

Equity Research

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Heat Biologics, Inc. (HTBX-\$6.69)

Rating: BUY

Target Price: \$18.00

Year-End Numbers In; Waiting for Data and Corporate Events - Maintain BUY

| <u>EPS</u> | <u>1Q</u> | <u>2Q</u> | <u>3Q</u> | <u>4Q</u> |
|--------------|--------------|--------------|--------------|-----------|
| 2013E | (1.66)A | (0.92)A | (0.48)A | (0.31)A |
| <i>Prev</i> | — | — | — | (0.36)E |
| 2014E | (0.38)E | (0.37)E | (0.39)E | (0.40)E |
| <i>Prev</i> | (0.51)E | (0.48)E | (0.51)E | (0.52)E |
| 2015E | — | — | — | — |
| <u>REV</u> | <u>1Q</u> | <u>2Q</u> | <u>3Q</u> | <u>4Q</u> |
| 2013E | 0.0A | 0.0A | 0.0A | 0.0E |
| 2014E | 0.0E | 0.0E | 0.0E | 0.0E |
| 2015E | — | — | — | — |
| <u>FY</u> | <u>2013E</u> | <u>2014E</u> | <u>2015E</u> | |
| EPS | (2.42)E | (1.54)E | (1.68)E | |
| <i>Prev</i> | (2.59)E | (2.02)E | (2.20)E | |
| REV | 0.0E | 0.0E | 0.0E | |

- **Updating for 2013 Year End.** Heat Biologics ("Heat") filed its first 10-K as a public company, providing 2013 actual figures. As with many development-stage companies, Heat does not have revenues, so the numbers in the 10-K reflect the company's expenses for the year. As we had anticipated, G&A and R&D rose slightly in 4Q:13, with EPS for the quarter coming in at (\$0.31) versus our forecast of (\$0.36), largely due to a larger-than-forecasted share base. We are also adjusting our 2014 EPS forecast to (\$1.54) from (\$2.02) to reflect the larger share base.
- **Recent Update.** Earlier in March, Heat outlined its Phase II trial design for HS-110, an immunotherapeutic treatment for non-small cell lung cancer (NSCLC). The original trial protocol was amended to incorporate changes in clinical practice, namely the availability of checkpoint inhibitors, which we think is a smart move given the potential for change in treatment practice over the next few years.
- **Data Points over the Next Few Years.** 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. We think the study is well thought out and that 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. HS-410, in Phase I/II for bladder cancer, with Phase I immune response and safety data likely available in 2015.
- **Looking for Partners.** Heat has announced intention to partner development and/or commercialization of HS-110 and HS-410. 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. The shares, we believe, have been weak due to limited visibility on clinical programs and a very modest float, but we look for meaningful price appreciation as candidates advance through trials. Additionally, the shares are trading at just about 2x cash, which is a multiple typically reserved for shares in distress, and we believe that is not the case with Heat. Our price target is \$18.

Current Statistics

| | |
|---|-----------------------|
| Market Cap (\$Mil) | \$43.2 |
| Avg. Daily Trading Volume (3 mo.): | 22,035 |
| Shares Out (Mil): | 6.452 |
| 52 Wk. Range | \$15.29-\$5.95 |

The Disclosure Section may be found on pages 8 - 10.

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 | \$3.13 | 14.32 | \$44.83 | \$0.00 | \$0.00 | \$0.23 | \$20.55 | 24.50 | (64.6%) |
| | Agenus | AGEN | 3.22 | 62.17 | 200.20 | 0.00 | 0.00 | 0.00 | 27.35 | 172.85 | (95.0%) |
| | Celldex Therapeutics | CLDX | 17.0 | 89.25 | 1,512.8 | 0.00 | 0.00 | 0.00 | 302.98 | 1,209.84 | (99.3%) |
| | Calena Biopharma | GALE | 2.22 | 117.88 | 261.69 | 0.00 | 0.00 | 9.92 | 47.99 | 223.63 | (96.1%) |
| | Immunocellular | IMUC | 1.19 | 57.57 | 68.50 | 0.00 | 0.00 | 0.00 | 27.65 | 40.86 | (78.8%) |
| | Inovio | INO | 3.28 | 240.15 | 787.68 | 0.00 | 0.45 | 0.00 | 52.63 | 735.50 | (98.8%) |
| | Newlink Genetics | NLNK | 25.83 | 27.86 | 719.65 | 0.00 | 0.00 | 7.22 | 61.54 | 665.33 | (98.7%) |
| | Oncothyreon | ONTY | 2.88 | 70.73 | 203.71 | 0.03 | 0.00 | 0.00 | 60.03 | 143.71 | (94.0%) |
| | Average | | | | | | | | | 402.03 | (97.8%) |
| Phase II Development Stage | Clovis | CLVS | \$70.33 | 33.9 | \$2,384.19 | \$0.00 | \$0.00 | \$0.00 | \$323.23 | 2,060.96 | (99.6%) |
| | Cytrx | CYTR | 3.43 | 55.56 | 190.58 | 0.00 | 0.00 | 0.00 | 38.57 | 152.02 | (94.3%) |
| | Epizyme | EPZM | 22.93 | 32.75 | 751.0 | 0.00 | 0.00 | 0.00 | 123.56 | 627.39 | (98.6%) |
| | Infinity Pharma | INFI | 12.02 | 48.28 | 580.34 | 0.00 | 0.00 | 13.12 | 213.89 | 379.57 | (97.7%) |
| | Oncomed | OMED | 29.04 | 29.48 | 856.10 | 0.00 | 0.00 | 0.00 | 128.65 | 727.45 | (98.8%) |
| | Oncosec | ONCS | 0.76 | 212.21 | 161.28 | 0.00 | 0.00 | 0.00 | 18.45 | 142.83 | (93.9%) |
| | Verastem | VSTM | 10.36 | 25.82 | 267.53 | 0.00 | 0.00 | 0.00 | 101.40 | 166.13 | (94.8%) |
| | Coronado Biosciences | CNDO | 1.97 | 44.09 | 86.85 | 0.00 | 0.00 | 14.87 | 106.27 | (4.55) | (290.8%) |
| | Progenics | PGNX | 3.79 | 69.58 | 263.69 | 0.00 | 0.00 | 0.00 | 65.86 | 197.83 | (95.6%) |
| | Average | | | | | | | | | 494.40 | (98.2%) |
| Recent IPOs | Tesaro Inc. | TSRO | \$28.53 | 35.97 | 1,026.20 | 0.00 | 0.00 | 0.00 | 130.31 | 895.89 | (99.0%) |
| | Epizyme | EPZM | 22.93 | 32.75 | 751.0 | 0.00 | 0.00 | 0.00 | 123.56 | 627.39 | (98.6%) |
| | BlueBird Bio | BLUE | 22.32 | 24.17 | 539.47 | 0.00 | 0.00 | 0.00 | 206.28 | 333.20 | (97.4%) |
| | Merrimack Pharmaceuticals | MACK | 5.06 | 103.04 | 521.37 | 0.00 | 0.34 | 111.68 | 155.30 | 478.08 | (98.2%) |
| | Intercept Pharmaceuticals | ICPT | 317.58 | 19.52 | 6,199.16 | 0.00 | 0.00 | 0.00 | 144.91 | 6,054.25 | (99.9%) |
| | ChemoCentryx | CCXI | 6.54 | 43.15 | 282.19 | 0.00 | 0.00 | 0.33 | 133.31 | 149.20 | (94.2%) |
| | Regulus Therapeutics | RGLS | 8.14 | 43.17 | 351.39 | 0.00 | 0.00 | 11.28 | 114.01 | 248.66 | (96.5%) |
| | Receptos | RCPT | 39.63 | 22.17 | 878.52 | 0.00 | 0.00 | 4.92 | 69.49 | 813.94 | (98.9%) |
| | Stemline Therapeutics | STML | 19.26 | 12.91 | 248.57 | 0.00 | 0.00 | 0.00 | 87.67 | 160.90 | (94.6%) |
| | Enanta Pharmaceuticals | ENTA | 38.52 | 18.36 | 707.34 | 0.00 | 0.00 | 0.00 | 91.90 | 615.45 | (98.6%) |
| | Average | | | | | | | | | \$1,037.70 | (99.2%) |
| | | | | | | | | | | | |
| | Heat Biologics* | HTBX | \$6.71 | 4.84 | 32.48 | 0.00 | (0.22) | 0.00 | 23.58 | 8.68 | (98.4%) |

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: Sales and Earnings by Quarter
Heat Biologics

| <i>All figures in millions</i> | 2014E | 4Q14E | 9Mos14E | 3Q14E | 6Mos14E | 2Q14E | 1Q14E | CY2013A | 4Q2013A | 9Mos13A | 3Q13A | 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 |
| Gross Profit Margin | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM |
| Operating Expenses | | | | | | | | | | | | | | |
| SG&A | 4.97 | 1.20 | 3.77 | 1.39 | 2.38 | 1.16 | 1.22 | 2.43 | 0.99 | 1.44 | 0.74 | 0.71 | 0.44 | 0.27 |
| R&D | 6.23 | 1.74 | 4.49 | 1.59 | 2.90 | 1.51 | 1.39 | 4.13 | 1.27 | 2.87 | 1.22 | 1.64 | 1.14 | 0.50 |
| Total Operating Expenses | 11.20 | 2.94 | 8.26 | 2.98 | 5.28 | 2.67 | 2.61 | 6.56 | 2.25 | 4.31 | 1.96 | 2.35 | 1.58 | 0.77 |
| Profit (Loss) from Operations | (\$11.20) | (\$2.94) | (\$8.26) | (\$2.98) | (\$5.28) | (\$2.67) | (\$2.61) | (\$6.56) | (\$2.25) | (\$4.31) | (\$1.96) | (\$2.35) | (\$1.58) | (\$0.77) |
| Operating Profit Margin | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM |
| Interest Income (Expense) | (0.06) | (0.04) | (0.02) | 0.05 | (0.07) | (0.04) | (0.03) | (0.07) | 0.04 | (0.11) | (0.05) | (0.06) | (0.03) | (0.03) |
| Other Income (Expense) | (0.12) | (0.02) | (0.10) | (0.03) | (0.07) | (0.06) | (0.01) | 0.02 | 0.10 | (0.08) | (0.03) | (0.05) | (0.06) | 0.01 |
| Income (Loss) from Continuing Operations | (\$11.38) | (\$3.00) | (\$8.38) | (\$2.96) | (\$5.42) | (\$2.77) | (\$2.65) | (\$6.61) | (\$2.11) | (\$4.50) | (\$2.03) | (\$2.46) | (\$1.67) | (\$0.79) |
| Pretax Margin | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM |
| 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) | (\$11.38) | (\$3.00) | (\$8.38) | (\$2.96) | (\$5.42) | (\$2.77) | (\$2.65) | (\$6.61) | (\$2.11) | (\$4.50) | (\$2.03) | (\$2.46) | (\$1.67) | (\$0.79) |
| Non-controlling Interest | (\$0.68) | (\$0.23) | (\$0.45) | (\$0.22) | (\$0.23) | (\$0.21) | (\$0.02) | (\$0.20) | (\$0.06) | (\$0.14) | (\$0.06) | (\$0.08) | (\$0.05) | (\$0.02) |
| Net Income to Heat Biologics (Loss) | (\$10.70) | (\$2.78) | (\$7.93) | (\$2.74) | (\$5.19) | (\$2.56) | (\$2.63) | (\$6.41) | (\$2.06) | (\$4.36) | (\$1.97) | (\$2.38) | (\$1.62) | (\$0.76) |
| Beneficial Conversion Charge/Pfd stock dividend* | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | (\$2.66) | \$0.00 | (\$2.66) | (\$0.36) | (\$2.30) | \$0.00 | (\$2.30) |
| Net Attributable to Common Shareholders | (\$10.70) | (\$2.78) | (\$7.93) | (\$2.74) | (\$5.19) | (\$2.56) | (\$2.63) | (\$9.07) | (\$2.06) | (\$7.02) | (\$2.3) | (\$4.68) | (\$1.6) | (\$3.1) |
| Net Margin | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM |
| Basic & Diluted Net Loss Per Share | (\$1.54) | (\$0.40) | (\$1.15) | (\$0.39) | (\$0.75) | (\$0.37) | (\$0.38) | (\$2.42) | (\$0.31) | (\$2.49) | (\$0.48) | (\$2.59) | (\$0.92) | (\$1.66) |
| Shares Outstanding | 6.93 | 6.98 | 6.91 | 6.95 | 6.90 | 6.92 | 6.87 | 3.75 | 6.53 | 2.82 | 4.84 | 1.81 | 1.76 | 1.86 |

Source: Heat Biologics, Cantor Fitzgerald research

Exhibit 3: Annual Sales and Earnings
Heat Biologics

| <i>Exhibit 3: Pipeline and Milestones</i> | 2018E | 2017E | 2016E | 2015E | 2014E | 2013A |
|---|------------------|------------------|------------------|------------------|------------------|-----------------|
| 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 | 2.43 |
| R&D | 13.99 | 12.06 | 9.81 | 7.54 | 6.23 | 4.13 |
| Total Operating Expenses | 21.10 | 18.93 | 16.10 | 13.06 | 11.20 | 6.56 |
| Profit (Loss) from Operations | (\$21.10) | (\$18.93) | (\$16.10) | (\$13.06) | (\$11.20) | (\$6.56) |
| <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) | (0.07) |
| Other Income (Expense) | 0.03 | 0.07 | 0.11 | 0.10 | (0.12) | 0.02 |
| Income (Loss) from Continuing Operations | (\$21.15) | (\$18.92) | (\$16.12) | (\$13.08) | (\$11.38) | (\$6.61) |
| <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) | (\$21.15) | (\$18.92) | (\$16.12) | (\$13.08) | (\$11.38) | (\$6.61) |
| Non-controlling Interest | (\$1.59) | (\$1.42) | (\$1.21) | (\$0.98) | (\$0.68) | (\$0.20) |
| Net Income to Heat Biologics | (\$19.56) | (\$17.50) | (\$14.91) | (\$12.10) | (\$10.70) | (\$6.41) |
| Beneficial Conversion Charge | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | (\$2.66) |
| Net Attributable to Common Shareholders | (\$19.56) | (\$17.50) | (\$14.91) | (\$12.10) | (\$10.70) | (\$9.07) |
| <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 | (\$1.84) | (\$2.04) | (\$1.81) | (\$1.68) | (\$1.54) | (\$2.42) |
| <i>Shares Outstanding</i> | 10.64 | 8.56 | 8.23 | 7.21 | 6.93 | 3.75 |

Source: Heat Biologics, Cantor Fitzgerald research

Exhibit 4: Select Large Cap, Specialty and Generic Pharmaceutical Stocks

| | |
|-------------------|-------------------------------|
| Biotechnology | Mara Goldstein - 212.610.2215 |
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| Mkt Cap. Range | Company (a) | Ticker | Rating | Price 3/31/14 | Market Cap. (mil) | 52-Week | | Performance (b) | | | Earnings Per Share (c) | | | Revenue Per Share (c) | | | Per Share Cash | EV (mil) | Short Interest |
|----------------|-----------------------|--------|---------|-------------------|-------------------|-----------|-----------|-----------------|-------------|--------|------------------------|------------|----------|-----------------------|---------|----------|----------------|------------|----------------|
| | | | | | | High | Low | YTD | QTD | 1-Year | 2012A | 2013A | 2014E | 2012A | 2013A | 2014E | | | |
| Small Cap | Ambit | AMBI | NC | 9.12 | 163.4 | 21.44 | 6.22 | -7.8% | 0.0% | NA | (16.59) | (1.15) | (1.87) | 0.99 | 1.51 | 0.31 | 3.97 | 92.3 | 132,113 |
| | Cleveland BioLabs | CBLI | HOLD | 0.68 | 34.7 | 2.26 | 0.63 | -42.3% | 0.0% | -65.3% | (0.70) | (0.44) | (0.16) | 0.07 | 0.17 | 0.23 | 0.20 | 43.0 | 825,494 |
| | Curis | CRIS | NC | 2.82 | 242.4 | 4.74 | 2.44 | -1.7% | 0.0% | -14.0% | (0.21) | (0.15) | (0.24) | 0.20 | 0.17 | 0.15 | 0.68 | 214.7 | 5,767,156 |
| | Cyclacel | CYCC | NC | 3.68 | 72.9 | 5.65 | 2.75 | -11.8% | 0.0% | -34.2% | (1.68) | (1.28) | (1.08) | 0.00 | 0.05 | 0.00 | 1.57 | 41.8 | 1,799,591 |
| | Dendreon | DNDN | HOLD | 2.99 | 475.3 | 5.38 | 2.23 | -1.6% | 0.0% | -36.9% | (2.65) | (1.95) | (0.93) | 2.05 | 1.78 | 1.88 | 1.13 | 882.5 | 44,541,517 |
| | Galena Biopharma | GALE | SELL | 2.50 | 294.7 | 7.77 | 1.65 | -50.8% | 0.0% | 19.0% | (0.53) | (0.85) | (0.40) | 0.00 | 0.02 | 0.11 | 0.41 | 256.6 | 23,773,708 |
| | Heat Biologics | HTBX | BUY | 6.69 | 42.6 | 15.29 | 5.95 | -8.4% | 0.0% | NA | NA | (2.42) | (1.54) | NA | 0.00 | 0.00 | 3.70 | 18.9 | 143,567 |
| | Immunocellular | IMUC | NC | 1.22 | 70.2 | 4.00 | 0.65 | 24.5% | 0.0% | -55.5% | (0.35) | (0.16) | (0.25) | 0.00 | 0.00 | 0.00 | 0.48 | 42.6 | 4,868,436 |
| | Merrimack Pharm. | MACK | NC | 5.04 | 519.3 | 7.09 | 2.05 | -9.8% | 0.0% | -17.4% | (1.28) | (1.32) | (1.19) | 0.47 | 0.46 | 0.52 | 1.51 | 476.0 | 20,796,216 |
| | Oncolytheon | ONTY | HOLD | 2.99 | 211.5 | 4.08 | 1.55 | 64.3% | 0.0% | 44.1% | (0.06) | (0.62) | (0.52) | 0.00 | 0.00 | 0.00 | 0.85 | 151.5 | 5,418,663 |
| | Stemline | STML | NC | 20.36 | 262.8 | 47.25 | 11.05 | 0.0% | 0.0% | 78.4% | (1.82) | (1.73) | (2.01) | 0.00 | 0.00 | 0.00 | 6.79 | 175.1 | 737,679 |
| | Sunesis Pharma | SNSS | BUY | 6.61 | 397.2 | 7.49 | 3.84 | 41.8% | 0.0% | 20.8% | (0.91) | (0.66) | (0.62) | 0.06 | 0.13 | 0.13 | 0.65 | 376.0 | 7,092,719 |
| | Synta | SNTA | NC | 4.31 | 368.2 | 10.74 | 3.70 | -18.1% | 0.0% | -49.9% | (1.06) | (1.27) | (1.18) | 0.00 | 0.00 | 0.00 | 1.07 | 300.2 | 18,148,887 |
| | Verastem | VSTM | BUY | 10.79 | 278.6 | 18.82 | 8.27 | -13.5% | 0.0% | 12.2% | (1.70) | (1.82) | (1.79) | 0.00 | 0.00 | 0.00 | 3.93 | 177.2 | 1,543,550 |
| Average | | | | | \$245.3 | | | -2.5% | 0.0% | -8.2% | (\$2.27) | (\$1.13) | (\$1.00) | \$0.30 | \$0.31 | \$0.24 | \$1.92 | \$232.0 | 9,684,950 |
| Mid Cap | Agios Pharmaceuticals | AGIO | NC | \$39.15 | \$1,236.75 | \$49.79 | \$15.77 | 63.0% | 0.0% | NA | (\$1.11) | (\$2.83) | (\$1.32) | \$0.79 | \$0.81 | \$1.21 | \$6.14 | \$1,042.9 | 1,928,700 |
| | Ariad | ARIA | NC | 8.06 | 1,501.8 | 23.00 | 2.15 | 11.0% | 0.0% | -55.4% | (1.34) | (1.49) | (1.08) | 0.00 | 0.24 | 0.48 | 1.27 | 1273.7 | 40,330,871 |
| | Array Biopharma | ARRY | NC | 4.70 | 589.6 | 7.10 | 4.32 | -4.7% | 0.0% | -4.3% | (0.33) | (0.57) | (0.69) | 0.68 | 0.55 | 0.40 | 0.95 | 571.4 | 13,908,222 |
| | Celldex | CLDX | BUY | 17.67 | 1,577.1 | 38.84 | 10.73 | -28.2% | 0.0% | 52.6% | (1.02) | (1.02) | (1.10) | 0.13 | 0.05 | 0.01 | 3.39 | 1274.1 | 10,927,335 |
| | Clovis Oncology | CLVS | NC | 69.27 | 2,348.3 | 93.33 | 27.17 | 17.0% | 0.0% | 141.6% | (2.97) | (2.95) | (3.88) | 0.00 | 0.00 | 0.00 | 9.53 | 2025.0 | 1,274,363 |
| | Endocyte | ECYT | NC | 23.81 | 968.0 | 33.70 | 8.18 | 120.9% | 0.0% | 91.2% | (0.48) | (0.50) | (0.32) | 0.85 | 1.60 | 1.81 | 3.03 | 844.7 | 5,568,719 |
| | Epizyme | EPZM | NC | 22.77 | 745.7 | 45.72 | 18.10 | 12.4% | 0.0% | NA | (0.72) | (0.22) | (1.48) | 1.38 | 2.09 | 1.29 | 3.77 | 622.2 | 2,474,593 |
| | Exelixis | EXEL | NC | 3.54 | 688.9 | 8.41 | 3.37 | -42.7% | 0.0% | -23.4% | (0.92) | (1.33) | (1.50) | 0.24 | 0.16 | 0.13 | - | 688.9 | 47,311,428 |
| | Immunogen (d) | IMGN | HOLD | 14.93 | 1,279.1 | 20.25 | 12.55 | -0.3% | 0.0% | -7.1% | (0.95) | (0.87) | (0.72) | 0.19 | 0.41 | 0.88 | 2.08 | 1100.7 | 8,833,694 |
| | Incyte | INCY | NC | 53.52 | 8,859.5 | 70.86 | 18.23 | 4.5% | 0.0% | 128.6% | (0.34) | (0.56) | (0.46) | 1.79 | 2.14 | 2.90 | 3.08 | 9011.6 | 5,608,413 |
| | Infinity Pharm | INFI | NC | 11.89 | 574.1 | 50.40 | 11.30 | -11.5% | 0.0% | -75.5% | (1.70) | (2.64) | (3.41) | 0.98 | 0.00 | 0.01 | 4.43 | 373.3 | 3,774,545 |
| | Medivation | MDVN | NC | 64.37 | 4,913.6 | 88.20 | 44.51 | 1.5% | 0.0% | 37.7% | (0.56) | (0.57) | 0.80 | 2.38 | 3.58 | 7.10 | 3.00 | 4893.2 | 4,007,726 |
| | NewLink Genetics | NLNK | BUY | 28.40 | 791.3 | 53.48 | 11.19 | 32.8% | 0.0% | 131.5% | (1.12) | (1.23) | (1.75) | 0.06 | 0.04 | 0.05 | 2.21 | 736.9 | 4,023,395 |
| | Oncomed | OMED | NC | 33.65 | 992.0 | 42.34 | 12.07 | 14.8% | 0.0% | NA | (21.06) | (1.93) | 0.01 | 0.84 | 1.28 | 2.84 | 4.36 | 863.4 | 2,083,815 |
| | Pharmacylics | PCYC | NC | 100.22 | 7,495.3 | 154.89 | 71.85 | -7.6% | 0.0% | 24.6% | 0.17 | 0.87 | 0.13 | 1.10 | 3.48 | 5.58 | 8.50 | 6859.6 | 1,970,614 |
| | Seattle Genetics | SGEN | SELL | 45.56 | 5,603.1 | 55.99 | 28.15 | 13.4% | 0.0% | 28.3% | (0.46) | (0.51) | (0.96) | 1.71 | 2.19 | 1.88 | 3.04 | 5228.8 | 16,494,665 |
| | Average | | | | | \$2,510.3 | | | 12.3% | 0.0% | 36.2% | (\$2.18) | (\$1.15) | (\$1.11) | \$0.82 | \$1.16 | \$1.66 | \$3.68 | \$2,338.2 |
| Large Cap | Alexion | ALXN | NC | \$152.13 | \$30,095.88 | \$185.43 | \$87.01 | 14.0% | 0.0% | 65.1% | \$2.13 | \$3.08 | \$4.52 | \$5.73 | \$7.84 | \$10.84 | \$7.66 | \$28,694.0 | 3,215,254 |
| | Amgen | AMGN | NC | 123.34 | 93,122.6 | 128.96 | 94.15 | 6.5% | 0.0% | 20.3% | 6.51 | 7.60 | 8.15 | 22.87 | 24.74 | 26.00 | 25.70 | 105,849.6 | 11,119,807 |
| | Biogen Idec | BIBB | NC | 305.87 | 72,305.8 | 358.89 | 191.80 | 9.1% | 0.0% | 58.8% | 6.53 | 8.96 | 11.34 | 23.34 | 29.32 | 36.47 | 5.17 | 71,679.6 | 2,659,142 |
| | Celgene | CELG | BUY | 139.60 | 56,680.4 | 174.66 | 110.53 | -18.8% | 0.0% | 20.4% | 4.91 | 5.96 | 7.28 | 13.56 | 15.99 | 18.70 | 14.40 | 55,574.4 | 6,120,491 |
| | Gilead | GILD | NC | 70.86 | 108,972.3 | 84.88 | 46.53 | -5.8% | 0.0% | 44.8% | 1.95 | 2.04 | 3.82 | 6.31 | 7.28 | 10.73 | 1.39 | 113,915.7 | 89,554,919 |
| | Regeneron | REGN | NC | 300.28 | 29,399.8 | 352.49 | 177.12 | 9.4% | 0.0% | 70.2% | 6.75 | 8.17 | 9.88 | 14.08 | 21.50 | 27.30 | 7.09 | 29,211.3 | 3,967,955 |
| | Vertex | VRTX | NC | 70.72 | 16,697.9 | 89.96 | 51.28 | -4.2% | 0.0% | 28.7% | (0.50) | (1.98) | (2.36) | 6.47 | 5.13 | 2.52 | 6.20 | 15,739.4 | 5,311,833 |
| Average | | | | | \$58,182.1 | | | 1.5% | 0.0% | 44.0% | \$4.04 | \$4.83 | \$6.09 | \$13.19 | \$15.97 | \$18.94 | \$9.66 | \$31,568.4 | 17,421,343 |
| Indices | S&P 500 | SP50 | NA | 1,872.3 | NM | 1,883.97 | 1,536.03 | 2.2% | 0.0% | 19.3% | 103.3 | NA | 119.0 | NA | NA | 1,173.0 | NM | NM | NM |
| | Dow Jones Ind | DJII | NA | 16,457.7 | NM | 16,588.25 | 14,386.78 | 0.1% | 0.0% | 12.9% | 1,042.2 | NA | 1,116.4 | NA | NA | 9,876.8 | NM | NM | NM |
| | NASDAQ Comp | COMP | NA | 4,199.0 | NM | 4,371.71 | 3,154.96 | 1.3% | 0.0% | 28.5% | 179.8 | NA | 207.3 | NA | NA | 2,092.4 | NM | NM | NM |
| | Amex Biotech Index | BTK | NA | 2,586.2 | NM | 2,963.54 | 1,784.68 | 10.4% | 0.0% | 41.6% | 72.5 | NA | 103.5 | NA | NA | 352.3 | NM | NM | NM |
| NASDAQ Biotech | NBI | NA | 2,468.9 | NM | 2,872.29 | 1,643.66 | 4.0% | 0.0% | 47.9% | 48.1 | NA | 75.1 | NA | NA | 353.7 | NM | NM | NM | |
| Average | | | | | | | | | | | | | | | | | | | |
| Mkt Cap. Range | Company | Ticker | Rating | Price Change From | | P/E | | | Price/Sales | | | Price/Debt | | EV/ | | | | | |
| | | | | High | Low | 2012A | 2013A | 2014E | 2012A | 2013A | 2014E | Cash | Debt | BV | EBITDA | Net Inc. | FCF | Sales | BV |
| Mid | Medivation | MDVN | NC | -27.0% | 44.6% | NA | NA | 80.0 | 27.04 | 18.00 | 9.07 | 21.48 | 23.58 | 63.41 | (198.9) | (112.5) | NA | 26.9 | 63.2 |
| Large | Alexion | ALXN | NC | -18.0% | 74.8% | 71.4 | 49.4 | 33.6 | 26.54 | 19.40 | 14.03 | 19.87 | 266.34 | 0.27 | 50.9 | 47.1 | 73.8 | 25.3 | 0.3 |
| Large | Amgen | AMGN | NC | -4.4% | 31.0% | 18.9 | 16.2 | 15.1 | 5.39 | 4.99 | 4.74 | 4.80 | 2.90 | 4.21 | 187.8 | 18.4 | 25.3 | 6.1 | 4.8 |
| Large | Biogen Idec | BIBB | NC | -14.8% | 59.5% | 46.8 | 34.1 | 27.0 | 13.11 | 10.43 | 8.39 | 59.13 | 121.33 | NA | 23.6 | 33.8 | 44.1 | 13.0 | NA |
| Large | Celgene | CELG | BUY | -20.1% | 26.3% | 28.4 | 23.4 | 19.2 | 10.29 | 8.73 | 7.46 | 9.69 | 11.95 | 10.23 | 23.7 | 23.0 | 29.1 | 10.1 | 10.0 |
| Large | Gilead | GILD | NC | -16.5% | 52.3% | 36.3 | 34.7 | 18.5 | 11.23 | 9.73 | 6.60 | 51.12 | NM | 9.56 | 27.1 | 36.3 | 40.7 | 11.7 | 10.0 |
| Large | Regeneron | REGN | NC | -14.8% | 69.5% | 44.5 | 36.8 | 30.4 | 21.33 | 13.97 | 11.00 | 42.36 | 58.16 | 23.46 | 58.7 | 36.5 | NA | 21.2 | 23.3 |
| Large | Vertex | VRTX | NC | -21.4% | 37.9% | NA | NA | NA | 10.93 | 13.78 | 28.06 | 11.40 | 32.96 | 15.38 | 371.5 | (33.7) | 80.0 | 10.3 | NA |
| Large Cap Only | | | | | | 41.1 | 32.4 | 20.5 | 14.1 | 11.6 | 11.5 | \$28.34 | \$45.46 | 18.52 | 24.3 | 23.1 | 48.8 | 14.0 | 18.6 |

(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.

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

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 allogeneic, "off the shelf" vaccine.

Companies Mentioned:

Advaxis, Inc. (ADXS - OTC BB): NC
 Agenus Inc. (AGEN - NASDAQ): NC
 Agios 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
 Tesaro, Inc. (TSRO - NASDAQ): NC
 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 |
| BUY [B] | 76 | 52.78 | 18 | 23.68 |
| HOLD [H] | 56 | 38.89 | 8 | 14.29 |
| SELL [S] | 12 | 8.33 | 1 | 8.33 |

