

Gain Therapeutics, Inc. (GANX, Buy, \$30 PT)

1Q22 Financial Results. GBA1 PD Program First-in-Human by YE22.

WHAT YOU SHOULD KNOW: We will soon get our first look at clinical data for the STAR program. GAIN has generated extensive preclinical data validating structurally-targeted allosteric regulators (STARs) and also highlighting the broad potential of the SEE-Tx platform. The most advanced program is the GBA1 program for Parkinson's Disease. The preclinical data package for the GBA1 PD seems as supportive as hoped where the company has employed both mouse models and iPSC-derived neurons expressing several GBA1 mutants found in patients. We thought the recent GT-02287 data showing improving non-GBA1 related AD pathologies were particularly interesting. Importantly, the lead candidate GT-02287 targets the GCase enzyme that is inherently labile. As a result, GT-02287 has the potential to stabilize the wild-type enzyme - so the first readout should be informative. Along those lines, the path to the clinic is now better defined with important animal data expected around October followed by an application to test the drug in healthy volunteers in Australia. The first trial will be in approximately 60 healthy volunteers and will encompass both SAD and MAD dosing. We are also interested in their oncology programs in collaboration with Zentalis (ZNTL, Not Rated). Allosteric modulators have significant potential in the oncology space, where targeting allosteric binding sites instead of the active binding sites may reduce the toxicity and off-target effects due to conservations of different enzymes.

- 1Q22 Financial Results.** The OpEx for 1Q22 of \$3.3M was lower than our estimated \$4.6M. Gain ended 1Q22 with \$34.3M in cash and cash equivalents, which we project sufficient to fund operations into 2H23.
- AD/PD Update.** Using the CBE-induced PD mouse model, GT-02287 lowered pathological features of the PD (e.g., p- α Syn, aggregated α Syn, Iba-1 expression) with statistical significance (Exhibit 1). Although less validated than α Syn, Iba-1 is often used to label microglia cells in the brain, and increased Iba-1 expression is associated with microglial activation and neuroinflammation. GT-02287 also improved neuronal viability measured by tyrosine hydroxylase (a key enzyme for L-DOPA) and motor deficits measured by the rotarod behavior test. In neuronal cultures incubated with A β ₁₋₄₂ peptides, Gain's GT STAR ameliorated pathological features of the AD through lysosomal function improvement and GCase stabilization. The level of Tau phosphorylation was reduced with improvement in the number of neurons and total neurite length (Exhibit 2).
- GBA iPSC Program - Primary Biomarkers.** A third compound (GT-02387), in addition to two previously characterized STARs (GT-02329 & GT-02287), all increased the GCase levels in dopaminergic and cortical neurons derived from Gaucher Type II (GD2) (L444P/RecNcil) and Gaucher Type III (GD3) (L444P/L444P). In addition, enzyme transport to the lysosome was increased in both WT and GD2/GD3 cells in a dose-dependent manner — visualized by co-localization with LAMP1 (a lysosomal marker). We see these primary biomarker data as support for the idea that Gain's molecules help deliver active enzymes to the lysosome and support the idea that Gain's activators will also be powerful additions to current SOC ERTs.
- GBA1 Secondary Biomarkers.** As biomarkers are better understood in neurodegeneration, we expect increased interest in "indirect biomarkers" where a specific ERT does something in the cell beyond degrading its target substrate. (Cont'd on P3)
- Valuation:** We value GANX with a DCF analysis (17.5% discount rate, 2.0% TG).

PLEASE READ: IMPORTANT DISCLOSURES AND ANALYST'S CERTIFICATION APPEAR IN APPENDIX

WWW.BTIG.COM



May 16, 2022

Thomas Shrader, PhD, CFA
(212) 527-3551 tshrader@btig.com

Sung Jun Hong, PhD
(332) 400-5048 shong@btig.com

Company Data			
Closing Price			\$2.69
Price Target			\$30.00
Market Cap (M)			\$31.97
Shares Out (M)			11.88
Avg Daily Vol-3 Months (M)			0.15
Revisions			
	Previous	Current	
Rating	Buy	Buy	
Price Target	\$30.00	\$30.00	
FY22E EPS	(2.10)	(1.38)	
EPS (GAAP)			
FY Dec	2020A	2021A	2022E
Q1	0.00	(0.50)	(0.28)A
Q2	0.00	(0.30)	(0.32)
Q3	0.00	(0.39)	(0.37)
Q4	0.00	(0.27)	(0.42)
FY EPS	(1.33)	(1.37)	(1.38)
FY P/E	-	-	-

Source: FactSet, BTIG Estimates and Company Documents reported as \$ currency.
FY = Fiscal Year CY = Calendar Year

Investment Thesis

Gain Therapeutics is an innovative computational and medicinal chemistry-based biotechnology company focused on developing novel allosteric modulators to treat diseases underpinned by improper protein folding. Leveraging its SEE-Tx platform, Gain is able to identify allosteric sites on enzyme targets in 5 to 6 weeks, screen hits in 2 to 3 weeks, and validate compounds in 2 to 3 months. We see the SEE-Tx technology as a major value driver that should lead to de-risked internal programs and potentially lucrative external collaborations. Gain's current programs are focused on lysosomal storage disorders with CNS and systemic manifestations that have no functional cures, are unlikely to be treated completely with protein-focused therapeutics (ERTs and gene therapies) and high unmet need.

Upcoming Catalysts

2022

- GBA1 for Parkinson's Disease - HREC submission & First-in-human study
- GBA1 for Gaucher - Start IND-enabling tox study
- GALC for Krabbe - Advancement of lead series identification
- Liver program - Initiation of hit-to-lead series
- Oncology program - Target and hit identification

2023

- GBA1 for Parkinson's Disease - Complete P1 clinical study & IND application process initiation
- GBA1 for Gaucher - HREC submission & First-in-human study initiation
- GALC for Krabbe - Enter lead identification phase
- Liver program - Lead series selection
- Oncology program - Start hit-to-lead series

Base Case Assumptions: \$30 Price Target

- Morquio B - 55% PoS, 2026 market entry, LOE in 2037, 50% peak penetration
- GM1 gangliosidosis - 55% PoS, 2026 market entry, LOE in 2037, 50% peak penetration
- Gaucher disease - 55% PoS, 2026 market entry, LOE in 2037, 50% peak penetration
- GBA1 Parkinson's disease - 40% PoS, 2026 market entry, LOE in 2037, 35% peak penetration

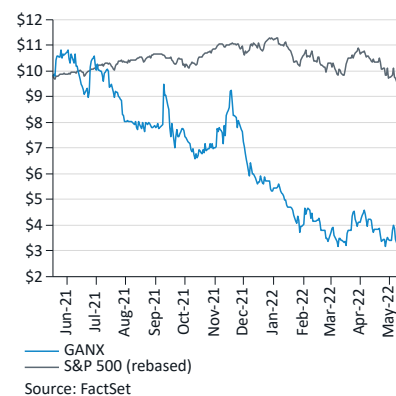
Upside Scenario

- Preclinical data accrued faster than currently anticipated.
- Significant collaborations with sophisticated partner companies.

Downside Scenario

- Any unexpected delays and/or safety signals that preclude progression to clinical development.

Price Performance




Company Description

Gain is in the stretch run for the initiation of clinical development. In each program, data from animal models is an important readout as are indications that a given candidate therapeutic is orally available and crosses the BBB. Many of the most meaningful milestones are after 2022 (including human patient data) making partnerships the best chance for truly transformational valuation events in 2021.

- Along these lines, treatment with STAR compounds decreased pS129-aSyn levels (a toxic aggregate not directly targeted by GCase) in both patient-derived dopaminergic neurons and a PD mouse model. In addition, STAR compounds resulted in encouraging changes of other biomarkers such as TH, Iba-1, and dopamine levels (suggesting improvement in housekeeping). Finally, STAR compounds resulted in improved lysosomal function as measured by autophagy flux.

Income Statement

 Thomas Shrader 212.527.3551 Sung Jun Hong 332.400.5048												
Gain Therapeutics (GANX) Income Statement												
Period Ending	Dec-20	Mar-21	Jun-21	Sep-21	Dec-21	Dec-21	Mar-22	Jun-22	Sep-22	Dec-22	Dec-22	Dec-23
\$USD ('000s)	2020A	1Q21A	2Q21A	3Q21A	4Q21A	2021A	1Q22A	2Q22E	3Q22E	4Q22E	2022E	2023E
Revenue												
Morquio B (55% risk adjusted)	-	-	-	-	-	-	-	-	-	-	-	-
GM1 gangliosidosis (55% risk adjusted)	-	-	-	-	-	-	-	-	-	-	-	-
Gaucher disease (55% risk adjusted)	-	-	-	-	-	-	-	-	-	-	-	-
Parkinson's disease (40% risk adjusted)	-	-	-	-	-	-	-	-	-	-	-	-
Other (including Collaboration)	29	5.3	89	27	43	165	45	13	13	13	83	54
Total Revenue	29	5.3	89	27	43	165	45	13	13	13	83	54
Operating Expenses												
COGS	-	-	-	-	-	-	-	-	-	-	-	-
R&D	2,259	1,422	1,794	2,477	1,472	7,164	1,556	2,056	2,556	3,056	9,226	28,750
SG&A	1,249	1,051	1,810	2,187	1,780	6,827	1,777	1,902	2,027	2,152	7,858	9,858
Total Operating Expenses	3,508	2,472	3,604	4,663	3,252	13,991	3,333	3,958	4,583	5,208	17,084	38,608
Operating Income	(3,479)	(2,467)	(3,515)	(4,636)	(3,209)	(13,826)	(3,288)	(3,946)	(4,571)	(5,196)	(17,001)	(38,554)
Other income (expense), net	(93)	19.9	(38)	(22)	(19,408)	(60)	18	103	85	73	279	920
Income (Loss) Before Taxes	(3,572)	(2,447)	(3,553)	(4,658)	(3,228)	(13,887)	(3,271)	(3,843)	(4,486)	(5,123)	(16,722)	(37,634)
Tax provision	(5)	(3.5)	(4)	(5)	8	(4)	(2)	-	-	-	(2)	-
Net Income (Loss)	(3,578)	(2,450)	(3,557)	(4,664)	(3,220)	(13,891)	(3,273)	(3,843)	(4,486)	(5,123)	(16,724)	(37,634)
Basic EPS, GAAP	(1.33)	(0.50)	(0.30)	(0.39)	(0.27)	(1.37)	(0.28)	(0.32)	(0.37)	(0.42)	(1.38)	(2.49)
Diluted EPS, GAAP	(1.33)	(0.50)	(0.30)	(0.39)	(0.27)	(1.37)	(0.28)	(0.32)	(0.37)	(0.42)	(1.38)	(2.49)
Weighted average shares outstanding, basic	2,681	4,869	11,876	11,877	12,039	10,165	11,883	12,101	12,151	12,201	12,084	15,139
Weighted average shares outstanding, diluted	2,681	4,869	11,876	11,877	12,039	10,165	11,883	12,101	12,151	12,201	12,084	15,139

Source: BTIG Research estimates, Company reports

BTIG Covered Companies Mentioned in this Report

Gain Therapeutics, Inc. (GANX, Buy, \$30 PT; Closing Price: \$2.69; Analyst: Thomas Shrader)

Appendix: Analyst Certification and Other Important Disclosures

Analyst Certification

I, Thomas Shrader, hereby certify that the views about the companies and securities discussed in this report are accurately expressed and that I have not received and will not receive direct or indirect compensation in exchange for expressing specific recommendations or views in this report.

I, Sung Jun Hong, hereby certify that the views about the companies and securities discussed in this report are accurately expressed and that I have not received and will not receive direct or indirect compensation in exchange for expressing specific recommendations or views in this report.

Regulatory Disclosures

Ratings Definitions

BTIG LLC's ("BTIG") ratings, effective June 12, 2017, are defined as follows:

BUY – A security which is expected to produce a positive total return of 15% or greater over the 12 months following the recommendation. The BUY rating may be maintained as long as it is deemed appropriate, notwithstanding price fluctuations that would cause the target to fall outside of the 15% return.

SELL – A security which is expected to produce a negative total return of 15% or greater over the next 12 months following the recommendation. The SELL rating may be maintained as long as it is deemed appropriate, notwithstanding price fluctuations that would cause the target to fall outside of the 15% return.

NEUTRAL – A security which is not expected to appreciate or depreciate meaningfully over the next 12 months.

NOT RATED – A security which is not rated or covered by BTIG.

UNDER REVIEW – Effective immediately, coverage of the following securities is Under Review. Ratings, price targets, disclosures, and estimates for the companies listed below are suspended and should no longer be relied upon.

Distribution of Ratings and Investment Banking Clients

BTIG must disclose in each research report the percentage of all securities rated by the member to which the member would assign a "buy", "neutral" or "sell" rating. The said ratings are updated on a quarterly basis. BTIG must also disclose the percentage of subject companies within each of these three categories for whom the member has provided investment banking services within the previous twelve months.

Current Rating Distribution (as of May 16, 2022):

Coverage Universe	Count	Percent	Inv. Banking Relationships	Count	Percent
Buy	328	71.8%	Buy	100	30.5%
Neutral	128	28.0%	Neutral	24	18.8%
Sell	1	0.2%	Sell	0	0.0%

For purposes of FINRA ratings distribution rules, BTIG's stock ratings of Buy, Neutral and Sell fall into Buy, Hold and Sell categories, respectively.

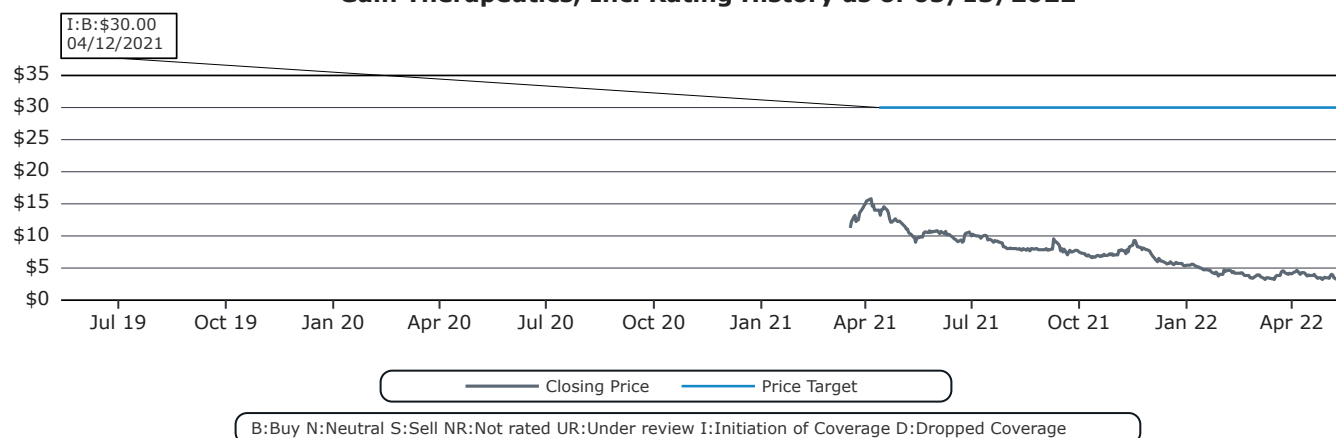
Company Valuation and Risk Disclosures

Gain Therapeutics, Inc. (GANX, Buy, \$30 PT)

Valuation: We value GANX with a DCF analysis (17.5% discount rate, 2.0% TG).

Risks: Gain Therapeutics is an established drug development company. It faces all the standard risks for that industry, including unexpected outcomes from clinical readouts, regulatory uncertainty, and increasingly complex and price-sensitive commercial markets for its product candidates.

Gain Therapeutics, Inc. Rating History as of 05/13/2022



Company-Specific Regulatory Disclosures

BTIG LLC is a market maker in the securities of: Gain Therapeutics, Inc. (GANX)

BTIG LLC expects to receive or intends to seek compensation for investment banking services in the next 3 months from: Gain Therapeutics, Inc. (GANX)

Other Disclosures

Additional Information Available Upon Request

General Disclosures

Research reports produced by BTIG LLC (“BTIG”) are published for and intended to be distributed solely to BTIG institutional and corporate clients. Recipients of BTIG reports will not be considered clients of BTIG solely because they may have received such BTIG report.

To the extent recipient accesses BTIG research, whether on a BTIG research website or through a third-party platform, BTIG is able to search, filter, download and review information on the readership of BTIG’s research, including the specific research consumed and the name, company name, email address and, in certain circumstances, the location of the individual who accessed the research (the “Readership Information”). Recipient consents to BTIG’s receipt of the Readership Information, including receipt of that information from a third party.

The research analyst(s) responsible for the preparation of this report receives compensation based upon a variety of factors, including the quality and accuracy of research, internal/client feedback, and overall Firm revenues.

BTIG reports are based on public information and BTIG considers the same to be reliable, comprehensive information, but makes no representation or warranty that the reports are accurate or complete. BTIG opinions and information provided in this report are as of the date of the report and may change without notice. An issuer may be classified as “Under Review” or “Research Restricted”. In these cases, investors should consider any previous investment recommendation and/or rating to a subject company/issuer to no longer be current and should not be relied upon nor considered a solicitation.

This research report is not an offer to buy or sell or solicitation of an offer to buy or sell any security in any jurisdiction where such an offer or solicitation would be illegal. This research report was not drafted specifically for any particular individual or entity and is not a personal recommendation to participate in any particular trading strategy or transaction. Any recipient of this research report should obtain independent advice specific to their personal circumstances before undertaking any investment activity and must make their own independent evaluation of any securities or financial instruments.

Facts, views or opinions presented in this report have not been reviewed by, and may not reflect information known to, employees or other professionals in the “BTIG Group” (BTIG Group includes, but is not limited to, BTIG and its parents, subsidiaries and/or affiliates). BTIG Group employees, including Sales Representatives and Traders, may provide oral or written commentary or advice that may be inconsistent with the opinions and/or views expressed in this research report. BTIG Group employees and/or

its affiliates not involved in the preparation of this research report may have investments in securities or derivatives of securities of companies mentioned in this report that are inconsistent with the views discussed in this report.

Investors in securities products bear certain risks in conjunction with those investments. The value of, and income from, any investments may vary because of changes in interest rates or foreign exchange rates, securities prices or market indexes, operational or financial conditions of companies or other factors within or beyond the companies' control. Recipient of the research reports should be aware that investments in securities may pose significant risks due to the inherent uncertainty associated with relying on forecasts of various factors that can affect the earnings, cash flow and overall valuation of a company. Any investment in securities should be undertaken only upon consideration of issues relating to the recipient's overall investment portfolio and objectives (such as diversification by asset class, industry or company) as well as time horizon and liquidity needs. Further, past performance should not be taken as an indication or guarantee of future performance, and no representation or warranty, express or implied, is made regarding future performance. There may be time limitations on the exercise of options or other rights in any securities transactions.

Investing in foreign markets and securities, including ADRs, is subject to additional risks such as currency fluctuation, limited information, political instability, economic risk, and the potential for illiquid markets. Investing in emerging markets may accentuate these risks. Non-U.S. reporting issuers of foreign securities, however, may not make regular or complete public disclosure relating to their financial condition or the securities that they issue.

The trademarks and service marks contained herein are the property of their respective owners. Third-party data providers make no warranties or representations of any kind relating to the accuracy, completeness, or timeliness of the data they provide and shall not have liability of any damages of any kind relating to such data. The report or any portion hereof may not be reprinted, sold or redistributed without the written consent of BTIG. This report is intended only for use by the recipient. The recipient acknowledges that all research and analysis in this report are the property of BTIG and agrees to limit the use of all publications received from BTIG within his, or her or its, own company or organization. No rights are given for passing on, transmitting, retransmitting or reselling the information provided.

Jurisdiction and Dissemination

BTIG is a U.S. broker-dealer and member of FINRA and SIPC.

BTIG Australia Limited ACN 128 554 601, member of ASIC and ASX; BTIG Hong Kong Limited, an Exchange Participant of SEHK and licensed and regulated by the SFC; BTIG Ltd, member of the LSE, authorized and regulated by the FSA; and BTIG Singapore Pte Ltd, registered and licensed with MAS; are all separate but affiliated entities of BTIG. Unless governing law permits otherwise, you must contact a BTIG entity in your home jurisdiction for further information, or if you want to use our services in effecting a transaction.

Issued and approved for distribution in the UK and EEA by BTIG Ltd. to eligible counterparties and professional clients only. Issued and distributed in Australia to "wholesale clients" only by BTIG Australia Limited. In Singapore and Hong Kong, further information may be obtained from BTIG Singapore Pte Ltd and BTIG Hong Kong Limited, respectively.