October 27, 2017

INVESTMENT HIGHLIGHTS

- Humanigen recently launched an industry-leading responsible pricing model that focuses on affordability, transparency, and delivery of reasonable returns in recognition of the risks taken in the drug development effort.
- Humanigen intends to use benznidazole to treat Chagas disease which affects an estimated 6-8 million globally, and expects to receive PRVs for the drug. PRVs have historically sold for $67.5-$350 million.
- Humanigen faces many obstacles from threat of competition and government regulation, which can hinder the company's commercial opportunities.

COMPANY DESCRIPTION

Humanigen, Inc. provides biopharmaceutical services focusing on advancing medicines for patients with neglected and rare diseases. The company was founded on March 15, 2000 and is headquartered in Brisbane, CA.

COMPANY DATA

52-Week Range ($)	0.22-4.75
Shares Outstanding (mn)	14.98
Market Cap ($mn)	11.23
3-Mo. Average Volume (mn)	0.04
Total Cash ($mn)	2.91
Total Debt ($mn)	4.29
Dividend Yield (%)	0.00
Short Interest (%)	N/A
Insider Ownership (%)	36.93%

KEY FINANCIALS (in $ millions, except EPS)

	FY13A	FY14A	FY15A	FY16A
Revenue	0.04	0.00	0.00	0.00
EPS	(13.84)	(9.20)	(8.58)	(2.78)
Net Income	(41.95)	(38.00)	(35.38)	(27.02)
EBIT	(40.91)	(36.72)	(28.84)	(18.83)
EBITDA	(40.61)	(36.41)	(28.64)	(18.72)

SHARE PRICE PERFORMANCE

BULL CONSIDERATIONS

- **Responsible pricing model**

  Humanigen launched an industry-leading responsible pricing model in April 2016. The model focuses on affordability for patients and payers, transparency, and delivery of reasonable returns in recognition of the risks taken in the drug development effort. The company plans to price its products at overall cost plus a reasonable and transparent profit margin. Key elements of product pricing will be disclosed, and stakeholders will be consulted on what constitutes reasonable returns. It does not intend to arbitrarily increase product prices but plans to limit increases, if any, to no more than the rate of CPI inflation and to no more than once a year. It also does not plan to engage in "price gouging" and intends to ensure that patients, irrespective of their ability to pay, will have access to its products. The US government's recent efforts to lower drug prices and increase transparency align well with the company's mission. The company's responsible pricing model is a positive step toward repairing its reputation that was hurt by former CEO Martin Shkreli's very short stint in 2015.

- **Priority review vouchers (PRVs) may create options for significant potential returns**

  Chagas disease affects an estimated 6-8 million globally and is responsible for an estimated average of 12,000 deaths annually worldwide.[1] Humanigen intends to use benznidazole to treat this disease and expects to receive PRVs for the drug. (A drug developer is granted a PRV upon drug approval; this can subsequently be used for priority review of another drug application.) PRVs have historically sold for $67.5-$350 million. Humanigen may receive a PRV for lenzilumab if the FDA agrees that juvenile myelomonocytic leukemia (JMML) is a rare pediatric disease and qualifies for priority review.

- **Strong management team**

  Humanigen is led by a talented, driven and seasoned management team able to help the company reach its long-term shareholder goals. It announced on March 27, 2017, that it had been named an M&A Advisor Turnaround Award winner for Chapter 11 reorganization. Humanigen received the award for the $10-$25 million company size category for successfully emerging from Chapter 11 bankruptcy.

  On August 8, 2017, Humanigen announced the completion of the benznidazole bioavailability study, another example of the team's ability to execute and continue to deliver on program milestones and goals. Humanigen expects to submit a new drug application (NDA) in Q1 2018. On August 23, 2017, it signed an agreement for a committed equity financing facility, under which it may from time to time, and at its sole discretion, sell up to $15 million of its common stock to Aperture Healthcare Ventures Ltd.[2]

[1] Pan American Health Organization Website, http://www2.paho.org/hq/index.php?option=com_topics&view=article&id=10&Itemid=40743
[2] Humanigen 8K, August 23, 2017

BEAR CONSIDERATIONS

- **History of operating losses, bankruptcy, and a delisted stock**

  Humanigen has incurred net losses each year since its inception except for the year ended December 31, 2007. It incurred a net loss of $27 million and reported an accumulated deficit of $240.6 million for the year ended December 31, 2016. On December 29, 2015, Humanigen filed a voluntary petition for bankruptcy protection under the Bankruptcy Code. On January 13, 2016, its common stock was suspended from the Nasdaq Global Market and began trading on the over-the-counter market. Humanigen emerged from bankruptcy on May 9, 2016, when its second amended plan of reorganization became effective.

  Despite having emerged from bankruptcy, Humanigen cannot be certain that residual effects of the bankruptcy proceedings will not adversely affect its operations going forward.

- **Uncertainty surrounding future capital and product approvals**

  Humanigen would need substantial additional capital to develop and commercialize its product pipeline, and this access to capital funding is uncertain. The auditors have expressed substantial doubt about the business, its ability to continue as a going concern, and its access to additional financing. Humanigen thus needs to continue to raise capital within the next 12 months if it is to continue operations.

  The company is also highly dependent on approval for benznidazole and lenzilumab and is looking to partner ifabotuzumab[3]. It is not certain that it will be able to obtain regulatory approval for, or successfully commercialize, any of its products pending approval. Products currently being developed are also in early stages of development and may not be successfully developed or commercialized. Furthermore, the FDA may disagree on the safety and efficacy data backing benznidazole and therefore not grant approval. There could also be delays due to clinical trials, in receiving data from third parties or in the continuation or completion of clinical tests, which could result in increased costs and defer revenue generation.

- **Competition and government reforms**

  Humanigen's commercial opportunities may be lost or drastically reduced if a competitor develops treatments that are approved faster, marketed more successfully or are demonstrated to be safer or more effective than Humanigen's. Potential healthcare reform measures also pose a risk; if implemented, they could hinder or prevent the commercial success of Humanigen's product pipeline. Governments may impose price controls, adversely affecting product profitability. In addition, the PRV program may be modified, affecting Humanigen's ability to receive a voucher.'

[3] Ifabotuzumab – A unique Humaneered monoclonal antibody. Humanigen's proprietary and patented Humaneered technology platform is a method for converting existing antibodies into engineered, high-affinity human antibodies designed for therapeutic use, particularly for chronic conditions.

FINANCIAL AND VALUATION OVERVIEW

P/E	
P/E (2016)	NM
P/E (ttm)	NM
PEG Ratio	NM

EPS Growth (vs. Previous Quarter)	
3Q2017	0.11
2Q2017	0.10
1Q2017	0.13

Sales Growth (vs. Previous Quarter)	
3Q2017	NM
2Q2017	NM
1Q2017	NM

Price Ratios (ttm)	
Price/Book	18.32
Price/Cash Flow	NM
Price/Sales	NM

ROE	
3Q2017	NM
2Q2017	NM
1Q2017	NM

ROA	
3Q2017	-276.78%
2Q2017	-373.77%
1Q2017	-340.63%

Current Ratio	
3Q2017	0.11
2Q2017	0.42
1Q2017	0.58

Quick Ratio	
3Q2017	0.11
2Q2017	0.42
1Q2017	0.58

Operating Margin	
3Q2017	NM
2Q2017	NM
1Q2017	NM

Net Margin	
3Q2017	NM
2Q2017	NM
1Q2017	NM

Pre-Tax Margin	
3Q2017	NM
2Q2017	NM
1Q2017	NM

Book Value	
3Q2017	-0.98
2Q2017	-0.59
1Q2017	-0.29

Inventory Turnover	
3Q2017	NM
2Q2017	NM
1Q2017	NM

Debt-to-Equity	
3Q2017	NM
2Q2017	NM
1Q2017	NM

Debt-to-Capital	
3Q2017	NM
2Q2017	857.39%
1Q2017	NM

Income Statement ($ in millions)	4Q2016	1Q2017	2Q2017	3Q2017	2013	2014	2015	2016
Total Revenue	-	-	-	-	0.04	-	-	-
% growth		0	0	0	0	-100%	0	0
Total Cost of Revenue	0.02	0.02	0.01	0.01	NM	0.31	0.20	0.10
% of sales		0	0	0	NM	0	0	0
Gross Profit	(0.02)	(0.02)	(0.01)	(0.01)	NM	(0.31)	(0.20)	(0.10)
Margin %	0	0	0	0	NM	0	0	0
R&D	1.74	2.64	2.67	3.85	15.55	15.55	15.55	10.45
% of sales	0	0	0	0	NM	0	0	0
SG&A	NM	NM	NM	NM	NM	NM	NM	NM
% of sales	NM	NM	NM	NM	NM	NM	NM	NM
EBIT	(4.19)	(4.85)	(5.12)	(5.40)	(40.91)	(36.72)	(28.84)	(18.83)
Margin %	0	0	0	0	NM	0	0	0
Interest Expense	0.03	0.06	0.29	0.69	1.09	1.21	0.84	0.13
EBT	(4.22)	(4.91)	(5.41)	(6.08)	(42.00)	(37.93)	(29.68)	(18.96)
Tax Expense	0	0	0	0	NM	NM	0	0
Tax Rate %	0	0	0	0	NM	NM	0	0
EBITDA	(4.17)	(4.83)	(5.10)	(5.38)	(40.61)	(36.41)	(28.64)	(18.72)
Margin %	0	0	0	0	NM	0	0	0
Net Income Applicable to Common Shareholders	(4.52)	(5.06)	(5.55)	(6.15)	(41.95)	(38.00)	(35.38)	(27.02)
Margin %	0	0	0	0	NM	0	0	0
Basic Shares	15	15	15	15	3	4	4	10
Dil Shares	15	15	15	15	3	4	4	10
EPS - Basic	-0.30	-0.34	-0.37	-0.41	-13.83	-9.22	-8.58	-2.78
EPS - Dil	-0.30	-0.34	-0.37	-0.41	-13.83	-9.22	-8.58	-2.78

Balance Sheet ($ in millions)	4Q2016	1Q2017	2Q2017	3Q2017	2013	2014	2015	2016
Current Assets	4.71	4.55	5.75	1.65	77.72	42.25	10.39	4.55
Total Assets	4.93	4.72	6.03	1.92	78.70	42.98	11.15	4.72
Current Liabilities	3.88	7.82	13.64	15.32	11.38	18.05	0	7.82
Total Liabilities	5.12	9.10	14.90	16.61	18.17	18.36	5.41	9.10
Shareholders' Equity	(0.19)	(4.38)	(8.87)	(14.69)	60.54	24.61	5.73	(4.38)
Total Liabilities and Shareholders' Equity	4.93	4.72	6.03	1.92	78.70	42.98	11.15	4.72

Cash Flow Statement ($ in millions)	4Q2016	1Q2017	2Q2017	3Q2017	2013	2014	2015	2016
Cash from operating activities	(8.99)	(3.01)	(4.37)	(3.94)	(38.82)	(35.94)	(29.06)	(20.96)
Cash from investing activities	(0.04)	0.01	0	0	(13.92)	(8.22)	30.10	0.10
Cash from financing activities	0	3.00	5.50	0	96.01	0.86	(3.53)	15.33
Net Change in Cash	(9.03)	0.00	1.14	(3.94)	43.27	(43.30)	(2.49)	(5.53)
Cash at beginning of the year	11.94	2.91	2.91	4.04	10.95	54.43	10.92	8.43
Cash at the end of the year	2.91	2.91	4.04	0.10	54.43	10.92	8.43	2.91

COMPANY INFORMATION

research@jgrcap.com
646.688.3131

DISCLOSURE

This report contains forward-looking statements, which involve risks and uncertainties. Actual results may differ significantly from such forward-looking statements. Factors that might cause such a difference include, but are not limited to, those discussed in the “Risk Factors” section in the SEC filings available in electronic format through SEC Edgar filings at www.SEC.gov.

The research analysts principally responsible for this research preparation do not receive compensation that is based upon any specific investment banking services or recommendations and can be compensated based on factors relating to the overall profitability of the JGR Capital (“firm”). As of the date of research distribution, neither the firm nor the principal research analysts beneficially own 1% or more of any class of common equity securities for this issuer (including, without limitation, any option, right, warrant, future, long or short position).

The securities of the issuer(s) discussed in this research may be unsuitable for investors depending on their specific investment objectives and financial position. Past performance is no guarantee of future results. This research does not constitute a personal trading recommendation or take into account the particular investment objectives, financial situation or needs of an individual reader of this report, and does not provide all of the pertinent information to make an investment decision.

JGR Capital does not provide investment banking services nor has it received compensation for investment banking services from the issuers covered in this research content. The firm does not make a market in the issuer’s securities. It has received compensation from the issuer for providing non-investment banking services to this issuer. The non-investment banking services provided to the issuer includes investor relations’ advisory and services, production of this research content, comprehensive reporting analytics, and financial analysis. The fees for these services vary on a per-client basis and are subject to the amount and category of provided services. For the services provided to the issuer covered in this report, engagement commenced on March 31st, 2017, for a 12-month period within the typical $12,000 to $20,000 compensation structure for the services engaged by this issuer. Firm analysts and members of the research production team are prohibited from holding or trading securities in the issuer.

Additional information is available upon request. JGR Capital’s research contents are based on data obtained from sources that it believes to be reliable and does not purport to be a complete statement of all material factors. This report is for informational purposes and is not a solicitation of orders to purchase or sell securities. No part of this material may be copied, photocopied or duplicated in any form or by any means, or redistributed without prior written consent from JGR Capital.