

**MARKET STATISTICS**

Exchange / Symbol	NasdaqGS: SPPI
Price:	\$18.64
Market Cap (\$mm):	\$1,895.7
Enterprise Value (\$mm):	\$1,706.4
Shares Outstanding (mm):	101.7
Float:	73%
Volume (3-month avg., mm):	1.3
52-week Range:	\$5.47 – \$23.50
Industry:	Biotechnology

**CONDENSED BALANCE SHEET**

(\$mm, except per share data)

Balance Sheet Date	12/31/2017
Cash & Cash Equivalents:	\$227.6
Cash/Share:	\$2.24
Debt:	\$38.2
Equity (Book Value):	\$351.3
Equity/Share:	\$3.45

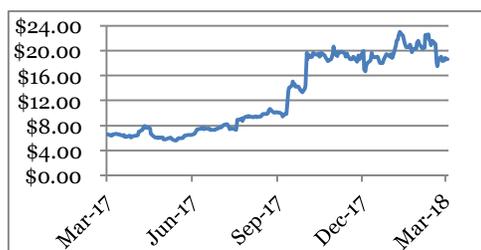
**CONDENSED INCOME STATEMENTS**

(\$mm, except per share data)

FY - 12/31	Revs	Income	Adj. EBITDA	EPS
FY15	\$162.6	(\$50.8)	(\$0.5)	(\$0.78)
FY16	\$146.4	(\$68.5)	(\$22.7)	(\$0.94)
Fy17	\$128.4	(\$91.2)	(\$53.5)	(\$1.07)
FY18E	\$100.3	(\$110.2)	(\$83.0)	(\$1.12)

**LARGEST SHAREHOLDERS**

BlackRock, Inc.	15,989,900
Vanguard Group, Inc.	7,932,200
Consonance Capital	7,383,500
FMR, LLC	7,035,700
Renaissance Technologies Corp.	6,180,900
PRIMECAP Management Co.	5,666,000
State Street Global Advisors, Inc.	4,112,700
Dimensional Fund Advisors, LP	2,462,900
D.E. Shaw & Co., LP	1,988,500
Goldman Sachs Group	1,507,200

**STOCK CHART**

**COMPANY DESCRIPTION**

Spectrum Pharmaceuticals, Inc. is focused on the acquisition, development and commercialization of proprietary drugs, primarily addressing the oncology/hematology markets. Spectrum's business strategy involves in-licensing or acquiring diversified drugs as well as creating an expanding pipeline of prospective candidates in late-stage Phase 2 and Phase 3 clinical trials. Over the years, the Company has developed comprehensive in-house clinical development/regulatory capabilities, along with an extensive commercial network, including a direct sales force in the U.S. and distributors in Europe and Japan for its marketed products. Spectrum's diverse portfolio consists of six marketed oncology drugs and a pipeline with three advanced stage products that address sizable markets. Spectrum Pharmaceuticals is headquartered in Henderson, Nevada, and as last reported, the Company had 227 employees.

**SUMMARY**

Over the last several quarters, Spectrum's primary focus has shifted beyond its established portfolio of niche cancer drugs to opportunities for its newer drugs, with three in its late-stage pipeline (Pozitotinib, Rolontis™, and Qapzola®), and all of which have meaningful competitive advantages and address indications with significant populations. In our opinion, the success of these drugs has the potential to transform the Company outlook in a relatively short time.

- Pozitotinib** - This novel oral, pan-HER inhibitor has shown single agent clinical activity in some multi-billion dollar indications, including breast, gastric, lung, and colorectal cancers. Spectrum and its Korean partner, Hanmi Pharmaceutical Co., are currently conducting separate Phase 2 clinical trials involving patients with breast cancer and other solid tumors that should read out in 2018. Also, Spectrum recently presented data from its ongoing Phase 2 study as part of a collaboration with MD Anderson Cancer Center evaluating Pozitotinib in EGFR exon 20 Mutant Non-Small Cell Lung Cancer; preliminary results were impressive, including an objective response rate of 73%, and the Company has now started its own multi-center trial with a similar design.
- Rolontis™** - In a Phase 2 trial for Rolontis™, Spectrum's long-acting granulocyte colony-stimulating factor (G-CSF) for neutropenia, the drug showed non-inferiority in the two highest doses and superiority in the highest dose over non-biosimilar Neulasta®, Amgen's (NYSE: AMGN) \$4 billion blockbuster drug. As most recently announced in February 2018, in its Phase 3 trial ADVANCE, the drug met its primary endpoint of non-inferiority in duration of severe neutropenia, and enrollment of a second Phase 3 RECOVER trial has been completed. Spectrum plans to file a Biologics License Application (BLA) in the U.S. in the fourth quarter of 2018 and in Europe in 2019.
- Qapzola®** - Qapzola® is a novel tumor-activated drug for the treatment of bladder cancer, which recently began enrolling for a registrational Phase 3 study. The current study is being conducted under SPA and has the benefit of being designed following results of earlier work as well as FDA input.
- Evomela®** - In May 2016, Spectrum began marketing Evomela®, a conditioning treatment used prior to stem cell transplantation in patients with multiple myeloma, a highly prevalent cancer that accounts for 1% to 2% of all cancers. Evomela® sales have increased dramatically since its launch, reaching \$16.2M total for FY16 and most recently over \$35M for FY17. While we look for leading transplant facilities to continue to recognize Evomela's® notable advantages over competing products including a lack of propylene glycol, increased stability, longer shelf life and ease of use, recent entry into the market by generics could create pricing pressure.
- Valuation** - On an EV/S basis for 2018E, the Company currently trades at a 17.0x multiple vs. the average of its peers at 20.2x and a P/B of 5.5x vs. the average of its peers at 8.6x. See pages 9-10 for details.

## OVERVIEW

Spectrum Pharmaceuticals, Inc. is a fully integrated biotechnology company with commercial capabilities and a strong research platform. Spectrum acquires and develops advanced stage drug candidates as well as approved drugs that enhance the value of its portfolio of oncology products. The Company's six marketed products generally target niche markets, including advanced metastatic colorectal cancer, non-Hodgkin's lymphoma and multiple myeloma. Exhibit 1 shows the currently marketed drugs, three of which (Marqibo®, Beleodaq® and Evomela®) have been launched in recent years. The revenue from these drugs helps fund the clinical development and product expansion of the Company's portfolio.

Exhibit 1: Currently Marketed Drugs



Source: Company Reports

Spectrum has three drugs in late-stage development that target significant markets: Pozitotinib, a novel, pan-HER inhibitor that is currently under development for breast, lung, gastric, head and neck cancers, Rolontis™, a drug that addresses chemotherapy-induced neutropenia in breast cancer patients, and Qapzola®, a late-stage bladder cancer drug.

## BUSINESS STRATEGY

### History of successful deals with infrastructure to support development through commercialization

Spectrum's business strategy involves in-licensing or acquiring late-stage or FDA approved drugs, thereby avoiding the lengthy developmental timelines and the inherent risk of the early in-house drug discovery process. The deal structures usually include a combination of upfront payments, paid when the license is signed, milestone payments when the Company reaches developmental milestones, and royalties paid when the product reaches commercialization. And Spectrum has a history of making some very strategic acquisitions. Although they often have 10 to 12 drugs on their radar at any given time, they usually complete one or two deals a year, typically acquiring the products at two to three times sales. The Company can then leverage its existing infrastructure to support development through commercialization.

Although the Company derives the majority of its revenue from drug sales to pharmaceutical wholesalers and distributors, to a lesser extent Spectrum derives revenue through license fees and royalties from outlicensing certain products. When Spectrum acquires the global rights to a drug in a region where the Company has not yet built an infrastructure, it out-licenses the rights to the product to one of its partners. For example, in early 2016, the Company signed a strategic partnership with Servier Canada, which expanded the reach of four marketed drugs into Canada.

## Partnerships

Leveraging industry ties in the pharmaceutical market has also enabled Spectrum to establish strategic partnerships with biotechnology and pharmaceutical companies, which is an integral part of executing its in-licensing business model. Exhibit 2 provides a list of Spectrum's in-licensing and co-development partners.

Exhibit 2: In-licensing and Co-development Partners



Source: Company Reports

## COMMERCIAL PORTFOLIO

Spectrum has a diversified portfolio of proprietary drugs. Exhibit 3 lists the six drugs that that Spectrum and its subsidiaries currently market.

Exhibit 3: Product Portfolio

	FUSILEV	FOLOTYN	ZEVALIN	MARQIBO	BELEODAQ	EVOMELA
Indication	1) Osteosarcoma 2) Palliative treatment of patients with mCRC	Relapsed/ Refractory PTCL	1) Relapsed/ Refractory Follicular NHL 2) Front-line consolidation Follicular NHL	Second-line (Ph-) ALL	Relapsed/ Refractory PTCL	1) Conditioning for transplant in MM 2) Palliative treatment of patients with MM
Approval	March 2008	September 2009	February 2002	August 2012	July 2014	March 2016
Acquired/ In-Licensed	April 2006, Targent	September 2012, Allos Therapeutics	2009/2012 Cell Therapeutics/ Bayer	July 2013, Talon Therapeutics	February 2010 Topo Target	March 2013, Ligand Pharmaceuticals
Patent Coverage/ Market Exclusivity	2018	2025	2019	2020	2027	2033

Source: Company Reports

### Fusilev® (levoleucovorin)

Spectrum's first approved drug, Fusilev® (levoleucovorin), is marketed for (1) metastatic colorectal cancer (CRC) patients in combination with chemotherapy, and (2) a rescue therapy in osteosarcoma patients. The Company has recognized healthy sales of Fusilev® since 2008, but in March 2015, a U.S. District Court ruled that Sandoz's (NYSE: NVS) levoleucovorin formulation, does not infringe on Spectrum's Fusilev® composition of matter patent, opening the door to generic competition in the osteosarcoma indication.

On the Company's most recent earnings call management announced that due to the decreased margins from generic competition, Spectrum does not anticipate much income from this product moving forward, and it has turned its attention to newer growth franchises, particularly its near-term pipeline opportunities.

#### **Folotyn® (pralatrexate)**

Another of Spectrum's marketed drugs, Folotyn® (pralatrexate) injection, received FDA approval in September 2009 and was added to Spectrum's oncology portfolio in September 2012 with the acquisition of Allos Therapeutics. Folotyn® is a niche drug approved in the U.S. for the roughly 6,000 people annually who are diagnosed with peripheral T-cell lymphoma (PTCL), and who have relapsed or are refractory to treatment with standard chemotherapy. Folotyn® was the first drug approved for PTCL, and despite there being two other drugs on the market that address the indication—Celgene's (NASDAQ: CELG) romidepsin, and Seattle Genetics's (NASDAQ: SGEN) brentuximab vedotin, Spectrum continues to be the leader in the refractory PTCL market. Generic versions of Folotyn® will not be permitted on the U.S. market until November 2022.

Recently, the Company announced that Folotyn® had received approval for marketing in Japan for the treatment of adult patients with relapsed or refractory PTCL; as a result, Spectrum is due future milestones and royalties on sales.

In addition to the drug's current focus on PTCL, because Folotyn® contains methotrexate, a drug used successfully in treating breast cancer, bladder cancer and lung cancer, Spectrum is exploring the use of the drug with these additional cancer targets, both as a single agent and in combination with chemotherapy regimens.

#### **Zevalin® (ibritumomab tiuxetan)**

An additional niche drug that Spectrum markets is Zevalin® (ibritumomab tiuxetan), a radiolabeled monoclonal antibody for relapsed/refractory low-grade or follicular B-cell non-Hodgkin's lymphoma (fNHL) and a consolidation therapy used after the first line treatment of fNHL. Spectrum obtained the ex-U.S. commercial rights to the drug from Bayer in early 2012. Upon acquiring the rights to Zevalin®, Spectrum worked to improve sales and market penetration by both addressing certain reimbursement issues and by also improving marketing efforts for the drug. However, Zevalin® sales saw some quarterly declines in 2017 due to the availability of new competitive drugs in the marketplace.

#### **Marqibo® (vincristine sulfate liposome injection)**

Marqibo® is a niche drug in Spectrum's product portfolio that is approved for adult patients with acute lymphoblastic leukemia (ALL) that have relapsed two or more times, or who have not responded to two or more lines of anti-leukemia therapy. Of the approximately 6,000 patients diagnosed with ALL each year, roughly 1,600 have had two or more relapses. In addition to refractory ALL, Spectrum is exploring the use of Marqibo® in broader acute lymphoblastic leukemia and in other indications, including non-Hodgkin lymphoma.

#### **Beleodaq® (belinostat)**

Beleodaq® (belinostat) is a histone deacetylase (HDAC) inhibitor that was approved in July 2014 for treatment of relapsed or refractory peripheral T-cell lymphoma using the FDA accelerated approval program based on response rate and duration. By inhibiting all three classes of HDACs, Beleodaq® differs from other marketed HDAC inhibitors that inhibit a single class of HDAC enzymes. Other characteristics that set Beleodaq® apart include efficacy when used as a single agent, less toxicity in terms of reported adverse events, less bone marrow toxicity, and a lack of severe side effects, which may enable the drug to be combined with other cytotoxic agents.

#### **Evomela® (melphalan for injection)**

Spectrum launched its sixth drug, Evomela® (melphalan for injection), in May 2016. Evomela® is a drug that Spectrum licensed from Ligand Pharmaceutical, Inc. (NASDAQ: LGND) in March 2013. Per the agreement, Spectrum gained global development and commercial rights to the drug and assumed responsibility for completing the pivotal Phase 2 study and filing the NDA. For its part, Ligand received a license fee, along with milestone payments and royalties on the commercialized product. In March 2016, the FDA approved the drug for two indications: (1) a high-dose conditioning treatment for use prior to stem cell transplantation in patients with multiple myeloma, and (2) a palliative treatment option for multiple myeloma patients for whom oral therapy is not appropriate.

Evomela® is a one-vial intravenous formulation of melphalan, which is the most frequently used IV agent for conditioning patients prior to undergoing autologous stem cell transplantation. Melphalan works by inhibiting DNA and RNS synthesis, which are functions necessary for the cancer cell's survival. The drug was launched into a market that was already genericized; however, Evomela® differs in its formulation from the generics currently available on the market in some important ways:

- (1) It avoids the use of propylene glycol, which has been associated with renal and cardiac side effects and has previously limited the use of the compound in higher quantities.
- (2) It uses Captisol® technology, which increases the stability of the product, enabling longer administration durations and slower infusion rates and allowing the administration of a higher dose intensity of pre-transplant chemotherapy. The addition of Captisol® enables the solution to be stable for four hours at room temperature compared with one-hour efficacy and stability for solutions without the inclusion of Captisol®.

With the goal of gaining market share, management priced Evomela® to be competitive with the generics. In FY16, sales totaled \$16.2M. Most recently, FY17 sales alone came in at over \$35M. In just over a year following its launch, Evomela® captured approximately 50% market share per management. The primary focus has been on gaining formulary access for Evomela® in leading U.S. institutions. This is a concentrated market with approximately 100 accounts across the country making up over 90% of potential sales. More than half of the market is comprised of the 20 leading transplant centers, and these large facilities can take several months to accept and integrate new products into their operations. However, recent pricing pressure from new generic entrants could affect sales moving forward.

## DEVELOPMENT PIPELINE

### Poziotinib (quinazoline-based pan-HER inhibitor)

In February 2015, Spectrum in-licensed Poziotinib, a novel pan-HER inhibitor in Phase 2 trials from its Korean partner, Hanmi Pharmaceutical. Poziotinib irreversibly blocks signaling through the epidermal growth factor receptor (EGFR, HER) group of tyrosine-kinase receptors, which includes HER1, HER2 and HER4. The overexpression of EGFR is associated with a number of cancers, including non-small cell lung cancer (NSCLC), breast, gastric, and colorectal cancers.

**Phase 1 clinical trial** - In Phase 1 clinical trials involving patients who had failed multiple lines of treatment, including HER2 directed therapies, 60% of the breast cancer patients demonstrated partial responses. Exhibit 5 illustrates that of the ten patients who had been on multiple types of treatments and were given different doses of Poziotinib, only two patients did not have a response, and those were the two patients who received the smallest dose of the drug.

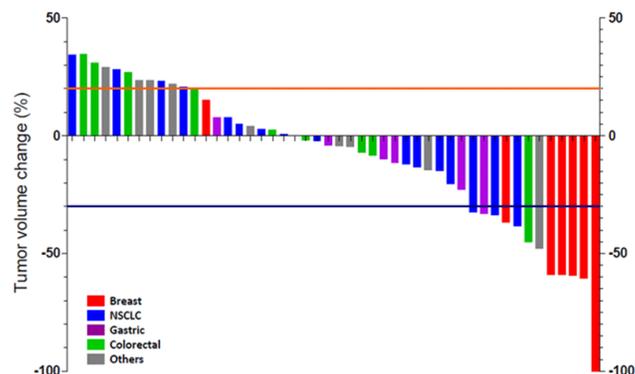
Exhibit 5: Poziotinib Phase 1 Study Results

Study*	Initial Dose	Previous Lines of Therapy	Prior HER-2 Directed Therapies	Safety AEs of Interest	Best Overall Response
HM-PHI-101	1 mg	7	Trastuzumab, Lapatinib	Rash G1	PD
	2 mg	6	Trastuzumab, Lapatinib	Diarrhea G1	PD
	20 mg	3	Trastuzumab, Lapatinib	Rash G2, Diarrhea G2	PR
	24 mg	4	Trastuzumab, Lapatinib	Mucositis G3	PR
		4	Trastuzumab, Lapatinib	Diarrhea G3	PR
	4	Trastuzumab-Pertuzumab, Lapatinib	Diarrhea G3	PR	
	32 mg	4	Trastuzumab, Lapatinib	Diarrhea G3	SD
HM-PHI-102	12 mg	5	Trastuzumab, Lapatinib	Skin Rash G1, Acneiform Eruption G2	PR
	18 mg	7	Trastuzumab, Lapatinib	Skin Rash Gr 2	PR

Source: Company Reports

**Phase 2 clinical trials** - Spectrum's Korean partner, Hanmi, is currently analyzing this drug using in multiple mid-stage studies and in different types of tumors, including breast cancer, gastric cancer and non-small cell lung cancer. Exhibit 6 illustrates data from multiple Phase 2 studies with Poziotinib involving patients with breast cancer and other solid tumors. The red bars, representing breast cancer patients, show significant reductions in tumor size—some over 50%.

Exhibit 6: Poziotinib Phase 1 Study Tumor Responses



Source: Company Reports

While Poziotinib has shown potential as a therapeutic for multiple indications, as shown in the preceding chart, Spectrum's strategy is to obtain FDA approval in breast cancer patients who have failed previous therapies and have few options available to them. The next step will be to target larger indications in combination with other oncology therapies.

Based on the successes of these trials, Spectrum initiated a Phase 2, open-label, multicenter study to evaluate the efficacy and tolerability of Poziotinib in approximately 75 patients with HER2-positive metastatic breast cancer who have failed at least 2 prior HER2-directed treatment regimens.

Additionally, in collaboration with MD Anderson Cancer Center, Spectrum has recently reported some exciting data for Poziotinib in a sub-type of lung cancer where there are currently no treatment options. The population includes younger patients with less than two months to live, who are generally non-smokers. MD Anderson reported that Poziotinib is approximately 100x more effective than other compounds that they have tested on this population. In an area with such significant unmet needs (two compassionate-use cases thus far, both with initial positive response), this drug could potentially be fast tracked for approval by the FDA, even before the previously discussed breast cancer indication. A Phase 2 trial was initiated and is currently enrolling patients with exon 20 insertion mutations in EGFR or HER2, and preliminary top line data was presented at the World Lung Conference in Japan in October 2017. Results to date showed:

- Evidence of significant antitumor activity in NSCLC patients with EGFR exon 20 insertion mutations
- Preliminary data with an objective response rate of 73%
- Toxicities including rash, diarrhea, paronychia, and mucositis consistent with those previously noted for poziotinib (and other TKIs); this led to a dose reduction in 55% of the patients

Furthermore, following Spectrum’s Scientific Advisory Board meeting as well as several discussions with the FDA regarding the potential of Poziotinib, the Company has decided to also initiate a multicenter trial at several of the top cancer centers in the US. This multicenter trial will enroll up to 87 patients with EGFR exon 20 insertion mutations and up to 87 patients with HER2 exon 20 insertion mutations. The primary endpoint will be the objective response rate, with disease control rate, duration of response, and safety as secondary endpoints. There are currently 12 sites activated with several more scheduled to open up in the near-term.

Phase 2 data in NSCLC patients with exon 20 mutations for Poziotinib is expected in 2H 2018.

### Rolontis™ (eflapegrastim)

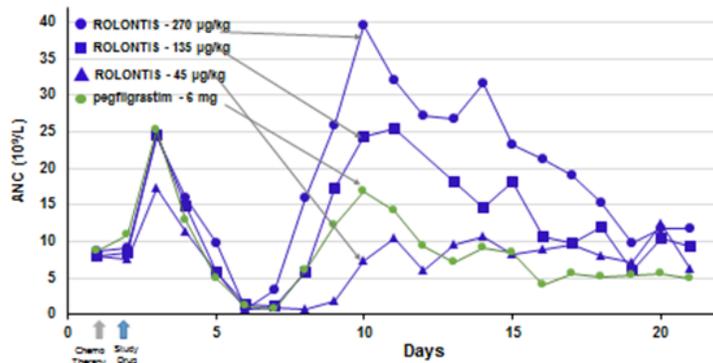
Going through chemotherapy for cancer can affect the bone marrow, suppressing the ability to make new white blood cells. This condition, known as neutropenia, can increase the risk of infections and necessitate the interruption of chemotherapy treatments. Granulocyte colony-stimulating factor (G-CSF) is a glycoprotein that strengthens the immune system by stimulating the bone marrow to produce granulocytes (white blood cells with infection-fighting proteins) and stem cells and release them into the bloodstream. A recombinant form of G-CSF is used in some cancer patients to facilitate recovery from neutropenia, enabling treatment regimens to remain uninterrupted.

In January 2012, Spectrum signed a co-development and commercialization agreement with Korea-based Hanmi Pharmaceutical Co., Ltd., for Rolontis™ for the treatment of chemotherapy-induced neutropenia. The terms of the agreement give Spectrum the global rights for Rolontis™ (excluding Korea, China and Japan), and Spectrum has primary financial responsibility for the drug’s development.

Rolontis™, is a granulocyte colony-stimulating factor (G-CSF) that utilizes LAPSCOVERY™, Hanmi’s proprietary platform technology that allows peptide drugs to maintain greater efficacy with long acting profiles, thereby enabling lower dosage, minimized adverse effects and lower therapeutic cost.

**Phase 2 clinical trial** - Spectrum released the results of its Phase 2 multicenter, dose-ranging study for Rolontis™ in March 2015. This study compared Rolontis™ to Amgen’s blockbuster drug, Neulasta® (pegfilgrastim). These drugs target the same market, but they are not biosimilars. The trial involved 144 patients in three cohorts, each receiving a different dose of the drug. In the highest dose, Rolontis™ was faster than Neulasta® in stimulating the regeneration of white blood cells, which Spectrum attributes to Rolontis’™ ability to go directly to the bone marrow.

Exhibit 7: Rolontis™ Phase 2 Efficacy



Source: Company Reports

Exhibit 7 illustrates the results in the Phase 2 trial efficacy, showing the median absolute neutrophil count (ANC) over time. Neutrophil are the most abundant type of granulocytes and white blood cells in humans and are an essential part of the immune system. Results showed similar ANC trends between the 135 µg/kg arm and the pegfilgrastim dosing arms. Additionally, ANC recovery was numerically greater in the 270 µg/kg arm.

The trial met its primary endpoint of mean duration of severe neutropenia during cycle one on patients with breast cancer.

Exhibit 8: Rolontis™ Phase 2 Primary Endpoint

	ROLONTIS 45 µg/kg (N=36)	ROLONTIS 135 µg/kg (N=36)	ROLONTIS 270 µg/kg (N=36)	Pegfilgrastim 6 mg (N=36)
<b>Days of Severe Neutropenia or DSN (Days) in Cycle 1</b>				
n	39	36	36	36
Mean	1.03	0.44	0.03	0.31
SD	1.547	1.275	0.167	0.822
Difference with Pegfilgrastim	0.72	0.14	-0.28	N/A
Non-inferiority p-value	0.296	0.002	<0.001	N/A
Superiority p-value	0.006	0.528	0.023	N/A

Source: Company Reports

As shown in Exhibit 8, in assessing the duration of severe neutropenia, non-inferiority was achieved in the two highest doses (135 ug/kg and 270 ug/kg), and superiority was achieved in the highest dose (270 ug/kg) over pegfilgrastim. All doses of Rolontis™ were well tolerated, and there were no significant dose-related toxicities observed. Based on the positive Phase 2 results, Spectrum made the decision to advance Rolontis™ into a Phase 3 trial.

**Phase 3 clinical trials** - Rolontis™ Phase 3 clinical trials commenced in January 2016. The trial design compares the efficacy of a single dose of Rolontis™ with pegfilgrastim in patients with early stage breast cancer who are receiving docetaxel and cyclophosphamide. The treatment period is four 21-day cycles.

Spectrum set plans for two randomized, non-inferiority trials with the duration of severe neutropenia as the primary endpoint. One trial, designated ADVANCE, is taking place in North America following the Special Protocol Assessment (SPA) outlined by the FDA and has completed enrollment of 406 patients; we note that this number was reduced from 580 with Spectrum agreeing to start a second small trial of 218 in Europe, Canada and Korea. The Company designated 84+ facilities where patients could receive Rolontis™ as a treatment for chemotherapy-induced neutropenia in breast cancer patients. In February 2018, Spectrum announced that the ADVANCE study met its primary endpoint, and the adverse event profile was similar between the treatment arms. The other trial, designated RECOVER, has locations in both the US and abroad and just recently completed enrollment of patients. Both trials involve breast cancer patients who have received chemotherapy. These patients are randomized 1:1 receiving either Rolontis™ or Neulasta®. If successful, the results will be the basis for filing the BLA with the FDA, which could be done in Q418; if approved, Spectrum could enter this sizable market in 2019. Notably, Spectrum's broad experience marketing in the blood cell factor growth market could provide a meaningful competitive advantage.

### Qapzola® (apaziquone)

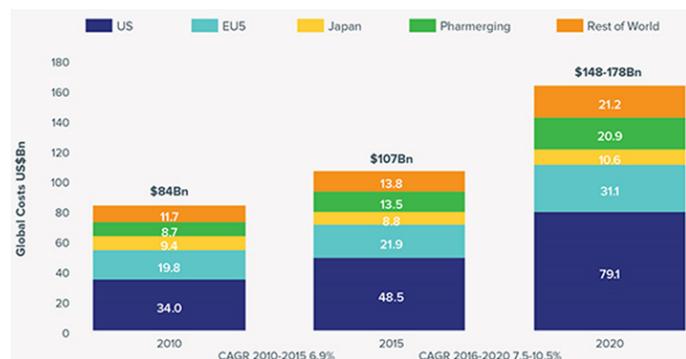
One other pipeline drug, Qapzola®, addresses intravesical instillation post-transurethral resection of bladder tumors in patients with non-muscle invasive bladder cancer (NMIBC). In September 2016, the FDA's advisory committee voted against its approval, and two months later, issued a complete response letter regarding the new drug application. Spectrum met with the FDA review team to discuss the next steps in the approval process.

The previous Phase 3 trial, which was in the process of recruiting 658 patients, is being replaced with a smaller study in the same indication (enrollment began in Q317). Per a SPA received from the FDA in February 2017, the new Phase 3 study has been specifically designed according to data learned from the previous studies as well as recommendations from the FDA and incorporates twice the dosage with approximately 70% less patients (n=425); it also evaluates the time-to-recurrence as the primary endpoint vs. recurrence at two years. Approximately 50 sites have been identified to date for patient enrollment, and the first patient was enrolled in August 2017.

### TARGET MARKETS

The oncology therapeutics market is rapidly growing and evolving. Much of the growth in this market is attributable to the re-categorization of cancer as a group of narrowly defined diseases, which has spurred the development of more treatment options. According to IMS Health, the global cancer therapeutics and supportive care drugs reached \$107 billion in 2015, up from \$84 billion in 2010. Growth in the market is projected to reach \$150 billion or more by 2020.

*Exhibit 9: Global Oncology Therapeutics and Supportive Care Drugs (U.S. dollars in billions)*



Source: IMS Health

The U.S. market currently accounts for 46% of the therapeutics market, an increase of 7.4% over the last five years. Increasing adoption of newer therapies, combined with a strengthening U.S. dollar, contribute to this growth. Over that same period, the EU5 (France, Germany, Italy, Spain, United Kingdom) and Japan grew by 5.3% and 5.4%, respectively.

Within the cancer therapeutics market, Spectrum has historically targeted multiple niche oncology markets. Going forward, the Company is focusing on some very large markets discussed below.

**Evomela®** – Evomela® is the first drug to be FDA-approved for the high-dose conditioning indication in multiple myeloma, a systemic malignancy of plasma cells that accumulate in the bone marrow. Multiple myeloma is a highly prevalent disease that accounts for 1% to 2% of all cancers. The Cancer Network reports there are currently an estimated 83,367 people in the United States with myeloma, with an estimated 30,330 new cases of myeloma in 2016 and 12,650 estimated deaths. According to Grand View Research, the multiple myeloma therapeutics market, valued at \$7.5 billion in 2015, is expected to grow to \$37.5 billion by 2024. Spectrum estimates its target market within this larger market is more than \$100 million.

**Poziotinib** – Spectrum's novel pan-HER inhibitor, Poziotinib, targets the multi-billion dollar breast cancer therapeutic market, which GBI Research forecasts will increase in value from \$10.4 billion in 2014 to \$17.2 billion by 2021, a CAGR of 7.3%. Following skin cancer, breast cancer is the most commonly diagnosed cancer among American women. Breastcancer.org reports that 1 in 8 women, or roughly 12%, will develop invasive breast cancer in her lifetime. An estimated 255,180 women will be diagnosed with invasive breast cancer, and another 63,410 will be diagnosed with non-invasive breast cancer in 2017. We also note that Poziotinib shows promise in a number of other cancer therapeutics markets (Exhibit 6); one of these, NSCLC, had an estimated market worth \$4.9B in 2014 and is expected to expand at a CAGR of 12.1% from 2015 – 2023, reaching an estimated value of over \$15B.

**Rolontis™** – In clinical trials (Exhibits 7 and 8), Spectrum tested Rolontis™ against pegfilgrastim, the active ingredient in Neulasta®, which is Amgen’s largest selling drug. Global sales of Neulasta® in FY 2015 were \$4.7 billion. The enormity of the market is attributable to the drug’s broad spectrum cancer applications. Neupogen (FY 2015 sales of \$1.05 billion) was Amgen’s first generation of the drug. Neulasta® and Neupogen are similar in function, but the former requires a one-time administration per chemotherapy cycle, while the latter must be administered multiple times to obtain the desired effectiveness. In a sense, Spectrum sees its product as a possible third generation of this compound (although, as stated previously, Rolontis™ and Neulasta® are not biosimilars). Rolontis™ is not only longer lasting than pegfilgrastim, but it also goes directly to the bone marrow. Additionally, the longer lasting molecule in Rolontis™ could mean not as much of the drug is required.

**Qapzola®** - This drug is being developed for low-to-intermediate risk non-muscle invasive bladder cancer, for which there are currently no other approved drugs (and NMIBC accounts for approximately 80% of all bladder cancers). Historically one of the biggest challenges of treating bladder cancer is its significantly high recurrence rate (estimated at 60 – 70%), which results in high costs as well as increased patient morbidity; bladder cancer carries the eighth highest cancer-related mortality rate in American men. It is estimated that the cost of treating the disease will pass \$5 billion by 2020.

## RISKS

Spectrum Pharmaceuticals faces a number of risks including:

**Potential competition for targeted indications:** As with any company in the biotechnology sector, the Company is exposed to risk from competitors that may target the same diseases and conditions as Spectrum. Potentially competitive products are currently in varying stages of development, and other products may be introduced that could negatively affect the use of Spectrum’s products with current or future indications.

**Accelerated approval requirements:** Spectrum obtained accelerated approval for three of its marketed drugs - Folutyn®, Beleodaq® and Marqibo®, and may seek this approval pathway for future products. Accelerated approval enables the FDA to approve drugs that target serious diseases based on initial data from positive clinical trials. However, accelerated status requires post-approval requirements, including additional clinical trials. Failure to complete these additional requirements could lead to the withdrawal of the drug from the market.

**Competition for in-licensing/acquiring new products:** Spectrum’s growth strategy requires the acquisition or in-licensing of drug candidates and products. The further the drug is in the approval process, the more competition for that drug, and the higher the price. Spectrum may not be able to continue to find desirable products on acceptable terms; thus, Spectrum’s success is highly dependent on guidance from senior management.

**INCOME STATEMENT**

Spectrum Pharmaceuticals, Inc. NASDAQGS: SPPI  
 Consolidated Statements of Income (in thousands \$, except per share amounts)  
 Fiscal Year: December

	FY 2015	FY 2016	FY 2017	FY 2018E
<b>Revenues</b>				
Product sales, net	\$ 136,851	\$ 128,596	\$ 116,178	\$ 92,942
License fees and service revenue	25,705	17,848	12,189	7,313
Total revenues	162,556	146,444	128,367	100,256
<b>Operating costs and expenses</b>				
Cost of product sales	27,689	27,953	42,859	31,600
Cost of service revenue	-	7,890	4,359	2,560
Selling, general and administrative	86,514	87,347	84,267	86,692
Research and development	50,766	58,936	65,895	78,415
Amortization and impairment of intangible assets	38,319	25,946	27,647	28,753
Total operating costs and expenses	203,288	208,072	225,027	228,020
<b>Loss from operations</b>	(40,732)	(61,628)	(96,660)	(127,764)
<b>Other (expense) income</b>				
Interest expense, net	(9,074)	(9,435)	(6,798)	(1,900)
Change in fair value of contingent consideration related to acquisitions	676	(649)	(4,957)	-
Other (expense) income, net	(1,249)	887	389	-
Total other (expense) income	(9,647)	(9,197)	(11,366)	(1,900)
<b>Loss before income taxes</b>	(50,379)	(70,825)	(108,026)	(129,664)
<b>Provision for income taxes</b>	(406)	2,313	16,778	19,450
<b>Net loss</b>	\$ (50,785)	\$ (68,512)	\$ (91,248)	\$ (110,215)
<b>Basic EPS (loss)</b>	\$ (0.78)	\$ (0.94)	\$ (1.07)	\$ (1.12)
<b>Diluted EPS (loss)</b>	\$ (0.78)	\$ (0.94)	\$ (1.07)	\$ (1.12)
Weighted average basic shares outstanding	64,882	72,824	85,116	98,734
Weighted average diluted shares outstanding	64,882	72,824	85,116	98,734
<b>EBITDA</b>	\$ (12,563)	\$ (35,136)	\$ (68,688)	\$ (99,011)
<b>Adjusted EBITDA</b>	\$ (479)	\$ (22,724)	\$ (53,549)	\$ (83,011)
<b>Margin Analysis</b>				
Gross margin	83.0%	75.5%	63.2%	65.9%
Operating margin	-25.1%	-42.1%	-75.3%	-127.4%
Selling, general and administrative	53.2%	59.6%	65.6%	86.5%
Research and development	31.2%	40.2%	51.3%	78.2%
Adjusted EBITDA margin	-0.3%	-15.5%	-53.5%	-98.8%
Net income (loss) margin	-31.2%	-46.8%	-71.1%	-109.9%
<b>Growth Rate Analysis Y/Y</b>				
Total revenue	-13.0%	-9.9%	-12.3%	-21.9%
Selling, general and administrative	-11.2%	1.0%	-3.5%	2.9%
Research and development	-27.1%	16.1%	11.8%	19.0%
Operating income (loss)	-29.0%	-51.3%	-56.8%	-32.2%
Adjusted EBITDA	-108.6%	-4644.1%	-135.6%	-55.0%
Net income (loss)	-11.1%	-34.9%	-33.2%	-20.8%
EPS - fully diluted	-9.9%	-20.6%	-14.0%	-4.1%
Share count - fully diluted	0.3%	12.2%	16.9%	16.0%

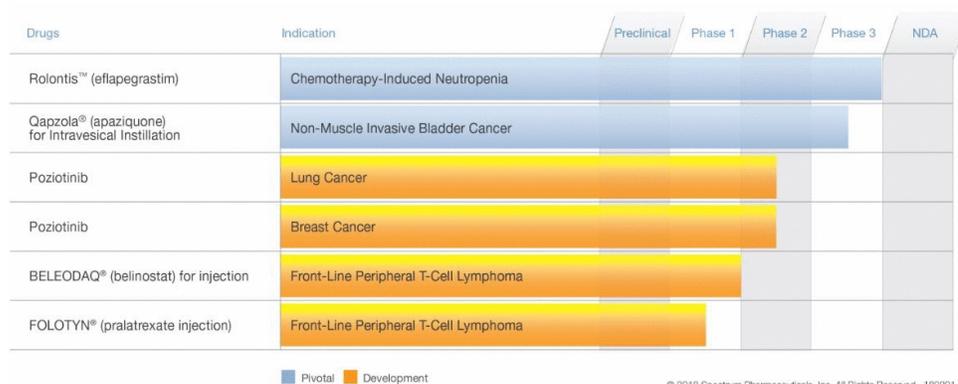
Source: Company Reports, Stonegate Capital Partners estimates

## VALUATION

Having launched its 6<sup>th</sup> drug to date, Spectrum Pharmaceuticals leverages its infrastructure as well as experience in the industry to acquire or in-license advanced or late-stage drug candidates for development and commercialization, as well as FDA approved drugs; this strategy provides the Company a healthy current revenue stream (albeit declining as a result of generic competition) that can continue to fund the pipeline of potential blockbuster products. Management has guided to a reduced top line in 2018 of \$90 – \$110M.

In the pipe, Spectrum's three most promising advanced and late-stage candidates, Poziotinib, Rolontis™, and Qapzola® address breast cancer, NSCLC, chemotherapy-induced neutropenia, and bladder cancer, all sizable markets within the larger oncology therapeutics market. These product candidates have shown promising data to date, including an objective response rate of 73% as recently reported for Poziotinib's preliminary results from an ongoing Phase 2 study in NSCLC patients with EGFR exon 20 insertion mutations, as well as its most recent news on the Phase 3 ADVANCE trial for Rolontis™ meeting its primary endpoint of non-inferiority in duration of severe neutropenia when compared to pegfilgrastim. The Company's next approval is expected to come in as early as 2018. Also, the Company had approximately \$228M in cash on hand as last reported, sufficient to fund development and commercial operations through at the next 12 months and likely beyond, depending on acquisition opportunities and licensing arrangements.

Exhibit 10: Spectrum Development Portfolio



Source: Company Reports

Below we have included an analysis of selected companies to provide prospective on the various players within the industry considered comps for Spectrum. We note that on an EV/S basis for 2018E, the Company currently trades at a 17.0x multiple vs. the average of its peers at 20.2x and a P/B of 5.5x vs. the average of its peers at 8.6x.

Exhibit 11: Comparables Analysis

Name	Ticker	Price	Sh	Mrkt Cap	EV	EV/S		EV/EBITDA		P/B
						Last FY	Current FY	Last FY	Current FY	MRQ
Arena Pharmaceuticals	ARNA	\$ 31.51	39.40	\$ 1,241.5	\$ 1,056.2	49.5x	68.6x	nm	nm	6.0x
Array BioPharma, Inc.	ARRY	\$ 16.83	207.60	\$ 3,493.9	\$ 3,181.2	72.8x	23.9x	nm	nm	14.4x
CTI BioPharma Corp.	CTIC	\$ 3.99	66.00	\$ 263.3	\$ 245.4	9.7x	21.7x	nm	nm	8.3x
Eagle Pharmaceuticals, Inc.	EGRX	\$ 53.90	14.90	\$ 803.1	\$ 734.2	3.1x	3.6x	9.3x	10.2x	4.5x
Halozyne Therapeutics, Inc.	HALO	\$ 20.62	142.30	\$ 2,934.2	\$ 2,667.4	8.4x	19.4x	32.1x	nm	14.0x
INSYS Therapeutics, Inc.	INSY	\$ 6.44	73.80	\$ 475.3	\$ 357.9	2.5x	2.7x	nm	nm	7.5x
NewLink Genetics Corporation	NLNK	\$ 7.24	37.20	\$ 269.3	\$ 110.6	3.9x	5.0x	nm	nm	1.8x
Seattle Genetics, Inc.	SGEN	\$ 57.70	158.00	\$ 9,116.6	\$ 8,700.6	18.0x	16.7x	nm	nm	12.3x
<b>Average</b>				<b>\$ 2,324.7</b>	<b>\$ 2,131.7</b>	<b>21.0x</b>	<b>20.2x</b>	<b>20.7x</b>	<b>10.2x</b>	<b>8.6x</b>
<b>Median</b>				<b>\$ 1,022.3</b>	<b>\$ 895.2</b>	<b>9.1x</b>	<b>18.0x</b>	<b>20.7x</b>	<b>10.2x</b>	<b>7.9x</b>
Spectrum Pharmaceuticals, Inc.	SPPI	\$ 18.64	101.7	\$ 1,895.7	\$ 1,706.4	13.3x	17.0x	nm	nm	5.5x

Source: Company Reports, Stonegate Capital Partners, Capital IQ

Based on this analysis, it appears that SPPI is currently undervalued at \$18.64/share. Again, we note that that Spectrum is presently well-funded and has several late stage product candidates, each with the potential to reach blockbuster status in the near-term; thus, it appears that these are not being fully considered by the Street as part of its current valuation. As the Company continues to leverage its resources to execute upon its growth strategy, utilizing its current product sales to help fund more sizable opportunities (addressing much broader market populations) through the approval phase, the stock price will likely continue to appreciate to multiples more in-line with the mid to upper range of its peer group.

## CORPORATE TIMELINE

**February 2018** – Company announces the Rolontis™ met the primary endpoint in the Phase3 ADVANCE study

**October 2017** – SPPI agrees to exchange \$69.5M in principal of its 2.75% convertible senior notes due 2018 for common stock and cash; Poziotinib data in NSCLC presented at 18<sup>th</sup> IASLC World Conference on lung cancer in Japan; Company initiates multicenter Phase 2 of Poziotinib in NSCLC patients with exon 20 insertion mutation in EGFR or HER2

**September 2017** – Company announces an additional 9.3M shares of common stock for proceeds of ~ \$90.2M issued under its ATM program

**July 2017** – 3.2M shares sold under ATM program for net proceeds of \$23.7M

**August 2017** – SPPI completes enrollment for Phase 3 pivotal study of Rolontis™ (ADVANCE), and enrolls first patient in registrational Phase 3 trial of Qapzola®

**March 2017** - Encouraging results seen in NSCLC patient treated with Poziotinib on a compassionate basis; Phase 2 trial initiated

**February 2017** - Company receives new SPA for Qapzola® that significantly reduces the number of patients required for an NDA filing

**September 2016** - FDA Advisory Committee votes that Qapzola® has not shown substantial evidence of a treatment effect over placebo

**April 2016** - FDA grants orphan drug exclusivity to Evomela® indicated for use as a high-dose conditioning treatment prior to hematopoietic progenitor (stem) cell transplantation in patients with multiple myeloma

**March 2016** - FDA grants approval of Evomela® (melphalan for injection) for use in two indications relating to multiple myeloma; Spectrum initiates Phase 2 breast cancer trial for Poziotinib based on 60% response rate in Phase 1

**January 2016** - Company begins enrollment in registrational Phase 3 trial to evaluate Rolontis™ as a treatment for chemotherapy-induced neutropenia in approx. 580 breast cancer patients

**March 2015** - FDA accepts NDA filing for Evomela®; the Company in-licenses Poziotinib from Hanmi Pharmaceutical Co.

**July 2013** - Spectrum acquires Talon Therapeutics, Inc. adding FDA approved Marqibo® to the product portfolio

**December 2002** - The Company changes its name to Spectrum Pharmaceuticals

**1987** - Founded as Americus Funding Corp.

## SPECTRUM GOVERNANCE

**Joseph W. Turgeon, President and Chief Operating Officer** - Mr. Turgeon is responsible for Spectrum's global commercial and pharmaceutical operations, as well as the Company's medical and clinical development. Before joining Spectrum, he spent 23 years at Amgen, Inc., where he was Vice President of Sales. During that time, he built the sales organization in multiple areas, including oncology, inflammation and bone health, and he was responsible for launching most of the drugs, including the blockbuster drugs that led to dramatic growth of the company. Mr. Turgeon graduated from Jacksonville University where he earned a B.S. in microbiology and economics.

**Kurt A. Gustafson, Executive Vice President, Chief Financial Officer and Principal Accounting Officer** - Mr. Gustafson joined Spectrum in June 2013. Previously, he was Vice President and Chief Financial Officer at Halozyme Therapeutics, Inc. (Nasdaq: HALO) where he managed multiple successful financings. Prior to joining Halozyme, he was with Amgen for more than 18 years in various capacities, including serving as CFO of Amgen International. Most recently, he was Vice President, Finance. Mr. Gustafson earned a BA in accounting from North Park University in Chicago, and he holds a MBA from University of California, Los Angeles.

**Thomas J. Riga - Senior Vice President and Chief Commercial Officer** - Mr. Riga, who is responsible for sales and commercialization of Spectrum products, joined the Company in July 2013. He has worked more than 15 years in the pharmaceutical and biotechnology industry. His background includes experience in multiple areas, including sales, marketing and manufacturing.

**Pramod K. Gupta, PhD., Senior Vice President, Pharmaceutical Operations** - Dr. Gupta's responsibilities with Spectrum include product development, commercial manufacturing and supply chain. Dr. Gupta has more than 25 years of experience in the pharmaceutical industry, holding several positions at Abbott Laboratories (NYSE: ABT), Baxter International (NYSE: BAX) and Bausch & Lomb (acquired by Valeant Pharmaceuticals International, Inc. (NYSE: VRX)). He holds a Ph.D. in Pharmaceutical Sciences.

**Zane Yang, MD, Senior Vice President, Clinical Development** - Dr. Yang came to Spectrum from Inovio Pharmaceuticals (Nasdaq: INO), where he was Vice President, Clinical Development for Oncology, overseeing the clinical programs relating to Inovio's oncology immunotherapies and cancer vaccines. Prior to working at Inovio, he was Director of Medical Affairs and Clinical Development at Janssen Pharmaceuticals (NYSE: JNJ), Novartis Oncology (NYSE: NVS) and Merck & Co. (NYSE: MRK). Dr. Yang earned his medical degree at Beijing Medical University.

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