Bio-Path Holdings INC

STONEGATE CAPITAL PARTNERS

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MARKET STATISTICS

Exchange / Symbol	NASDAQ:BPTH
Price:	$0.40
Market Cap (mm):	$38.26
Enterprise Value (mm):	$31.15
Shares Outstanding (mm):	95.65
Float (%):	92.6%
Volume (3-month average):	485,100
52 week Range:	$0.33-$2.28
Industry:	Biotechnology

CONDENSED BALANCE SHEET

($mm, except per share data)

Balance Sheet Date:	3/31/2017
Cash & Cash Equivalent:	$7.11
Cash/Share:	$0.07
Equity (Book Value):	$8.09
Equity/Share:	$0.08

CONDENSED INCOME STATEMENTS

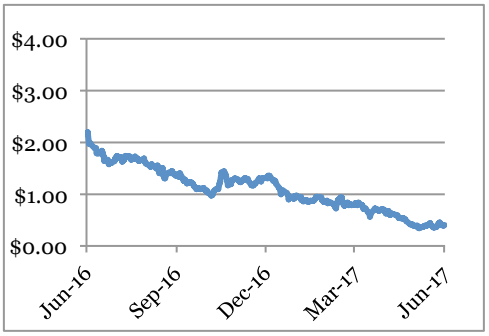
($mm, except per share data)

FY - 12/31	Revenue	Income	Adj. EBITDA	EPS
FY14	$0.00	($4.52)	($3.97)	($0.05)
FY15	$0.00	($5.47)	($4.91)	($0.06)
FY16	$0.01	($7.77)	($8.71)	($0.08)
Fy17E	$0.00	($6.84)	($7.16)	($0.07)

LARGEST SHAREHOLDERS

Peter H. Nielsen	5,164,400
BlackRock, Inc.	3,858,200
UT Investment Management Co.	3,830,900
The Vanguard Group, Inc.	2,912,500
Hyacinth Resources, LLC	1,609,800
HighTower Advisors, LLC	1,263,100
State Street Global Advisors, Inc.	1,130,400
Northern Trust Global Investments	885,200

STOCK CHART



COMPANY DESCRIPTION

Bio-Path Holdings, Inc. (Bio-Path) is a clinical stage biotechnology company that focuses on developing nucleic acid cancer therapeutics using its proprietary nanoparticle RNAi antisense technology called DNAbilize™. This technology safely distributes nucleic acid based drugs systemically throughout the body via intravenous infusion. Bio-Path's lead product candidate, prexigebersen (BP1001) is in Phase 2 clinical studies for the treatment of acute and chronic myeloid leukemia (AML and CML), and preclinical studies for solid tumors. The Company's second DNAbilize™ drug candidate, Liposomal Bcl2 (BP1002), for the treatment of lymphoma, leukemia, colon, prostate and breast cancers, has completed preclinical studies for non-Hodgkin's lymphoma. Bio-Path is planning a broad Phase 1 clinical trial in lymphoma in 2017. Bio-Path is headquartered in Bellaire, Texas, and currently employs 12 full-time.

SUMMARY

Despite ongoing advancements in the development of nucleic acid drugs, pharmaceutical developers are still facing the challenge of delivering therapeutics to targeted cells without causing severe side effects in the patient. In clinical studies, Bio-Path's therapeutic platform has delivered a strong, effective therapeutic payload, with no evidence of toxicity. This novel target-based platform has the potential to transform the therapeutic landscape of cancer treatment and also address other diseases that have well-defined targets.

- Bio-Path's pipeline continues to expand with new cancer indications. Importantly, once its DNAbilize™ platform is proven successful for cancer, the core technology can easily be expanded to address new therapeutic areas, including autoimmune diseases.
- In contrast to other lipid delivery technologies that have dose-limiting toxicities, DNAbilize™, Bio-Path's next generation oligonucleotide-based technology, enables the delivery of high doses of therapeutics to target cells, while demonstrating no evidence of toxicity. This lack of toxicity enables the development of therapies to address patients, particularly within the growing elderly population, who are unable to withstand aggressive therapeutic regimens, and therefore, have limited available treatment options.
- Bio-Path has completed Phase 1 clinical trials for its lead candidate prexigebersen for AML, CML and other blood cancers, and is in the midst of Phase 2 clinical trial for AML and a Phase 1b/2 clinical trial for CML. Importantly, the Company expects to complete an interim analysis in 2H 2017 of the first 19 patients enrolled in the Phase 2 efficacy trial for AML, with the possibility of switching to a registration trial for accelerated approval.
- The clinical targets for BP1002 are lymphoma, and potentially breast cancer, colon cancer, and prostate cancer. This novel, non-toxic, specific Bcl2 inhibitor could be a significant advance in cancer therapeutics, with the potential to treat 40% to 60% of solid tumors, according to Bio-Path estimates.
- Bio-Path is collaborating with respected academic and clinical institutions, including M.D. Anderson, Thomas Jefferson University and UT Southwestern, to expand indications inside and outside of cancer, which we view as a validation of Bio-Path's DNAbilize™ technology. Going forward, we believe the versatility of the DNAbilize™ platform could represent significant drug development and licensing opportunities for Bio-Path.
- Recent results include a net loss of $397K for the quarter ended 3/31/17 vs. a net loss of $1.87M for the comparable quarter of prior year. While operating expenses were similar Y-O-Y, the Company recognized a $1.6M gain for the change in fair value of warrants for the most recent quarter. Management states that cash on hand of approximately $7M is sufficient to fund operations for the next 12 months.
- With promising clinical data and several programs in the pipeline addressing sizable markets with unmet needs, our valuation analysis for the BP1001 for AML and CML programs alone results in an estimated range of $3.60-$4.45/share, with a mid-point of approximately $3.99. See page 6 for further details.

BUSINESS OVERVIEW

Bio-Path was founded based on antisense and neutral lipid technology licensed from the University of Texas M.D. Anderson Cancer Center. The Company maintains an exclusive license agreement. Bio-Path has subsequently developed its own neutral lipid nanoparticle RNAi technology that is patented and is the basis for development of its DNAbilize™ technology platform. Bio-Path plans to develop therapeutics using this proprietary platform, both independently and by partnering with others, to address a broad range of diseases.

With DNAbilize™ as the drug development and manufacturing platform, Bio-Path is focusing on two drug candidates that address multiple disease indications, including several types of cancers, with an initial focus on hematological malignancies. Bio-Path's lead product candidate, prexigebersen (BP1001), is in Phase 2 studies to treat patients with acute myeloid leukemia (AML), chronic myeloid leukemia (CML) and multiple types of solid tumors, including breast and ovarian cancers. Prexigebersen has received orphan drug status for AML and CML from the FDA, and for AML from the European Medicines Agency. Another DNAbilize™ drug candidate, Liposomal Bcl2 (BP 1002), which is also a liposomal antisense drug, is currently in preparation for an Investigational New Drug (IND) application.

TECHNOLOGY

Simply put, DNAbilize™ is based on blocking the expression of proteins that cause disease (RNA interference, or RNAi). Bio-Path's novel and patented technology enables the development and the delivery of systemic antisense DNA treatments for multiple types of cancers, including solid tumors and hematological cancers, as well as other types of diseases.

Exhibit 1: How DNAbilize™ Works

Source: Company Reports

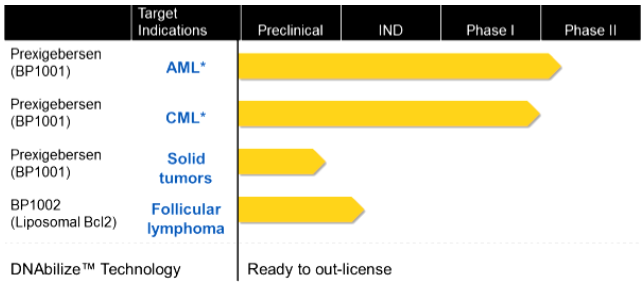
DNA has two strands—the sense strand and the antisense strand. The antisense strand, which is also known as the template strand, is the DNA that carries the genetic information necessary to make proteins because it is the template for messenger RNA (mRNA) synthesis. The synthesis of RNA from DNA is called transcription (the DNA is transcribed into RNA). Outside the cell nucleus, the mRNA sequence is next translated into a protein. Bio-Path's DNAbilize™ technology works by delivering short strands of antisense DNA (antisense oligonucleotides) into the cell which correspond to the target mRNA and hybridize, blocking protein synthesis. DNAbilize™ technology is an RNA-modulating therapeutic that disrupts the expression of proteins that are responsible for the disease.

- **No toxicity -** Unlike many traditional therapies, DNAbilize™ does not introduce a toxic agent into the body to kill the cells. The P-ethoxy DNA does not induce hepatotoxicity or thrombocytopenia, but simply blocks protein production.
- **Higher cellular uptake -** Neutral lipids form structures that are similar to cell membranes, enabling a more efficient delivery in higher doses to the diseased cells through the blood and lymphatic system, as compared with other lipid delivery technologies with dose limiting toxicities.
- **Systemic treatment** – The technology provides systemic distribution of nucleic acid drugs throughout the body with a simple intravenous transfusion.
- **Microscopic-sized liposomes enable penetration into tumors for delivery of drug -** Testing in animals has shown a 10- to 30-fold increase in tumor cell penetration compared to other methods of drug delivery.
- **Proven target inhibition**- DNAbilize™ is a sequence-specific drug, targeting the protein that is causing the disease. It inhibits only the target protein, and no off-target effects have been observed.

With the rise of "personalized therapy" as an important topic of research over the last several years, multiple companies have performed clinical trials using antisense oligonucleotides (AONS) as RNA-modulating therapeutics. The results have been disappointing, primarily due to toxicity induced by either the DNA backbone or the lipid delivery. These therapies have historically used positively charged lipids to form complexes between lipids and the targeted molecules. Due to their instability in plasma and hepatic clearance, these approaches have been dose limiting. While many companies have focused on overcoming the limitations posed by DNA instability or lipid delivery, Bio-Path's DNAbilize™ drug delivery and antisense technology successfully overcomes the limitations of AONS therapies by combining a neutral charge P-ethoxy DNA backbone. This combination enables the delivery of high doses of drugs, while minimizing toxicity. DNAbilize™ could prove to be the first antisense therapeutic to effectively treat hematological and systemic diseases relating to the blood and lymph systems.

CLINICAL TRIALS

Exhibit 2: Product Candidates in Development



Source: Company Reports

Bio-Path has two product candidates in various stages of development that target multiple indications: prexigebersen and BP1002 (Liposomal Bcl2). The Company's lead drug, prexigebersen, targets Grb2, a protein that bridges activated and mutated cellular kinases (altering cellular functionality) and the proteins involved in the process of cell proliferation. Inhibiting

Grb2 function impairs developmental processes and blocks the transformation and proliferation of the diseased cancer cells.

Phase 1 Clinical Trial - Prexigebersen for AML, CML and MDS- This Phase 1 trial, which was conducted at M.D. Anderson Cancer Center, was designed to determine the safety and tolerance of escalating doses of prexigebersen in AML, CML and MDS patients who were refractory or resistant to current therapies, having failed an average of 6 prior therapies. The original IND outlined for a maximum dose of 50 mg/m2, but because there had been no evidence of significant toxicity, in November 2012, the FDA permitted a change in protocol allowing for higher doses. In October 2014, three patients were then treated with 90 mg/m2, with no evidence of significant toxicity.

Summary of results:

- Data demonstrated that Bio-Path's technology successfully delivered the antisense drug substance to the cell and across the cell membrane into the interior of the cell, where expression of the target protein (Grb2) was blocked
- Of the 18 evaluable patients with circulating blasts, 83% showed decreased circulating blasts/ anti-leukemic activity
- 63% of evaluable patients showed greater than 50% reduction of circulating blasts
- The drug was well tolerated, with no dose limiting toxicities observed

As shown in Exhibit 3, the Grb2 levels decreased in 11 of 13 patient samples by the end of treatment. Inhibition of the disease-causing protein has the effect of down regulating the disease; phosphorylated (pErk), a protein downstream of the Ras protein, was decreased in 58% of the samples. This potentially enables prexigebersen to be used in combination with current frontline therapies, and also as a potential standalone treatment. These results marked a milestone for antisense therapies, with development efforts that have been hindered by safety concerns and problems with delivery into the interior of the cell.

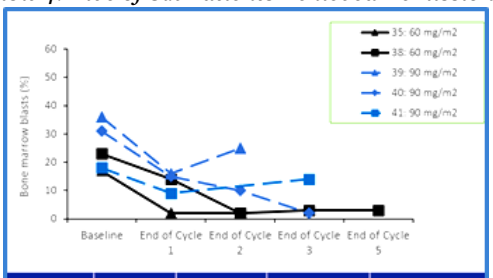
Exhibit 3: Decrease in Disease-causing Proteins

Subject Number	Cohort	BP1001 dose (mg/m²)	Grb2 Decrease (Day 15)	pErk Decrease (Day 15)	Grb2 Decrease (EOT)	pErk Decrease (EOT)
022	3	20	0%	0%	57%	0%
023	3	20	0%	3%	28%	45%
024	3	20	56%	28%	47%	35%
025	4	40	63%	82%	54%	91%
026	4	40	47%	0%	0%	0%
027	4	40	NS[1]	NS[1]	34%	27%
028	5	60	0%	0%	30%	54%
029	5	60	57%	51%	65%[2]	0%[2]
030	5	60	54%	55%	43%	47%
031	6	90	0%	0%	0%	0%
032	6	90	85%	54%	91%	63%
033	6	90	13%	13%	53%	2%
034	6	90	42%	42%	40%	0%

Source: Company Reports

Phase 1b/2 Clinical Trial – Safety Trial of Prexigebersen in Combination with Low-dose Cytarabine Treating AML - The Company completed the safety segment of the Phase 2 clinical trials, which demonstrated anti-leukemic activity with no adverse events and no negative synergies using prexigebersen with LDAC (low-dose cytarabine).

Exhibit 4: Five of Six Patients Achieved Remission



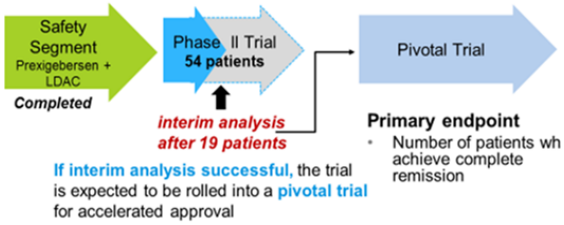
Patient	BP1001 (mg/m²)	BM Blasts % Reduction	Cycles completed	Response
35	60	88	1	CR
37	60	0	1	PD
38	60	91	5	CR
39	90	56	3	PR
40	90	68	3	CR
41	90	50	3	PR

Source: Company Reports

There were two cohorts, with three patients in each cohort, one group receiving 60 mg/m² and one group receiving 90 mg/m2. As illustrated in Exhibit 4, of the six evaluable patients from the trial, three patients achieved complete remission and two patients achieved partial remission. This corroborates the decrease of Grb2 protein and the positive effect on bone marrow blasts observed in the Phase 1 trial.

Phase 2 Clinical Trial - Efficacy Trial of Prexigebersen Combined with Low-dose Cytarabine for Treating AML - The Phase 2 efficacy trial of prexigebersen in combination with low-dose cytarabine for the treatment of AML is underway. The efficacy trial will take place in 10 leading cancer centers throughout the U.S., with six sites currently enrolling patients. The trial will compare safety profile, pharmacokinetics, pharmacodynamics, and efficacy of 60 mg/m² of prexigebersen combined with LDAC vs. the response rates documented for LDAC alone. The study involves newly diagnosed, previously untreated patients, who are not eligible for, or who have opted to forego, high-intensity chemotherapy or have elected to have a low intensity regimen.

Exhibit 5:Phase 2 Efficacy Trial Design for AML Prexigebersen Combination Therapy



Source: Company Reports

The primary endpoint is complete remission, including patients achieving incomplete hematologic recovery and complete remission with incomplete platelet recovery. Secondary endpoints will assess aspects relating to safety and efficacy of prexigebersen. The first patient was dosed in November 2016. The trial design includes approximately 54 previously untreated AML patients. After 19 patients have received treatment, the

Company will analyze the interim results, which will likely be released in 2H 2017, and if the results exceed the statistically determined thresholds, Bio-Path may seek FDA approval to convert the trial to a registration trial for accelerated approvals.

Phase 1b/2 - Prexigebersen for Chronic Myeloid Leukemia - The Company is preparing to enroll patients in a Phase 1b/2a study to determine the dose-limiting toxicity and maximal tolerated dose of prexigebersen combined with dasatinib in patients with Philadelphia chromosome positive CML in accelerated blast phase. The trial is expected to begin in the second half of 2017. Based on clinical data involving CML patients, prexigebersen demonstrated the potential to provide the 33% of patients who are resistant to the current standard of care for CML, Gleevec® (imatinib), with an alternative treatment.

Summary of results:

- Prexigebersen has demonstrated the ability to decrease the proliferation of Gleevec®-resistant CML cells in a dose-dependent manner
- Prexigebersen pretreatment enhanced the inhibitory effects of Sprycel® (dasatinib) in CML cells, leading to cell death
- Five CML blast phase patients were enrolled in the first cohort (5 mg/m² dose of prexigebersen) of the Phase 1 clinical study. Two CML patients, who had drug resistant mutations, showed significant reductions in circulating blasts during treatment
- One patient's blasts were reduced from 89% to 12%, while another patient's blasts were reduced from 24% to 7%

Pre-clinical –Prexigebersen for Treatment of Solid Tumors - Bio-Path believes that solid tumors with activated or mutated tyrosine kinases as targets for prexigebersen would have a high degree of success. In preclinical studies, leaders in the field of ovarian and breast cancer at M.D. Anderson are currently assessing prexigebersen in the treatment of solid tumors. The results from these preclinical studies will be used to evaluate the efficacy of prexigebersen, both as a monotherapy and in combination with front line therapies, in the treatment of solid tumors. Current indications include triple negative breast cancer, inflammatory breast cancer and ovarian cancers.

BP1002 – Liposomal Bcl2 Antisense - BP1002 is a neutral-charge, liposome-incorporated antisense drug designed to inhibit protein synthesis of Bcl2, a protein that promotes the survival of cells and inhibits apoptosis. The Company recently announced the results of preclinical in-vitro and in-vivo studies supporting BP1002 as a potential treatment in aggressive non-Hodgkin's lymphoma NHL). In two animal studies, none of the control group mice survived beyond 39 days. In the BP1002 arm of the study, a combined 87% of the mice survived until the end of the 5-week study. In 2017, Bio-Path is planning to initiate a Phase 1 clinical trial of BP1002 in patients with follicular lymphoma, which is the most common form of non-Hodgkin's lymphoma.

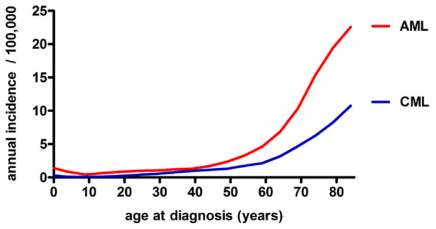
Collaborations

Bio-Path is collaborating with respected academic and clinical institutions to expand indications in oncology and outside of cancer, which we view as further validation of Bio-Path's DNAbilize™ technology. M.D. Anderson is developing clinical and preclinical programs that address cancers with significant unmet needs including pancreatic, triple negative and inflammatory breast and advanced ovarian cancers. Thomas Jefferson University has launched a program to establish DNAbilize™ technology for glioblastoma immunotherapy. Beyond oncology, UT Southwestern is developing a clinical and preclinical pipeline for systemic lupus erythematosus.

MARKET OPPORTUNITY

Bio-Path's initial targets are myeloid neoplasms, a subset of hematologic malignancies that include acute myeloid leukemia and chronic myeloid leukemia, which are defined according to the percentage immature blasts in the bone marrow. The incidence of AML and CML dramatically increases with age (Exhibit 6). Particularly in the elderly, who often cannot tolerate aggressive therapies, there remains a dire unmet need for an effective, non-toxic therapy.

Exhibit 6: Annual Incidence of AML and CML in U.S. by Age



Source: National Cancer Institute

Although there have been two specialized drug approvals, AML treatment has generally remained unimproved in the last 20 years and consists of induction cytotoxic chemotherapy. Even with these highly toxic chemotherapies, less than 30% of AML patients survive long-term. The prognosis for patients over 65 is dismal. Treatment failure often occurs due to therapy-related complications, such as infections and toxicity, and there is a high disease relapse rate after a first remission in AML therapy.

CML is characterized by the overproduction and accumulation of mature, functionally impaired myeloid cells, primarily granulocytes. The incidence of the disease dramatically rises with age. Without treatment, chronic phase CML generally turns into blast crisis, and the disease becomes similar to AML. Blast crisis CML is highly resistant to treatment, and median survival of patients is approximately 4–8 months.

RISKS

Competition - Bio-Path would be unable to compete effectively if its technology or its pipeline were to be rendered noncompetitive or obsolete by novel technologies or products that are more effective or less costly.

Clinical trials - The path to commercialization requires multiple clinical trials. If the Company is unable to prove safety and efficacy of its product candidates, the result could be in increased costs and a delay in generating revenue. Management states that current cash resources are sufficient to fund operations for the next 12 months.

Reimbursement -Even if Bio-Path's drug candidates are approved, they may not gain market acceptance among patients, healthcare payors and the medical community due to the pricing or reimbursement status of the drug candidates, and as a result, the Company's topline could suffer.

STONEGATE CAPITAL PARTNERS

INCOME STATEMENT

Bio-Path Holdings, Inc. (NasdaqCM: BPTH)
Consolidated Statements of Income (in thousands $, except per share amounts)
Fiscal Year: December

	FY 2014	FY 2015	FY 2016	FY 2017 E
Revenues				
Product revenues	$ -	$ -	$ 13.0	$ -
Total product revenues	**$ -**	**$ -**	**$ 13.0**	**$ -**
Cost of revenues				
Cost of product revenues	-	-	-	-
Total cost of revenues	-	-	-	-
Gross (loss) profit	**-**	**-**	**13.0**	**-**
Operating expenses				
General and administrative	2,715.0	2,465.0	3,014.0	3,970.0
Research and development	1,827.0	3,020.0	5,474.0	4,476.0
Total operating expenses	4,542.0	5,485.0	9,508.0	8,446.0
Income (loss) from operations	**(4,542.0)**	**(5,485.0)**	**(9,495.0)**	**(8,446.0)**
Other income / (expense)				
Change in fair value warrant liability	-	-	1,713.0	1,596.0
Interest income	23.0	18.0	12.0	12.0
Total other (income) / expense	23.0	18.0	1,725.0	1,608.0
Pre-tax income (loss)	**(4,519.0)**	**(5,467.0)**	**(7,770.0)**	**(6,838.0)**
Income taxes (benefit)	-	-	-	-
Net income (loss)	**(4,519.0)**	**(5,467.0)**	**(7,770.0)**	**(6,838.0)**
Basic and diluted EPS (loss)	**$ (0.05)**	**$ (0.06)**	**$ (0.08)**	**$ (0.07)**
Weighted Average Basic and Diluted Shares Outstanding	89,282.0	89,763.0	92,704.0	97,872.5
EBITDA	(4,371.0)	(5,283.0)	(9,291.0)	(8,154.0)
Adjusted EBITDA	(3,967.0)	(4,914.0)	(8,711.0)	(7,158.0)

Growth Rate Analysis Y/Y				
General and administrative	66.1%	-9.2%	22.3%	31.7%
Research and development	11.8%	65.3%	81.3%	-18.2%
Net income (loss)	-38.4%	-21.0%	-42.1%	12.0%
EPS	-10.6%	-20.3%	-37.6%	16.6%
EBITDA	-40.6%	-20.9%	-75.9%	12.2%
Weighted Average Basic and Diluted Shares Outstanding	25.1%	0.5%	3.3%	5.6%

Source: Company Reports, Stonegate Capital Partners estimates

VALUATION

We are projecting total operating expenses of approximately $8.4M, and we have assumed that Bio-Path finishes the FY17E year with a net loss of approximately ($6.8)M, or ($0.07) per share, with approximately 100.1M shares outstanding. This activity will support BPTH's objectives for the year, with its lead candidate prexigebersen in Phase 2 for AML and CML, and a second drug candidate being readied for IND to start a Phase 1.

We believe that an appropriate tool for analyzing the longer-term opportunity for Bio-Path is through a discounted cash flows analysis. Exhibit 7 presents a summary of the detailed analysis we performed based on certain assumptions for the Company's AML and CML programs with the most advanced clinical work, providing sensitivity for discount rates and terminal growth rates. Given the still fairly early stages of the other programs, we have not factored them into the analysis at this point, although we note that several indications show significant promise to move forward quickly following success of Bio-Path's lead candidate prexigebersen.

We have assumed that commercialization of BP1001 for AML begins in 2020 and for CML in 2021, given the Company's current progress in clinical trials and the orphan drug designation. We have incorporated a US population of 20,000 patients for AML and 8,000 for CML, out of which we assume that approximately 1/3 will be eligible for treatment with BP1001; we have doubled those figures to incorporate the European population. We show market penetration ramping up to 30% of the total population by 2026; we used an average price of $120,000 per patient per year, with annual increases around 3%. We factor in a probability of commercialization of 30%.

We have made conservative assumptions on Bio-Path's changes in working capital, depreciation and amortization, as well as capex going forward. We have incorporated a tax rate of 35% beginning in 2021. The Company reported a tax loss carryforward of $27M as of 12/31/16 as well as a $1.3M tax credit R&D carryforward.

A mid-range discount rate of 25% has been included, which we feel is appropriate given the stages of the programs, regulatory hurdles both in the US and abroad, and the need for reimbursement approvals. We have incorporated terminal values ranging from 0% - 4%. Our discounted cash flows analysis for the AML and CML BP1001 programs results in the range of valuation of approximately $3.60 - $4.45, with a midpoint of approximately $3.99. BPTH currently trades at $0.40 per share.

Again, we point out that this analysis covers the potential of the BP1001 for AML and CML programs only at this point, with several other promising programs in the pipeline that could follow just years behind given continued impressive results from the clinic; additionally, the DNAbilize™ technology has applications in several other disease areas outside cancer and can likely be outlicensed as well. Furthermore, we note that while we feel that we have attempted to include conservative assumptions within our analysis, downside to any one of those inputs can significantly lower the estimated ranges, and in keeping with that idea, it is appropriate for investors revisit the risks associated with clinical stage development companies in the process of seeking initial FDA approval and drug commercialization.

Exhibit 7: Summarized DCF Analysis

		Terminal Growth Rates				
		0%	1%	2%	3%	4%
Discount Rate	23.0%	$4.54	$4.64	$4.75	$4.88	$5.01
	24.0%	$4.17	$4.26	$4.35	$4.45	$4.57
	25.0%	$3.84	$3.91	$3.99	$4.08	$4.18
	26.0%	$3.54	$3.60	$3.67	$3.74	$3.83
	27.0%	$3.27	$3.32	$3.38	$3.44	$3.51

Source: Company Reports, Stonegate Capital Partners, Capital IQ

CORPORATE TIMELINE

April 2017
Announced results of preclinical in-vitro and in-vivo studies supporting the potential of BP1002 in the treatment of aggressive non-Hodgkin's lymphoma

November 2016
Dosing of first patient in the efficacy portion of the Phase 2 trial for AML announced

October 2016
Received orphan drug designation for prexigebersen in the European Union for the indication of AML

April 2015
Received orphan drug designation from the FDA for prexigebersen in AML

February 2015
Began enrollment into the combination therapy Phase 1b clinical trial for prexigebersen in patients with AML

August 2013
Clinical confirmation received that treating patients with BP1001 inhibits the Grb2 disease-causing target protein in patients with blood cancers

November 2011
Announced that since there had been no evidence of significant toxicity from treatment of patients with L-Grb2, the Company had requested that the FDA to allow higher dosing

July 2010
BPTH initiated Phase 1 clinical trial of BP1001

March 2010
FDA accepted IND for Bio-Path's lead cancer drug candidate liposomal BP1001 allowing it to proceed into clinical trials

March 2010
Common stock ceased trading on the OTCQX and commenced trading on The NASDAQ Capital Market under the ticker symbol BPTH

February 2008
Company completed a reverse merger with Bio-Path subsidiary

February 2006
Company becomes publicly traded

BIO-PATH HOLDINGS GOVERNANCE

Peter Nielsen, President, Chief Executive Officer, Chief Financial Officer – Peter Nielsen co-founded Bio-Path Holdings in 2007. Since the Company's founding, Mr. Nielsen has been responsible for advancing its lead product candidate into Phase 2 studies, for introducing additional candidates into Bio-Path's pipeline, and for overseeing the Company's IPO. Prior to co-founding Bio-Path, Mr. Nielsen served as a senior level executive for several companies, where his responsibilities included developing and implementing strategies for growth. Before he became involved with the biotechnology sector, Mr. Nielsen served as a lieutenant in the U.S. Naval Nuclear Power program, where he was Director of the physics department. He also worked in product development for Ford Motor Company. Mr. Nielsen's educational background includes degrees in engineering and mathematics, and an MBA from the University of California at Berkeley.

Ulrich Mueller, Ph.D., Chief Operating Officer - Dr. Ulrich Mueller joined Bio-Path in 2014. Prior to joining the Company, he was Vice President at the Fred Hutchinson Cancer Research Center, where his responsibilities included clinical research agreements, licensing the institutions' intellectual property and industry contracts with pharmaceutical companies. His professional background also includes serving a Managing Director in the Office of Technology Commercialization at the University of Texas M.D. Anderson Cancer Center. Dr. Mueller holds a doctorate degree in cell and molecular biology from the Baylor College of Medicine, a master's degree in biology from Texas A&M University and a bachelor of science in microbiology from New Mexico State University.

William Hahne, M.D., Vice President of Clinical Research – Dr. Hahne joined Bio-Path in 2017. Previously, he was a medical consultant for multiple organizations focused on oncology. He also held a number of management and executive-level positions in clinical research and medical affairs at biotechnology and global pharmaceutical companies, including Celator Pharmaceuticals, Celsion Corp., Glaxco Inc., Hoechst Marion Rousel, and Eisai, Inc. Dr. Hahne has a BA in chemistry from Grinnell College. He received his medical degree from Cornell University and completed his residency in general surgery at Emory University Affiliated Hospitals in Atlanta, Georgia.

Ana Tari Ashizawa, Ph.D., MBA, Director of Research – Dr. Ashizawa is a scientific co-founder of Bio-Path Holdings. As an expert in neutral lipid delivery technology, she was instrumental in the development of the Company's technology. Previously, she was an Associate Professor at the University of Texas M.D. Anderson Cancer Center and the University of Florida, Gainesville. She earned a doctorate in biochemistry from the University of Tennessee and an MBA from University of Florida.

Tara Sadeghi, M.P.H, Director of Clinical Operations – Ms. Sadeghi joined Bio-Path in 2015. She was previously the Assistant Director of the Cord Blood Bank Regulatory and Quality Assurance office at the University of Texas M.D. Anderson Cancer Center. Ms. Sadeghi has over 24 years of experience in drug development and clinical operations. She also has experience in developing liposomal drug formulations for clinical testing. She has a BS from the University of Louisiana at Lafayette.

Suzanne Kennedy, Ph.D., Director of Corporate Development – Dr. Kennedy joined Bio-Path in 2014. Prior to joining the Company, she was in global marketing at QIAGEN and Thermo Fisher and Director of Research and Development for MO BIO Laboratories. She earned a doctorate from Virginia Commonwealth University in microbiology and immunology.

Anthony Price, MBA, Director, Finance and Accounting – Mr. Price joined the Company in 2014. Previously, he was Associate Director of Finance and Accounting for Lexicon Pharmaceuticals, Inc. and held various financial and accounting management positions for Building Materials Holding Corporation. He has a Bachelor of Science in business administration-finance from California State University, Fresno and an MBA from Colorado State University.

Board of Directors:

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