc. (ENTA - NASDAQ): NC
Endocyte Inc. (ECYT - NASDAQ): NC
Epizyme, Inc. (EPZM - NASDAQ): NC
Exelixis Inc. (EXEL - NASDAQ): NC
Galena Biopharma (GALE - NASDAQ): SELL
Gilead Sciences Inc. (GILD - NASDAQ): NC
Heat Biologics, Inc. (HTBX - NASDAQ): BUY
ImmunoCellular Therapeutics Ltd. (IMUC - NASDAQ): NC
ImmunoGen, Inc. (IMGN - NASDAQ): HOLD
Incyte Corporation (INCY - NASDAQ): NC
Infinity Pharmaceuticals, Inc. (INFI - NASDAQ): NC
Inovio Pharmaceuticals, Inc. (INO - NYSE): NC
Intercept Pharmaceuticals, Inc. (ICPT - NASDAQ): NC
Medivation Inc. (MDVN - NASDAQ): NC
Merrimack Pharmaceuticals Inc. (MACK - NASDAQ): NC
NewLink Genetics Corporation (NLNK - NASDAQ): BUY
OncoMed Pharmaceuticals, Inc. (OMED - NASDAQ): NC
OncoSec Medical Inc. (ONCS - NASDAQ): NC
Oncothyreon Inc. (ONTY - NASDAQ): HOLD
Pharmacyclics Inc. (PCYC - NASDAQ): NC
Progenics Pharmaceuticals, Inc. (PGNX - NASDAQ): NC
Receptos, Inc. (RCPT - NASDAQ): NC
Regeneron Pharmaceuticals Inc. (REGN - NASDAQ): NC
Regulus Therapeutics Inc. (RGLS - NASDAQ): NC
Seattle Genetics, Inc. (SGEN - NASDAQ): SELL
Stemline Therapeutics, Inc. (STML - NASDAQ): NC
Sunesis Pharmaceuticals, Inc. (SNSS - NASDAQ): BUY
Synta Pharmaceuticals Corp. (SNTA - NASDAQ): NC
Tesarro, Inc. (TSRO - NASDAQ): NC
Verastem, Inc. (VSTM - NASDAQ): BUY
Vertex Pharmaceuticals Inc. (VRTX - NASDAQ): NC
Lonza (private)

Disclosures Appendix

Analyst Certification

The analyst primarily responsible for this research report, and whose name appears on the front cover, certifies that: (i) all of the views expressed in this research report accurately reflects his or her personal views about any and all of the subject securities or issuers featured in this report; and (ii) no part of any of the research analyst's compensation was, is, or will be, directly or indirectly related to the specific recommendations or views expressed by the research analyst in this report.

Legal Disclosures

For important disclosures on companies mentioned in this report, please contact the Cantor Fitzgerald Research Department at 110 East 59th Street, New York, NY 10022, or refer to this website:

<https://cantor2.bluematrix.com/sellside/Disclosures.action>

Cantor Fitzgerald's rating system

BUY: We have a positive outlook on the stock based on our expected 12 month return relative to its risk. The expected return is based on our view of the company and industry fundamentals, catalysts, and valuation. We recommend investors add to their position.

HOLD: We have a neutral outlook on the stock based on our expected 12 month return relative to its risk. The expected return is based on our view of the company and industry fundamentals, catalysts, and valuation.

SELL: We have a negative outlook on the stock based on our expected 12 month return relative to its risk. The expected return is based on our view of the company and industry fundamentals, catalysts, and valuation. We recommend investors reduce their position.

NC: Not Covered. Cantor Fitzgerald does not provide an investment opinion or does not provide research coverage on this stock.

Prior to September 12, 2006, Cantor Fitzgerald had the below ratings:

BUY - denotes stocks that we expect will provide a total return (price appreciation plus yield) of 15% or more over a 12-month period. A BUY rated stock is expected to outperform the total average return of analyst's industry coverage universe on a risk adjusted basis.

HOLD - denotes stocks that we suggest will provide a total return or total negative return of up to 15% over 12-month period. A HOLD rated stock is expected to perform in-line with the total average return of the analyst's industry coverage universe on a risk adjusted basis.

SELL - denotes stocks that we expect to provide a total negative return of more than 15% over a 12 month period. A SELL rated stock is expected to underperform the total average return of the analyst's industry coverage universe on a risk adjusted basis.

NC - Not Covered. Cantor Fitzgerald does not provide research coverage on this company.

Other Disclosures

This report is for informational purposes only and is based on publicly available data believed to be reliable, but no representation is made that such data are accurate or complete. Opinions and projections contained herein reflect our opinion as of the date of this report and are subject to change. Pursuant to Cantor Fitzgerald's policy, the author of this report does not own shares in any company he/she covers.

Disclosures for UK investors

This material is approved for distribution in the United Kingdom by Cantor Fitzgerald Europe ("CFE"). CFE is authorised and regulated by the Financial Conduct Authority ("FCA"). While we believe this information and the materials upon which this information was based is accurate, except for any obligations under the rules of the FCA, we do not guarantee its accuracy. This material is only intended for use by eligible counterparties or professional clients who fall within articles 19 or 49 of the Financial Services and Markets Act 2000 (Financial Promotion) Order 2001 and not the general investing public. None of the investments or investment services mentioned or described herein are available to other persons in the U.K and in particular are not available to "retail clients" as defined by the rules of the FCA.

Disclosure for Canadian Institutional Investors

This research report was prepared by analysts of Cantor Fitzgerald & Co. and not by Cantor Fitzgerald Canada Corporation. As a result, this report has not been prepared subject to Canadian Disclosure requirements. Cantor Fitzgerald Canada may distribute research reports prepared by its affiliates.

Risks

The financial instruments discussed in this report may not be suitable for all investors and investors must make their own investment decisions based on their specific investment objectives. Past performance should not be taken as an indication or guarantee of future performance. The price, value of and income from, any of the financial instruments featured in this report can rise as well as fall and be affected by changes in economic, financial and political factors. If a financial instrument is denominated in a currency other than the investor's currency, a change in exchange rates may adversely affect the price or value of, or income derived from, the financial instrument, and such investors effectively assume currency risk. In addition, investors in securities such as ADRs, whose value is affected by the currency of the home market of the underlying security, effectively assume currency risk.

Distribution of Ratings/Investment Banking Services (IB) as of 03/21/14

Rating	Cantor		IB Serv./Past 12 Mos.	
	Count	Percent	Count	Percent
BUY [B]	74	52.11	18	24.32
HOLD [H]	57	40.14	8	14.04
SELL [S]	11	7.75	1	9.09

