OPPENHEIMER

EQUITY RESEARCH

INITIATION OF COVERAGE

November 9, 2017

HEALTHCARE/BIOTECHNOLOGY

Stock Rating:

OUTPERFORM

12-18 mo. Price Target	€3.00
PHARM - NXT AM	€1.26

3-5 Yr. EPS Gr. Rate	NA
52-Wk Range	€1.38-€0.21
Shares Outstanding	520.1M
Float	496.7M
Market Capitalization	€673.5M
Avg. Daily Trading Volume	33,545,510
Dividend/Div Yield	NA/NM
Book Value	€0.01
Fiscal Year Ends	Dec
2017E ROE	NA
LT Debt	€71.3M
Preferred	$0.0M
Common Equity	€6M
Convertible Available	No

EPS Diluted	Q1	Q2	Q3	Q4	Year	Mult.
2016A	(0.01)	(0.01)	(0.01)	(0.02)	(0.04)	NM
2017E	(0.01)A	(0.05)A	(0.02)A	0.02	(0.06)	NM
2018E	--	--	--	--	0.10	12.6x
2019E	--	--	--	--	0.22	5.7x
2020E	--	--	--	--	0.41	3.1x

Revenue ($/mil)	Q1	Q2	Q3	Q4	Year	Mult.
2016A	2.2	3.1	3.4	7.2	15.9	45.0x
2017E	15.5A	15.2A	26.1A	33.8	90.5	7.9x
2018E	--	--	--	--	176.6	4.1x
2019E	--	--	--	--	273.7	2.6x
2020E	--	--	--	--	409.9	1.7x

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Pharming Group N.V.

Recombinant Products Win Out; Initiating With An Outperform

SUMMARY

We are initiating on Pharming Group (PHARM) with an Outperform rating and a €3 price target. PHARM has developed the only commercial recombinant C1 esterase inhibitor (C1INH) approved in the US and EU for the treatment of hereditary angioedema (HAE), a rare autosomal dominant genetic blood disorder. While a range of other products are approved for the acute and prophylactic treatment of HAE, we believe that the unconstrained production capabilities for Ruconest, coupled with a clean safety profile and increasing diagnosis rates for HAE patients worldwide, will lead to the product achieving €410M in 2020 sales (vs. €259M Bloomberg est). Increasing awareness and treatment in the EU and rest-of-world serve as upside to our model. We are bullish.

KEY POINTS

- **In late 2010**, Pharming secured European marketing approval for Ruconest and licensed the North American commercialization rights to Santarus. Through the agreement, Pharming was entitled to $45M in milestone payments and a supply royalty of 30% of sales. While PHARM was launching Ruconest in the EU, US sales languished due to M&A shifting focus from concerted launch and marketing efforts.
- **Since reacquiring the North American rights to Ruconest**, PHARM has also benefited from a shortage of the leading plasma-derived C1INH, Cinryze. This turbocharged Ruconest's 9M17 sales. Previous shortages of rare disease products like Cerezyme and factor VIII for hemophilia have created a precedent whereby patients and physicians subsequently gravitate toward recombinant products.
- **The competitive landscape for HAE** is not easy, but with ~5K to 10K patients in the US and 10K to 20K in the underserved EU market, PHARM can focus sales and marketing efforts in such a manner as to break even by 2018. Competition from novel therapies (Shire's lanadelumab) remains a potential overhang.
- **Diagnosis rates** for HAE have been increasing over time as therapeutic options diversify and patient/physician awareness increases. Our physician checks indicate that another 20% to 30% of patients are still undiagnosed due to a misunderstanding of the disease and shortened life spans. This benefits a recombinant product with unlimited supply.
- **While the majority** of the near-term revenue opportunity for PHARM is Ruconest sales in the US, over time the EU and ROW markets should become meaningful revenue contributors. This is not in our base case, but like many rare diseases launches, could add a pillar to valuation in the medium/long term.

Stock Price Performance

Company Description

Pharming is a biopharmaceutical company using its transgenic animal technology to develop recombinant protein therapeutics for rare diseases. Lead product Ruconest is a recombinant human C1 esterase inhibitor approved for the treatment of acute hereditary angioedema (HAE) attacks, with ongoing studies in the prophylactic and pediatric settings.

For analyst certification and important disclosures, see the Disclosure Appendix.

5-YEAR PRICE PERFORMANCE

Source: Bloomberg

INVESTMENT THESIS

We are initiating on Pharming Group (PHARM) with an Outperform rating and a €3 price target. This company possesses the only commercial recombinant C1 esterase inhibitor approved in the US and EU for the treatment of hereditary angioedema (HAE), a rare genetic blood disorder. While a range of other products are approved for the treatment of acute and prophylaxis HAE, we believe that the unlimited production capabilities for Ruconest, coupled with a clean safety profile and increasing diagnosis rates, will enable the product to achieve €410M in 2020 sales (vs. €259M Bloomberg estimate).

BASE CASE ASSUMPTION

- **Ruconest continues** to gain market share in the US in 2018E/19E
- **Ruconest EU and ROW sales** increase slowly in 2018E-202E
- **Prophylaxis sBLA is submitted** in 4Q17 and approved in 2018E

CATALYSTS

- **4Q17:** File sBLA for Ruconest in prophylactic treatment of HAE
- **2018:** Quarterly updates on continued US sales growth
- **2018:** Initiate studies for next generation subcutaneous and intramuscular Ruconest formulations

UPSIDE SCENARIO

- **Ruconest takes** US market share at an accelerating pace
- **EU and ROW sales** perform better than expected
- **Prophylaxis sales** become a meaningful contributor to Ruconest sales in the mid/long-term

DOWNSIDE SCENARIO

- **Once Cinryze shortages are fixed**, Ruconest loses market share back to Cinryze
- **Lanadelumab becomes** the standard of care in treating HAE
- **Ruconest manufacturing** leads to unacceptable side effects

PRICE TARGET CALCULATION

We value Ruconest in hereditary angioedema (HAE) at €2.90/share, applying a 7x multiple to estimated 2022 WW sales of €620M, discounted 25% annually. Cash makes up the remaining €0.10/share of our €3.00 price target.

KEY RISKS

Key risks include slower than expected Ruconest US sales growth, failure to achieve significant market penetration, and emergence of unforeseen side effects or safety concerns.

Additional considerations include regulatory risk, commercialization risk, intellectual property risk, manufacturing risk, competitive risk, strategic risk, financing risk, liquidity and small-capitalization risks. Pharming's status as an overseas-only listed stock may prevent some investors from owning it.

Note: We see PHARM, as a stock trading under €5, as speculative and appropriate only for risk-tolerant investors.

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Investment Thesis

We are initiating coverage on Pharming Group NV (PHARM) with an Outperform rating and €3 price target.

Pharming is a European biotechnology company founded in 1988 and headquartered in the Netherlands. The company is focused on developing novel and innovative therapeutics for rare diseases using its proprietary technology for the production, purification, and formulation of recombinant protein products.

Lead asset Ruconest is the only recombinant C1 esterase inhibitor approved in the US and EU for the treatment of hereditary angioedema (HAE), a rare genetic blood disorder. The ~$1.7 billion US HAE treatment market, currently dominated by Shire and CSL Behring, is expected to reach $3.8 billion by 2025.

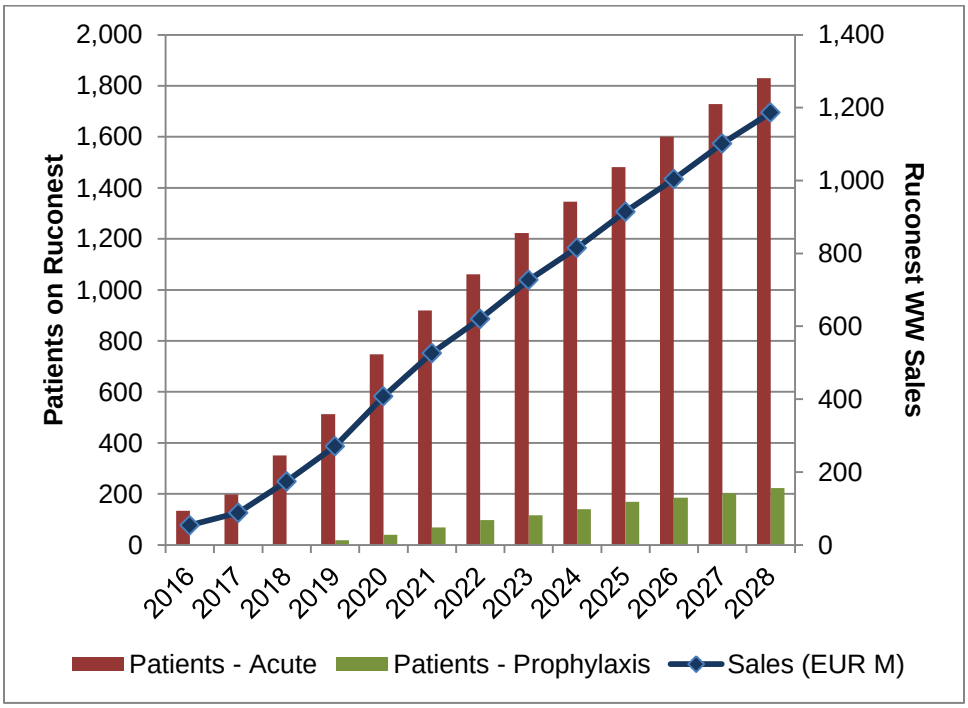
Pharming Gets Ruconest Back

Pharming re-acquired the North American commercialization rights to its approved recombinant human C1 esterase inhibitor (C1INH) for acute HAE attacks (Ruconest) from Valeant (VRX) in 2H16. Since then, the company has been busy essentially relaunching the product in the US.

Recent supply constraints for Shire's market-leading plasma-derived C1INH, Cinryze, have helped the recent sales momentum of Ruconest, leading to a >1.5X increase in sales in 2017 (over 2016).

We expect this sales momentum to continue once Cinryze supply returns to normal, as the number of diagnosed HAE patients continues to increase in the US, EU and ROW. This is usually the case in most rare diseases once treatment options enter the market and patient awareness and testing increase.

Exhibit 1: Ruconest Sales and Patient Adds, 2016-28E



Source: Company presentations, Oppenheimer & Co.

While a range of other products are approved for the acute and prophylactic treatment of HAE, we believe that unlimited production capabilities, clean safety profile, and increasing WW disease diagnosis rates will enable Ruconest to achieve €410M in 2020 sales (vs. €259M Bloomberg consensus).

Valuation Summary

We value Ruconest in hereditary angioedema (HAE) at €2.90/share, applying a 7x multiple to estimated 2022 WW sales of €620M, discounted 25% annually. Cash makes up the remaining €0.10/share of our €3.00 price target.

Exhibit 3: PHARM OPCO Valuation Table

Product	WW Sales (M)	Year	Discount Rate	Sales Multiple	Probability to Market	NPV	Comments
Ruconest (rhC1INH)	EUR 620	2022	25%	7	100%	EUR 2.9	Assume lower-end (6X to 10X) biotech sales multiple
Cash	NA	NA	NA	NA	NA	EUR 0.1	
					Total =	EUR 3.0	

Source: Oppenheimer & Co.

Key Risks

Key risks to our price target include slower than expected Ruconest US sales growth, failure to achieve significant market penetration, and emergence of unforeseen side effects or safety concerns. Pharming's status as a non-US listed stock may prevent some investors from owning it.

Additional risks include regulatory risk, commercialization risk, intellectual property risk, manufacturing risk, competitive risk, strategic risk, financing risk, liquidity and small-capitalization risks.

Company Overview

Early History

The company was founded in 1988 as Genfarm, the Pharming Group, a wholly owned subsidiary of GenPharm International that was spun off as its own entity in 1995. Pharming became publicly listed on the EASDAQ in 1998 and subsequently obtained a dual listing on the AEX in Amsterdam in1999.

At its inception, the company's scientific work was focused on developing transgenic technology to produce human lactoferrin protein in the milk of cattle. In 1996, Pharming was awarded an Orphan Drug Designation for recombinant human alpha-glucosidase in Pompe's disease, a hereditary muscle disease, and entered into a collaboration with Genzyme to market the product.

Strategic Refocus on HAE Program

Due to financial difficulties, Pharming had to terminate the collaboration in 2001 and sell the Pompe's disease asset and all related activities to Genzyme, prompting a strategic refocusing on its recombinant human C1 inhibitor and recombinant human fibrinogen.

Pharming then focused its development efforts on its lead candidate Ruconest, a recombinant human C1 esterase inhibitor for acute hereditary angioedema (HAE). In late 2010, Pharming secured European marketing approval for Ruconest and licensed the North American commercialization rights to Santarus. Through the agreement, Pharming was entitled to $45M in milestone payments and a supply royalty of 30% of sales.

Ruconest US Launch Impeded by M&A Musical Chairs

While Ruconest was still undergoing FDA review, Salix acquired Santarus and retained the North American commercialization rights. Ruconest received FDA approval in July 2014 and was then launched by Salix in the US in November 2014, resulting in a $20M milestone payment to Pharming. Salix was subsequently acquired by Valeant in April 2015.

Pharming slowly but steadily ramped sales in the EU, but the US launch never fully gained traction as Ruconest continued to change hands and failed to receive the necessary focus and resources from its various US partners to build out a successful sales infrastructure. On the heels of positive Phase 2 prophylaxis data for Ruconest in November 2016, and the emergence of a rapidly expanding US HAE market, Pharming took the transformative step of reacquiring the North American commercialization rights to Ruconest from Valeant in December 2016, including all rights to the US, Mexico, and Canada.

On December 7, 2016, Pharming reacquired the North American commercial rights to Ruconest from Valeant in a deal valued at $125M USD. Pharming paid Valeant $60M USD upfront and agreed to a number of specific sales milestones totaling a maximum of $65M USD. The company has stated that the payment of these milestones will be self-funding given that they are triggered at levels of sales at which the product will produce incremental profits sufficient for payment of each milestone once incurred. In order to fund the transaction, Pharming completed a €104 million combined financing of debt and new equity.

Pharming also acquired the 11-person dedicated Ruconest sales force from Valeant and announced its intention to grow the sales force, invest in medical science liaisons and additional marketing activities, including patient advocacy programs and support for the US HAE patients association (HAEA) and other HAE centers of excellence in the US.

Other Transactions and Partnerships

Shanghai Institute of Pharmaceutical Industry (SIPI)

In mid-2013, Pharming signed a strategic collaboration with the Shanghai Institute of Pharmaceutical Industry (SIPI), a Sinopharm company, to develop, manufacture, and commercialize new products based on the Pharming technology platform and granted SIPI exclusive commercial rights to Ruconest in China. Under the terms of the agreement, joint global development for new products takes place at SIPI's facilities in Shanghai to take advantage of the Pharming technology and the competitive manufacturing costs at SIPI. Pharming retains global rights ex-China to all products developed under the collaboration.

SIPI paid Pharming €1.26M upfront and a total of €0.84M technology transfer related milestones associated with the implementation of the first technology transfer for Ruconest. For each product developed and manufactured, SIPI will pay Pharming a number of clinical and regulatory milestones and supplies Pharming on a cost plus basis for world- wide commercialization. Pharming will pay SIPI 4% royalties on global sales (ex-China) and SIPI will pay Pharming 4% royalties on sales in China.

Transgenic Rabbit Models SASU (TRM)

In August 2014, Pharming also acquired certain assets from Transgenic Rabbit Models SASU (TRM), a private French company in liquidation, for €0.5M in cash to build out its pipeline. These preclinical assets included recombinant- human (rh)-α-glucosidase in development for Pompe's disease, rh-α-galactosidase in development for Fabry's disease, rh-β-cerebrosidase in development for Gaucher's disease, rh- Factor VIII in development for the treatment of Hemophilia A, and rh- Factor IX in development for the treatment of Hemophilia B. Importantly, this acquisition provided Pharming with access to the transgenic rabbit founder technology and knowledge base developed by TRM with broad applicability to producing complex proteins that are difficult and costly to manufacture using traditional cell based methods.

Swedish Orphan Biovitrum Ab (SOBI)

In mid-2016, Pharming amended its longstanding agreement with partner Swedish Orphan Biovitrum Ab (SOBI). The partnership was initially signed in 2009, to grant SOBI commercialization rights to Ruconest in select European and ROW countries. In August 2016, Pharming amended this agreement in order to market Ruconest directly in an additional 21 countries including Algeria, Andorra, Bahrain, Belgium, France, Ireland, Jordan, Kuwait, Lebanon, Luxembourg, Morocco, Oman, Portugal, Qatar, Syria, Spain, Switzerland, Tunisia, United Arab Emirates, United Kingdom, and Yemen.

Although sales in these markets are expected to be modest, this expansion of Pharming's direct commercialization market was intended to improve margins and align with its long-term vision of becoming a biopharmaceutical company with its own commercial infrastructure.

Products and Pipeline

Exhibit 4: PHARM Pipeline

Product	Indication	Lead Optimization	Preclinical	Phase 1	Phase 2	Phase 3	Approval & Commercialization
RUCONEST (rhC1INH)	Acute Hereditary Angioedema (HAE)						
RUCONEST (rhC1INH)	Prophylaxis of Hereditary Angioedema (HAE)						
RUCONEST (rhC1INH)	Delayed Graft Function						
PGN004 (α-glucosidase)	Pompe Disease						
PGN005 (α-galactosidase)	Fabry Disease						
PGN006 (undisclosed)	Antibody Program						
Factor VIII (rhFVIII)	Hemophilia A *Licensed to SIPI (Sinopharm)						

Source: Company presentations

Transgenic Animal Platform and Manufacturing

Pharming's predecessor company, GenPharm, was founded to commercialize its innovative transgenic animal technology. In 2014, the company strengthened its transgenic capabilities with the acquisition of TRM's rabbit founder technology and began breeding transgenic animals that can produce fully human-like proteins in their milk.

This recombinant DNA technology platform allows Pharming to produce complex therapeutic proteins in the mammary glands of rabbits or cattle and purify the protein from their milk for therapeutic applications, delivering consistent production of high quality recombinant human proteins in a consistent, controlled, easily transferable, and scalable manner.

Pharming has optimized the technology to be fully compliant with US and EU regulatory guidelines and developed commercial-scale purification methods for separating the human proteins from other natural components in the milk. The purification process for lead product Ruconest was successfully scaled up and transferred to manufacturing partner Sanofi Chimie in 2010, and all production facilities and processes comply with regulatory GMP-guidelines.

Pharming was the first company in the world to obtain regulatory approval for a recombinant protein pharmaceutical produced in milk of transgenic rabbits.

Ruconest

Ruconest (conestat alfa) is a human recombinant C1 esterase inhibitor (C1-INH) approved for the treatment of acute hereditary angioedema attacks in the US, Europe, Israel and South Korea.

Hereditary Angioedema (HAE)

Disease Overview and Prevalence

Hereditary angioedema (HAE) is a rare autosomal dominant genetic blood disorder estimated to affect between one in 10,000 and one in 50,000 people in the US. Affected individuals have a deficiency of functionally active plasma protein called C1 esterase inhibitor (C1INH) that regulates the production of important vasoactive mediators, resulting in recurrent episodes of angioedema (severe swelling). These attacks most commonly occur in the extremities, face, gastrointestinal tract, and upper airway. HAE is a chronic and debilitating disease with a severe impact on patient quality of life and mental health. In the absence of interventional therapy, swelling of the airway can be life threatening and is associated with significant morbidity and mortality.

External factors such as stress, trauma, illness, infection, and some medications may trigger an attack, but swelling often occurs unpredictably without a known trigger. Attack frequency and duration is quite variable, ranging from multiple times a week to several times per year.

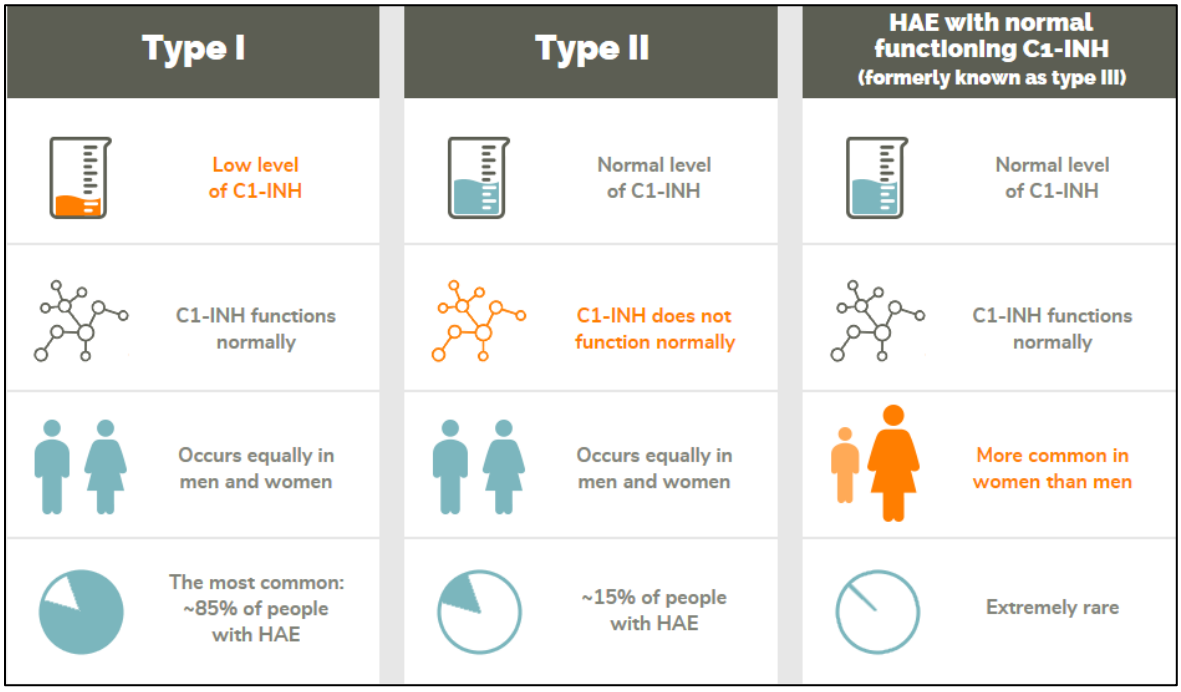
HAE-C1INH (Types I and II) and HAE-nlC1INH (formerly known as Type III)

The three subtypes of HAE have indistinguishable clinical presentation and symptoms, but are defined based on the levels and activity of plasma C1INH. Types I and II are both caused by a mutation in the *SERPING1* gene that codes for the C1INH protein. Type I, the most prevalent (85%), is characterized by a deficiency in plasma C1INH, while type II (15%) is characterized by the production of abnormal C1INH proteins that do not function properly.

When there is an imbalance of functional C1INH, excessive amounts of an inflammatory-mediating peptide called bradykinin are produced that increase vascular permeability and allow the leakage of fluid through blood vessel walls. Fluid then accumulates in the tissue and causes the characteristic episodes of swelling.

The third type of HAE (HAE-nlC1INH), characterized by normal plasma levels of functional C1INH, is very rare and has been observed to be more prevalent in women. Although poorly understood, it is thought to be caused by mutations in the *F12* gene (HAE-FXII), which codes for coagulation factor XII. Coagulation factor XII is an important inflammatory mediator, and increased activity is associated with the overproduction of bradykinin, again facilitating leakage of fluid through the blood vessels into the tissues.

Exhibit 5: Hereditary Angioedema (HAE) Disease Subtypes



Source: CSL Behring reports

Diagnosis

Symptoms tend to begin in childhood and worsen during puberty, with the majority of patients experiencing their first symptoms of angioedema before 18. Attacks are often mistaken for other conditions, including allergic reactions, appendicitis, or irritable bowel syndrome (IBS) that may lead to unnecessary procedures and delay in diagnosis. Although HAE disease awareness in the US is improving through increased family screening and physician education efforts, it is still under recognized and often misdiagnosed. In a 2015 survey by the US Hereditary Angioedema Association, the average time to accurate diagnosis was more than ten years in one third of patients. Based on the literature and our physician checks, we estimate that 20-30% of HAE patients in the US remain undiagnosed – although we note that some estimates are as high as 50-60%.

C1INH quantitative and functional blood tests can be used to confirm an HAE type I or II diagnosis, while diagnosis of HAE-nlC1INH disease is limited to clinical criteria.

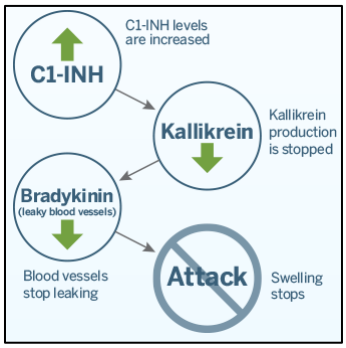
Treatment

Although HAE is a genetic blood disorder, it is primarily treated by allergists and immunologists due to the nature of the symptoms (94% in 2015 patient survey). A small percentage of patients are treated by hematologists, rheumatologists, or their primary care doctors.

Until the last decade, treatment options for HAE in the US were largely limited to avoidance of known triggers and supportive care. Prior to FDA approval of the first C1INH replacement therapy, prophylactic treatment relied on the use of attenuated androgens, which increased the levels of C1INH and reduced the number of attacks, but were also associated with undesirable long-term side effects and contraindicated for pregnant or breastfeeding women. Even as modern, targeted therapies have become available, some androgen use has persisted due to their low cost. Oral antifibrinolytic agents were also historically prescribed off-label, but lack relative efficacy and require multiple daily dosing.

The treatment paradigm has evolved greatly in recent years with the advent of effective targeted acute therapies and advances in prophylactic treatment. C1INH replacement therapy had been available and used successfully in Europe for several decades before the first approvals in the US (in 2008 for prophylactic and 2009 for acute), and has since drastically changed the management protocol for HAE.

Exhibit 6: C1INH Replacement Therapy



Source: Pharming company reports

Because of the high variability in frequency and severity of attacks among HAE patients, acute interventions alone will be sufficient for some, while others patients are prescribed a first line prophylactic therapy together with acute treatment for breakthrough attacks. Treatment strategies take into consideration many factors and are highly individualized. Even with prophylactic treatment, which can be burdensome and expensive, the vast majority of patients experience some frequency of breakthrough attacks that must be treated acutely. Physicians we spoke with emphasized the importance of all HAE patients carrying an acute therapy for emergent attacks, even if they are on a prophylactic regimen.

Exhibit 7: First Generation Prophylactic Treatment Options - 2008

Treatment	Dosing	Main side effects	FDA-approved Adults	FDA-approved Children	Pregnancy designation	Long-term prophylaxis	Short-term prophylaxis	Acute attacks
17 α alkylated androgens								
Danazol (Danocrine)	200 mg/day or every other day	Masculization Alopecia Acne Hepatic adenomas Lipid abnormalities	Yes	No	Category X	Yes	Yes	No
Stanozolol (Winstrol)	**Usual doses** Adults: 2 mg/day Children 6–12 yr: 0.5–2 mg/day Children <6 yr: 0.5–1 mg/day		Yes	Yes		Yes	Yes	No
Antifibrinolytics								
Epsilon aminocaprioic acid (EACA) or Amicar	1–2 g by mouth 3x daily	Hypercoagulability Muscle cramps Postural hypotension	No	No	Category C	Off-label use		
Tranexamic acid (Cyklokapron)	1g–.5g by mouth 2–3x daily		No	No	Category B	Off-label use		
Plasma derivatives								
Fresh frozen plasma	2 U intravenous prior to procedure or during attack	Possible worsening of angioedema during an attack	No	No			Off-label use	Off-label use
C1 inhibitor concentrates								
Plasma-derived nanofiltered C1 inhibitor (Cinryze)	1000 U intravenous every 3–4 days	Hypersensitivity Possible transmission of infectious or prion disease Upper respiratory infection Rash Headache	Yes*	Adolescents	Category C	Yes	Yes	No

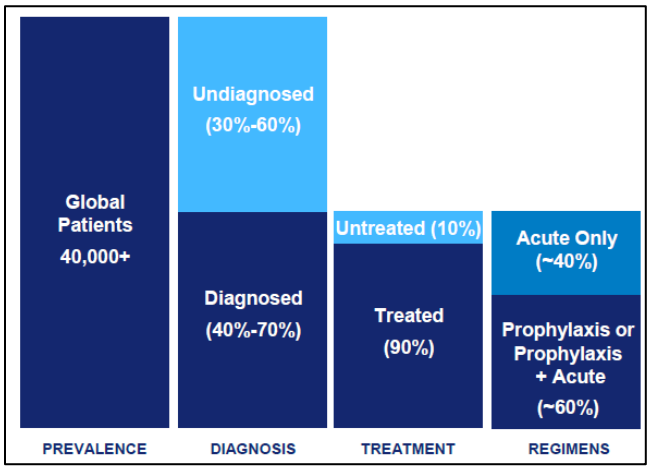
Source: Cleveland Clinic, adapted from Zuraw 2008

HAE Treatment Landscape

The US HAE market is dominated by two large, established players (Shire and CSL Behring) and consists of both prophylactic and "on-demand" or acute treatments.

Estimates of prevalence in the US range from one in 10,000 to one in 50,000 individuals. As of 2016, the US HAE Association estimates that there are ~11,000 total patients in the US (one in 30,000 individuals).

Exhibit 8: HAE Patient Breakdown



Source: Shire, May 2017

Acute Treatment

There are currently four effective acute treatment options available in the US for HAE: Berinert, Kalbitor, Firazyr, and Ruconest.

Exhibit 9: Acute Treatment Options for HAE

Treatment	Dosing	Main side effects	FDA-approved Adults	FDA-approved Children	Pregnancy designation	Long-term prophylaxis	Short-term prophylaxis	Acute attacks
Plasma-derived purified C1 inhibitor (Berinert)	20 U/kg intravenous on demand	Hypersensitivity reactions Possible transmission of infectious or prion disease Laryngeal edema Thromboembolic events Dysgeusia	Yes*	All age groups	Category C	No	No	Yes
Recombinant C1 inhibitor (Rocunest)	50 IU/kg (<84 kg) 4200 IU (>84 kg)	Hypersensitivity Headache Nausea Diarrhea	Yes*	Adolescents	Category B	No	No	Yes
Plasma kallikrein inhibitor								
Ecallantide (Kalbitor)	30 mg subcutaneous on demand	Anaphylaxis	Yes	12 years and older	Category C	No	No	Yes
Selective bradykinin receptor antagonist								
Icatibant (Firazyr)	30 mg subcutaneous on demand	Laryngeal attacks Localized reaction	Yes*	No	Category C	No	No	Yes

Source: Cleveland Clinic, adapted from Cicardi et al. 2016,

- Berinert (CSL Behring) is a plasma-derived C1INH approved for acute attacks in adults and pediatric patients by the FDA in 2009. It was the first C1INH approved for acute attacks in the US, and is to date the only treatment for acute attacks in HAE patients under 12 years old. Berinert is delivered via IV and was approved for self-administration in 2011. As a plasma-derived product, Berinert also carries a blood clot warning.

- Kalbitor (Dyax, acquired by Shire in 2016) is an anti-kallikrein that received FDA approval in 2009 for acute treatment in patients 12 and older. It must be refrigerated, and is administered via three subcutaneous injections in a hospital setting due to its black box warning for anaphylaxis in ~4% of patients.

- Shire's Firazyr (icatibant) was approved by the FDA in 2011 for the treatment of acute attacks in adults. Firazyr is a plasma-derived selective bradykinin B2 receptor antagonist delivered via a single subcutaneous injection, and is approved for self-administration. Side effects include injection site reactions in 97% of patients.

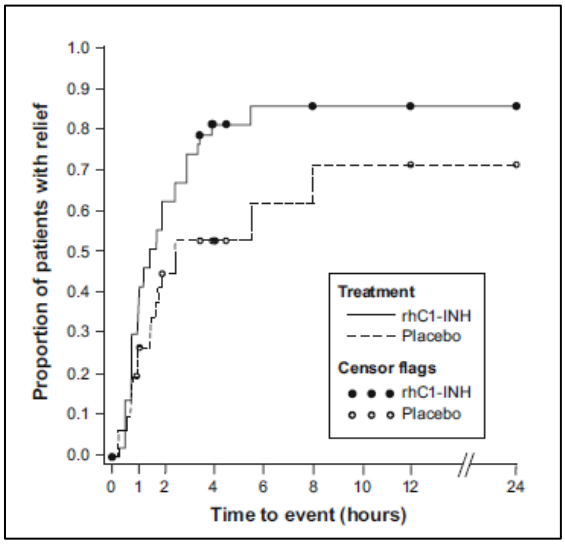
- Ruconest (Pharming), the first recombinant (non-plasma derived) C1INH, was a late market entrant approved by the FDA in July 2014 for the treatment of acute attacks in adults and adolescents. It is currently administered via IV and is approved for home infusion. Pharming is developing intramuscular (IM) and subcutaneous (SC) formulations, as well as conducting trials for approval in the prophylactic setting.

Ruconest in the Acute Treatment Setting

Ruconest was first approved in Europe in 2010 for the treatment of acute attacks, but was not approved by the FDA until mid-2014. It is the only recombinant C1INH on the market, and is extracted from the milk of transgenic rabbits using Pharming's proprietary recombinant transgenic rabbit platform.

The safety and efficacy of Ruconest in the treatment of acute attacks in patients with HAE has been studied in three randomized, double-blind, placebo-controlled studies and two open-label extension studies. The pivotal Phase 3 study conducted as part of the FDA biologics license application (Study C1 1310) demonstrated a statistically significant difference in the primary endpoint of median time to onset of symptom relief (90 minutes) versus placebo (152 minutes).

Exhibit 10: Acute Treatment Efficacy – Ruconest vs. Placebo



Source: Riedl et al. 2014 Ann Allergy Asthma Immunology

Although direct comparisons are difficult due to differences in study design and outcome measures, the efficacy data of recombinant C1INH in the treatment of acute attacks of HAE appear to be comparable to that of competing human plasma-derived C1-INH products; the median time to onset of patient-reported symptom relief was 30 minutes with Berinert 20 U/kg versus 90 minutes for placebo (Zuraw et al. 2010).

We note that the two kinin pathway modulators available for acute treatment, Kalbitor and Firazyr, have the advantage of subcutaneous dosing and have been shown to suppress symptoms, but have limitations in response rates and breakthrough events. Both drugs failed to meet the primary endpoint in one Phase 3 study in the acute setting before ultimately gaining approval.

In Kalbitor's two Phase 3 studies, up to one third of patients required medical intervention to treat unresolved symptoms within 24 hours. Kalbitor also carries a black box warning for risk of anaphylaxis.

Across three Phase 3 trials conducted, Firazyr had a median time to 50% reduction from baseline symptoms ranging from 120 to 138 minutes. 97% of patients experience injection site pain and approximately 30% of patients experience a recurrence of symptoms after one injection and must administer a second dose or go to the hospital.

Despite the injection site pain and risk of symptom recurrence, Firazyr is still the most commonly used therapy in the acute setting largely due to patient preference for subcutaneous self-administration over IV home infusion. In order to take significant market share from Firazyr in the long term, we believe Pharming will need to develop a subcutaneous formulation of Ruconest.

Prophylactic Treatment Landscape

- Cinryze (Shire) was the first C1NH concentrate approved in the US for the prophylactic treatment of adults and adolescents with HAE in 2008, and has since been the leading drug in that setting. It was originally developed by ViroPharma, which was acquired by Shire in 2013. It is a human plasma-derived product, with a pasteurization and nanofiltration process in place to minimize the potential risks of blood clots, impurities, and pathogens that underlie plasma-derived therapies. The FDA label carries a warning for blood clots. It is delivered via IV and is approved for home infusion.

- Haegarda (CSL Behring) is a plasma-derived C1INH recently approved (June 2017) as the first prophylactic HAE treatment delivered subcutaneously, despite an attempted patent dispute from Shire. In its Phase 3 COMPACT study, Haegarda demonstrated a median reduction in attack rate of 95% vs. placebo at the highest dose and up to 40% of patients remained attack free throughout the study. Despite this impressive efficacy data, Haegarda requires a high volume injection (up to 12 mL twice weekly) that is often painful and time consuming for the patients, and still carries the FDA blood clot warning as a plasma-derived product.

- Shire reported positive pivotal Phase 3 data for lanadelumab in May 2017. It is a fully human monoclonal antibody engineered to bind to kallikrein and prevent the production of bradykinin. Shire is expected to submit a BLA in late 2017 or early 2018 for the prophylactic treatment of HAE. It is administered via a subcutaneous injection every 2 weeks.

- Ruconest is a recombinant C1INH in development for prophylactic treatment of HAE attacks. It is administered via IV twice weekly. Pharming is expected to file an sBLA with the FDA for conditional approval in the fourth quarter of 2017.

Historically, many patients were not willing to assume the treatment burden of prophylactic IV regimens twice weekly unless their attacks were very frequent or severe. With the recent launch of Haegarda and other subcutaneous and even oral therapies in development, this is expected to change considerably.

Ruconest in Prophylaxis

In August 2016, Pharming reported positive results from its Phase 2 study of Ruconest for prophylaxis in HAE showing a statistically significant reduction in attack frequency with an impressive safety profile.

Exhibit 11: Reduction in HAE Attack Frequency with Ruconest Prophylactic Treatment

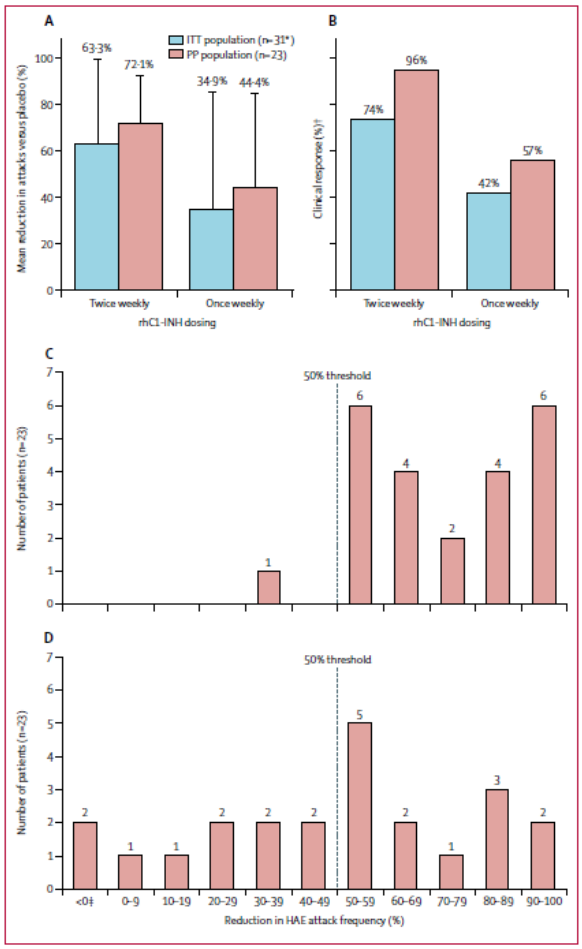


Figure 2: **Primary and secondary endpoints**
(A) Percentage reduction in attacks. (B) Clinical response. rhC1-INH twice-weekly (C) and once-weekly (D) administration distributions of percentage reduction in clinical response (PP population). ITT=intention-to-treat. PP=per-protocol. rhC1-INH=recombinant human C1 esterase inhibitor. HAE=hereditary angio-oedema. *With exclusion of one patient who was randomly assigned, but did not receive study medication. †Defined as a reduction of 50% or more in the number of attacks that occurred during rhC1-INH treatment versus attacks that occurred during placebo treatment. ‡Two (9%) patients had an increase in attack frequency while receiving once-weekly rhC1-INH (one patient had an increase of 40% and one patient had an increase of 62·5%).

Source: Riedl et al Lancet 2017

Exhibit 12: Ruconest Safety Profile

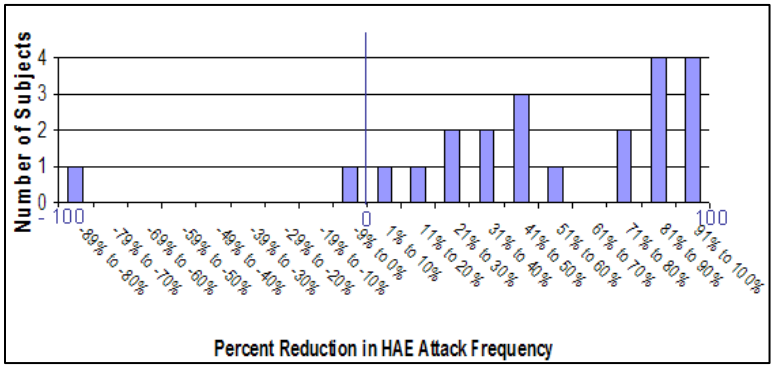
	rhC1-INH twice weekly (n=29)	rhC1-INH once weekly (n=29)	Placebo (n=28)
Any AE	10 (34%)	13 (45%)	8 (29%)
Serious AE	1 (3%)*	--	--
Treatment-related AE	2 (7%)†	--	--
AEs occurring in ≥5% of patients			
Headache	5 (17%)	2 (7%)	--
Nasopharyngitis	--	3 (10%)	2 (7%)
Anxiety	--	2 (7%)	--

Data are n (%). rhC1-INH=recombinant human C1 esterase inhibitor. AE=adverse event. *Patient underwent a urological procedure for pre-existing phimosis. †Fatigue (n=1) and headache (n=1).

Source: Riedl et al Lancet 2017

Ruconest demonstrated a 96% response rate (≥50% reduction in attack frequency, twice weekly dosing). This compares to a 50% response rate in Cinryze's pivotal study when dosed every 3-4 days.

Exhibit 13: Reduction of HAE Attack Frequency on Cinryze Prophylaxis



Source: FDA Briefing Documents, May 2008

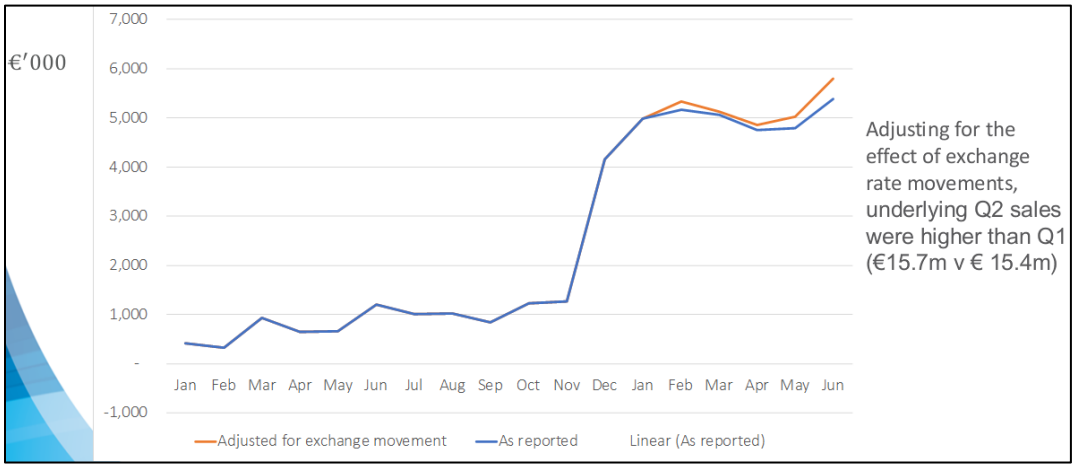
Although Shire's lanadelumab demonstrated impressive efficacy data of 87% monthly reduction in attacks at the highest dose in Phase 3 versus Ruconest's 72% reduction (Phase 2 prophylaxis study) we note that that the lanadelumab study population had a baseline of 3.7 mean attacks/month, while the Ruconest Phase 2 study population had a baseline of 7.5 mean attacks/ month.

Based on its end of Phase 2 meeting with the FDA, Pharming intends to file an sBLA to the FDA by YE17 to expand Ruconest's label to include prophylaxis.

Ruconest Gaining Traction

Three things happened in relatively rapid succession that gave Ruconest a needed push. 1) Pharming reacquired the North American commercialization rights to Ruconest from Valeant in December 2016, 2) the Ruconest prophylaxis data was published in the Lancet in July 2017, and 3) Shire experienced a manufacturing interruption in late 2017 that led to a widespread and shortage of Cinryze.

Exhibit 14: Ruconest Sales Trend - Monthly Net Revenues



Source: Pharming company reports

Shire's contract manufacturer, Sanquin Blood Supply, experienced a manufacturing interruption that led to product shortages starting in August 2017. According to Shire's comments on its third quarter earnings call, Sanquin has had historic difficulties producing enough product to meet patient demand. Production resumed in September 2017 and Shire is seeking approval to begin in-house manufacturing; however supply is expected to remain constrained until they are able to build inventory.

Many Cinryze patients turned to Berinert or Haegarda as alternatives, but CSL has not been able to scale up rapidly enough to accommodate the heightened demand for its plasma-derived products either.

The severity of this shortage highlights Ruconest's advantage. In addition to eliminating the risks of plasma exposure, recombinant products are far less susceptible to manufacturing interruptions and supply issues.

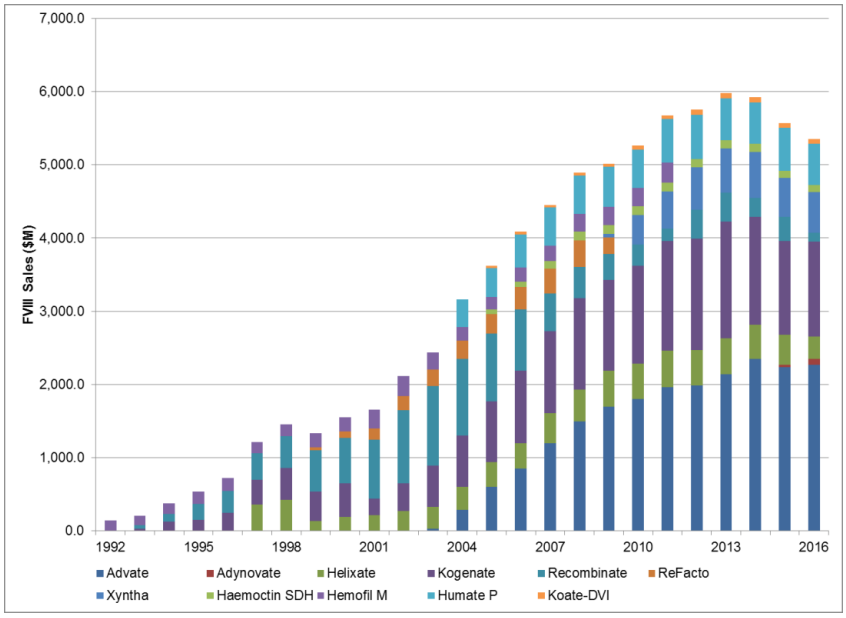
Recombinant Products Win Out

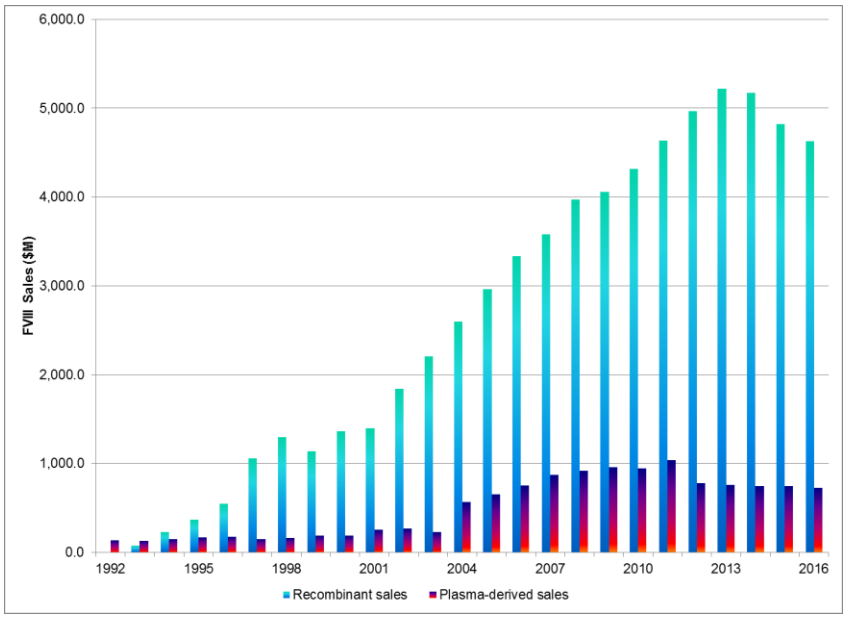
Hemophilia FVIII (hemophilia A) serves as a useful example of a genetic disorder where the advent of coagulation factor replacement therapy materially improved patients' lives.

As one academic paper in Blood Transfusion notes:

> *"…The unlimited production of recombinant FVIII products has theoretically provided an opportunity to overcome the potentially limited availability of plasma-derived FVIII concentrates, and the perceived increased safety of the replacement therapy associated with the introduction of recombinant FVIII products dramatically improved the quality of life of patients with haemophilia A and their families and enabled regular infusion of factor concentrate replacement therapy to prevent bleeding and resultant joint damage (i.e., primary prophylaxis), home treatment, and, ultimately, a near-normal lifestyle and life expectancy…"*

Exhibit 2: FVII Sales – By Product & Type





Source: EvaluatePharma, Oppenheimer & Co.

We feel strongly that the unlimited production capacity of recombinant Ruconest coupled with its safety and side effect profile will make it the default product of choice for acute and (upon approval) prophylactic treatment of HAE.

Future of HAE Treatment

The treatment landscape for HAE has changed dramatically in the past decade, but there is still a need for durable and reliable treatment options with convenient routes of administration.

Behind lanadelumab, the next promising therapy in the pipeline for HAE is BiCryst's BCX7353, an oral inhibitor of plasma kallikrein currently in Phase 2 development. An oral prophylactic treatment would be highly desirable in HAE, but efficacy and reliability will remain important determinants of market share.

In the long term, gene therapy could be a promising approach to a more durable response; however, in the near to mid-term we anticipate a push toward improved dosing and administration of existing therapies with known efficacy and safety profiles.

Exhibit 15: Overview - Competitive HAE Products in Pipeline

Product	Company	Target	Route of Administration	Phase	Drug Class
SHP643	Shire	Kallikrein inhibitor	Subcutaneous (SQ)	Phase 3	Biologic (mAb)
Cinryze SQ	Shire	C1-INH (Plasma-derived)	Subcutaneous (SQ)	Phase 3	Biologic (Protein)
BCX7353	BioCryst	Kallikrein inhibitor	Oral - Prophylactic	Phase 2	Small Molecule
CSL312	CSL	Coagulation Factor XII	Subcutaneous (SQ)	Phase 1	Biologic (mAb)
IONIS-PKKRx	Ionis Pharmaceuticals	Prekallikrein inhibitor	Subcutaneous (SQ)	Phase 1	Antisense
KVD-818	KalVista Pharmaceuticals	Kallikrein inhibitor	Oral - Prophylactic	Phase 1	Small Molecule
AB602	AntriaBio	Kallikrein inhibitor	Oral	Preclinical	Small Molecule
ADVM-053	Adverum Biotechnologies	Viral gene therapy	NA	Preclinical	Vaccine
ALN-F12	Alnylam Pharmaceuticals	Coagulation Factor XII	Subcutaneous (SQ)	Preclinical	siRNA/RNAi
ARC-F12	Arrowhead Pharmaceuticals	Coagulation Factors	NA	Preclinical	siRNA/RNAi
C1-INH	ProMetic Life Sciences	C1-INH (Plasma-derived)	NA	Preclinical	Biologic (Protein)
KVD-900	KalVista Pharmaceuticals	Kallikrein inhibitor	Oral - Prophylactic	Preclinical	Small Molecule

Source: Biomedtracker, Company reports

Other Pipeline Programs

Pharming has two preclinical programs in Pompe disease and Fabry's disease, and additional projects in early stage development.

Pharming is also developing next-generation forms of Ruconest, including new small IV (IV Lite), intramuscular and subcutaneous versions. An oral version is also being explored.

Recombinant Alpha-glucosidase in Pompe Disease

Pompe disease (also known as Acid Maltase Deficiency or Glycogen Storage Disease type II) is a rare autosomal recessive genetic disorder characterized by absence or deficiency of the lysosomal enzyme alpha-glucosidase (GAA) required to breakdown glycogen. This causes accumulation of lysosomal glycogen in the body, particularly in cardiac, smooth, and skeletal muscle cells, resulting in muscular myopathy. It affects approximately 1 in 40,000 individuals.

Pharming previously generated transgenic rabbits producing alpha-glucosidase until all assets related to the program were transferred to Genzyme in the 2002 settlement. Genzyme later stopped the program, and Pharming's is developing a new recombinant product with better immunogenicity, safety and efficacy profiles than existing therapies.

Recombinant Alpha-galactosidase in Fabry's Disease

Fabry's disease (also known as alpha-galactosidase A deficiency) is a rare genetic X-linked lysosomal storage disorder resulting from the deficient activity of alpha-galactosidase A (a-Gal A), caused by a mutation of the GLA gene. Fabry's disease involves dysfunctional metabolism of sphingolipids and can cause a wide range of systemic symptoms. It affects approximately 1 in 40,000 men and 1 in 60,000 women.

Pharming is using its transgenic technology platform to develop a recombinant alpha-galactosidase enzyme replacement therapy.

Recombinant Factor VIII for the Treatment of Hemophilia A

Hemophilia A is a genetic bleeding disorder caused by insufficient levels of a plasma protein called factor VIII, an important coagulation or clotting factor. Hemophilia A can be mild, moderate or severe, depending on the level of factor VIII produced.

Pharming is working with its Chinese partner (CSIPI) to develop a recombinant Factor VIII replacement therapy product.

Intellectual Property

Pharming owns and has in-licensed a significant number of patents and applications worldwide, broadly covering the technology for the production of recombinant proteins in the milk of transgenic animals, as well as its specific products under development.

Ruconest has data exclusivity until July 16, 2026 ensuring that the FDA will not approve any applications for biosimilar recombinant C1 inhibitors referencing Ruconest data under the Biologics Price Competition and Innovation Act.

Patents for its recombinant proteins currently produced in milk and methods of generating transgenic animals are protected beyond 2020.

Pharming's IP position in the production and use of Ruconest not only covers the therapeutic compound itself, but also methods of production and purification, improved versions of Ruconest, and therapeutic use in a large number of medical indications, including but not limited to HAE and other diseases linked to C1INH deficiency.

Pharming's IP for transgenic technology includes:

- Generation and use of transgenic cattle
- Milk specific expression in transgenic animals
- Animals carrying large transgenes (> 50kb)
- Purification of biopharmaceuticals from milk
- Structure and design of transgenes for high level production
- Fusion proteins for high level expression
- Generation of animals using nuclear transfer technology
- Oocyte activation for nuclear transfer
- Transgenic antibody production
- Sperm mediated gene transfer

Important Recent Announcements

- December 8, 2016 - Pharming Announces Completion of Acquisition of All North American Commercialization Rights for Ruconest From Valeant
- January 16, 2017 - European Commission Amends Marketing Authorization for Ruconest to Include Self-Administration
- March 9, 2017 - Pharming Group Report on Preliminary Financial Results for 2016
- May 17, 2017 - Pharming Group Interim Report on Financial Results for the First Quarter 2017
- July 21, 2017 - Pharming Announces Completion of its Refinancing with a Single US$100M Debt Facility on Improved Commercial Terms
- July 26, 2017 - Pharming Announces Publication of Ruconest Prophylactic Data in The Lancet
- July 27, 2017 - Pharming Reports on Financial Results for the First Half of 2017
- September 11, 2017 - Pharming Announces Conclusion of FDA End of Phase 2 Interactions on Ruconest for Prophylaxis of HAE
- October 2, 2017 - Pharming Announces Positive Data from Pediatric Clinical Trial with Ruconest
- October 26, 2017 - Pharming Group Reports Financial Results for the First Nine Months of 2017

Management Biographies

Sijmen de Vries, MD, MBA, Chief Executive Officer

Dr. De Vries has extensive senior level experience in both the pharmaceutical and biotechnology industry. He joined Pharming from Switzerland-based 4-Antibody, where he was CEO. Dr. De Vries was previously CEO of Morphochem AG, and prior to this he worked at Novartis Pharma and Novartis Ophthalmics and at SmithKline Beecham Pharmaceuticals Plc where he held senior business and commercial positions. Dr. De Vries holds an MD degree from the University of Amsterdam and a MBA in General Management from Ashridge Management College (UK).

Robin Wright, FCA, Chief Financial Officer

Mr. Wright is responsible for the financial management, accounting and investor relations activities of the Company within the CFO role. He has extensive senior level experience as a CFO of public companies in both the pharmaceutical and biotechnology industries. He is a qualified accountant and joins Pharming from Sweden-based Karolinska Development AB (KDEV:SS), where he was CFO and Head of Business Development. Mr. Wright was also CFO and Head of Business Development at Orexo AB (ORX:SS) in Sweden. Prior to this, he worked in private equity and corporate finance advisory roles, including long periods at Citibank Salomon Smith Barney and Barclays de Zoete Wedd. He has completed over 165 global license and M&A transactions as well as many financing transactions within the pharma/biotech sector. Mr. Wright holds a BA degree in chemistry from Oxford University and is a Fellow of the Institute of Chartered Accountants in England and Wales in the UK.

Bruno M. Giannetti, MD PhD, Chief Operations Officer

Dr. Giannetti is responsible for the company's operations including research and development, manufacturing, non-clinical and clinical development, regulatory affairs, drug safety and medical information. He has more than 30 years of experience in the pharmaceutical and biotech industry. Previously, he was the CEO of AM-Pharma BV (NL) and President and CEO of Verigen AG, Germany. He has served as senior management consultant for pharmaceutical R&D projects at Coopers & Lybrand (in Switzerland and the UK). Dr. Giannetti was also worldwide Vice-President Marketing and Medical Information at Immuno, Austria and Head of Clinical Research at Madaus AG, Germany. Dr. Giannetti holds a PhD in Chemistry, a MD PhD degree in Medicine from the University of Bonn and has recently been appointed Professor at the Pharmaceutical Faculty of the University of Seville (Spain).

Anne-Marie de Groot, SVP Organizational Development

Mrs. De Groot is responsible for developing and executing internal strategic development within the Company to drive performance and identify and implement best business practices, including continuous education and alignment of the organization to be prepared to deliver on new challenges. She has extensive and hands-on experience leading the Human Resources, Internal Communications, Information Technologies and Support Services groups and plays a key role in aligning talent to business strategy, cultivating an environment of high employee engagement and in developing the organizational design. Mrs. De Groot has over 10 years of experience crossing the full spectrum of the HR discipline including leadership and talent development, talent acquisition, corporate culture development, organization design and restructuring, mergers and acquisitions, compensation and benefits, payroll and performance management. She held various Human Resources and Talent Acquisition positions at Randstad, Janssen Pharmaceuticals (the pharmaceutical companies of Johnson and

Johnson) and Pharming. She holds a Bachelor in Social Work and a Bachelor in Human Resources Management from Hogeschool Leiden.

Management Compensation

Exhibit 16: Compensation Table

Name	Position Held	Year	Base Salary (€)	Bonus[1] (€)	Share-Based Payment[2] (€)	Post-Employment Benefits[3] (€)	Other[4] (€)	Total (€)
Sijmen de Vries	Chief Executive Officer	2016	454,000	258,000	736,000	79,000	32,000	1,559,000
		2015	432,000	194,000	1,055,000	76,000	32,000	1,789,000
Bruno Giannetti	Chief Operations Officer	2016	287,000	148,000	445,000	75,000	36,000	991,000
		2015	282,000	106,000	636,000	72,000	25,000	1,121,000
Robin Wright*	Chief Financial Officer	2016	264,000	165,000	205,000	30,000	-	664,000
		2015	44,000	-	7,000	2,000	-	53,000

[1]Bonuses are related to the achievement of the corporate and personal objectives

[2]Share-based payments are long term benefits and for 2016 relates to options of €1.3M (2015 €1.6M) and long-term incentive plan of €0.1M (2015 €0.1M)

[3]Post-employment benefits increased due to compensation in pension earnings due to change in maximum earnings of €0.1M per annum

[4]Includes lease- and car compensation and other related expenses

*Compensation as of appointment in 2015

Source: Company reports

Appendix: HAE Competitve Landscape

	Ruconest		Approved Competitor Products					Upcoming Competitor Products	
Company	**Pharming**	**Pharming**	**CSL Behring**	**Shire**	**CSL Behring**	**Shire**	**Shire**	**Shire**	**BioCryst**
Product	Ruconest (conestat alfa)	Ruconest (conestat alfa)	Haegarda	Cinryze	Berinert	Firazyr (Icatibant)	Kalbitor (Ecallantide)	Lanadelumab	BCX7353
Type	Recombinant C1-INH	Recombinant C1-INH	Plasma-derived C1-INH	Plasma-derived C1-INH	Plasma-derived C1-INH	Bradykinin receptor antagonist	Kallikrein inhibitor	Kallikrein inhibitor	Kallikrein inhibitor
Drug Class	Biologic (Protein)	Biologic (Protein)	Biologic (Protein)	Biologic (Protein)	Biologic (Protein)	Peptide	Biologic (Protein)	Biologic (mAb)	Small Molecule
US Approval	July 2014	Filing sBLA 4Q17	June 2017	2008	2009	2011	2009	Expected 2018	Completed Phase 2
EU Approval	October 2010	-	-	2011	2008	2008	-	Expected 2018	-
Sales	€88.9M in 2017E Cons €53.0M in 2016A	NA	NA	$734.9M in 2017E Cons $680.2M in 2016A	NA	$597.9M in 2017E Cons $578.5M in 2016A	$67.5M in 2017E Cons $52.2M in 2016A	NA	NA
Indication	Acute	Prophylaxis	Prophylaxis	Prophylaxis	Acute	Acute	Acute	Prophylaxis	Prophylaxis
Efficacy	Median time to onset of symptom relief 90 min versus placebo 152 min	96% response rate (≥50% reduction in attack frequency, 2x weekly dosing)	83% response rate (≥50% reduction in attack frequency)	50% response rate 66% reduction in days of swelling	Median time to onset of symptom relief 30 min versus placebo 90 min	Median time to 50% reduction from baseline symptoms 120-138 min	Mean time to significant overall improvement 124.5 min versus placebo	87% monthly reduction in attacks at highest dose	NA
Safety	Very low risk of allergic reaction, unless known sensitivities to rabbits	Very low risk of allergic reaction, unless known sensitivities to rabbits	Blood clot warning, allergic reactions, blood-borne pathogens	Blood clot warning, allergic reactions, blood-borne pathogens	Blood clot warning, allergic reactions, blood-borne pathogens	97% injection site reactions	Black Box Warning: Anaphylaxis 3.9%	Mild to moderate injection site pain	Diarrhea, nausea, headache
Dosing	50 IU/kg Can administer second dose if symptoms persist	50 IU/kg 2x weekly	60 IU/kg or 40 60 IU/kg every 3-4 days	1,000 units (10 mL) every 3-4 days	20 IU/kg	10 mg/mL	Three 10 mg (1 ML) injections (can be repeated if persists)	300 IU/kg (2 mL) every 2 weeks	350/500mg 1x daily
Route of Administration	IV (5 min infusion)	IV (5 min infusion)	Subcutaneous	IV (10 min infusion)	IV (4 ml/minute infusion)	Subcutaneous	Subcutaneous (3 min infusion)	Subcutaneous	Oral
Self Administer?	Yes	Yes	Yes	Yes, after training	Yes	Yes	No	Yes	Yes
Pros	Strong efficacy Durable response Reliable production	Effective and durable response Reliable production	Strong efficacy Subcutaneous dosing	Strong efficacy	Pediatric approval	Subcutaneous dosing	Subcutaneous dosing	Subcutaneous dosing	Oral dosing
Cons	IV dosing	IV dosing Still need acute therapy for breakthrough attacks	Significant plasma exposure Potential supply issues High volume, painful SubQ injection 2x weekly Still need acute therapy for breakthrough attacks	Significant plasma exposure Potential supply issues Still need acute therapy for breakthrough attacks Thromboembolitic event warning	Significant plasma exposure Potential supply issues Thromboembolitic event warning Requires medical follow up for laryngeal	Injection site pain High rate of symptom recurrence after dosing Requires medical follow up for laryngeal attack	Black box warning Must be administered in hospital setting High rate of symptom recurrence after dosing	Safety profile of antibody Physicians have experience with C1INH Still need acute therapy for	NA

Source: FDA, Company reports, Oppenheimer & Co.

Pharming NV Statement of Operations	Dec-12	Dec-13	Dec-14	Dec-15	Dec-16	Mar-17	Jun-17	Sep-17	Dec-17	Dec-17	Dec-18	Dec-19	Dec-20	Dec-21	Dec-22
€ Millions, except per share data	2012A	2013A	2014A	2015A	2016A	1Q17A	2Q17A	3Q17A	4Q17E	2017E	2018E	2019E	2020E	2021E	2022E
Product sales	0.798	0.941	2.996	8.621	13.689	15.192	14.917	25.878	32.007	87.99	174.10	270.84	407.44	526.64	620.24
License fees	9.815	5.903	18.190	2.207	2.184	0.268	0.268	0.205	1.759	2.50	2.50	2.50	2.50	2.50	2.50
Total revenues	**10.613**	**6.844**	**21.186**	**10.828**	**15.873**	**15.460**	**15.185**	**26.083**	**33.766**	**90.494**	**176.598**	**273.340**	**409.945**	**529.140**	**622.738**
Cost of sales	(1.126)	(0.533)	(2.853)	(4.800)	(4.683)	(1.705)	(2.040)	(4.262)	(4.993)	(13.000)	(26.490)	(41.001)	(61.492)	(79.371)	(93.411)
Inventory impairments	(3.141)	(0.579)	(0.574)	-	-	0.008	0.080	-	0.012	0.100	0.100	0.100	0.100	0.100	0.100
Gross income (loss)	**6.346**	**5.732**	**17.759**	**6.028**	**11.190**	**13.763**	**13.225**	**21.821**	**28.785**	**77.594**	**150.208**	**232.439**	**348.553**	**449.869**	**529.428**
Income from grants	0.250	0.106	0.105	0.147	0.335	0.084	0.083	0.440	0.243	0.850	0.850	0.850	0.850	0.850	0.850
Other income	**0.250**	**0.106**	**0.105**	**0.147**	**0.335**	**0.084**	**0.083**	**0.440**	**0.243**	**0.850**	**0.850**	**0.850**	**0.850**	**0.850**	**0.850**
Research and development	(19.350)	(10.232)	(11.663)	(14.180)	(15.388)	(4.689)	(4.465)	(3.914)	(4.932)	(18.000)	(24.000)	(28.000)	(35.000)	(40.000)	(45.000)
General and administrative	(3.080)	(2.518)	(3.324)	(3.744)	(4.642)	(1.375)	(1.253)	(1.680)	(1.692)	(6.000)	(8.000)	(10.000)	(12.000)	(15.000)	(15.000)
Marketing and sales	-	-	-	(1.085)	(3.035)	(3.911)	(7.229)	(8.175)	(10.685)	(30.000)	(50.000)	(65.000)	(80.000)	(100.000)	(110.000)
Impairment charges	(1.257)	-	-	-	-	-	-	-	-	-	-	-	-	-	
Share-based compensation	(0.370)	-	-	-	-	-	-	-	-	-	-	-	-	-	
Total operating expenses	**(24.057)**	**(12.750)**	**(14.987)**	**(19.009)**	**(23.065)**	**(9.975)**	**(12.947)**	**(13.769)**	**(17.309)**	**(54.000)**	**(82.000)**	**(103.000)**	**(127.000)**	**(155.000)**	**(170.000)**
Operating income (loss)	**(17.461)**	**(6.912)**	**2.877**	**(12.834)**	**(11.540)**	**3.872**	**0.361**	**8.492**	**11.719**	**24.444**	**69.058**	**130.289**	**222.403**	**295.719**	**360.278**
Fair value gain (loss) on revaluation derivatives	1.283	-	-	3.380	0.079	(2.426)	1.201	(13.961)	(0.814)	(16.000)	(10.000)	(10.000)	(10.000)	(10.000)	(10.000)
Other financial income (expenses)	(7.915)	(8.148)	(8.644)	(0.503)	(6.075)	(7.194)	(26.032)	(2.022)	(2.752)	(38.000)	(10.000)	(10.000)	(10.000)	(10.000)	(10.000)
Total other income (expenses)	**(6.632)**	**(8.148)**	**(8.644)**	**2.877**	**(5.996)**	**(9.620)**	**(24.831)**	**(15.983)**	**(3.566)**	**(54.000)**	**(20.000)**	**(20.000)**	**(20.000)**	**(20.000)**	**(20.000)**
Income (loss) before provision for (benefit from) income taxes	**(24.093)**	**(15.060)**	**(5.767)**	**(9.957)**	**(17.536)**	**(5.748)**	**(24.470)**	**(7.491)**	**8.153**	**(29.556)**	**49.058**	**110.289**	**202.403**	**275.719**	**340.278**
Income tax expense	-	-	-	-	-	-	-	-	-						
Net income (loss)	**(24.093)**	**(15.060)**	**(5.767)**	**(9.957)**	**(17.536)**	**(5.748)**	**(24.470)**	**(7.491)**	**8.153**	**(29.556)**	**49.058**	**110.289**	**202.403**	**275.719**	**340.278**
Net income (loss) attributable to non-controlling interest	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Basic and diluted EPS (€)	**(0.33)**	**(0.07)**	**(0.01)**	**(0.02)**	**(0.04)**	**(0.01)**	**(0.05)**	**(0.02)**	**0.02**	**(0.06)**	**0.10**	**0.22**	**0.41**	**0.55**	**0.67**
Shares outstanding (Diluted)	72.977	213.008	393.146	408.680	415.381	475.200	483.929	485.00	487.43	482.888	487.717	492.594	497.520	502.496	507.521

Source: Company reports, Oppenheimer & Co.

Pharming NV Balance Sheet	Dec-12	Dec-13	Dec-14	Dec-15	Dec-16	Mar-17	Jun-17	Sep-17	Dec-17	Dec-17	Dec-18	Dec-19	Dec-20	Dec-21	Dec-22
€ Millions	2012A	2013A	2014A	2015A	2016A	1Q17A	2Q17A	3Q17A	4Q17E	2017E	2018E	2019E	2020E	2021E	2022E
Inventories	2.101	4.763	13.404	16.229	17.941	18.901	17.473	17.995	18.078	18.078	17.906	18.014	18.019	18.004	17.986
Assets held for sale	0.242	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trade and other receivables	0.524	0.860	1.554	3.220	12.360	19.846	18.645	17.274	17.031	17.031	17.495	17.208	17.191	17.232	17.282
Restricted cash	0.309	2.008	-	-	-	-	-	-	-	-	-	-	-	-	-
Cash and cash equivalents	5.273	16.968	34.185	31.643	31.889	27.358	24.997	38.389	30.658	30.658	31.176	32.720	31.303	31.464	31.666
Total current assets	**8.449**	**24.599**	**49.143**	**51.092**	**62.190**	**66.105**	**61.115**	**73.658**	**65.767**	**65.767**	**66.577**	**67.942**	**66.513**	**66.700**	**66.933**
Intangible assets	0.535	0.405	0.777	0.724	56.680	56.148	55.855	56.735	56.355	56.355	56.325	56.442	56.369	56.373	56.377
Property, plant and equipment	7.128	6.228	5.598	5.661	6.043	6.442	7.104	7.815	6.851	6.851	7.155	7.168	7.006	7.045	7.094
Restricted cash	0.732	0.176	0.200	0.200	0.248	0.248	0.248	0.248	0.248	0.248	0.248	0.248	0.248	0.248	0.248
Long term prepayment	-	-	-	-	1.622	2.495	2.644	1.500	2.065	2.065	2.069	1.925	2.031	2.022	2.012
Total assets	**16.844**	**31.408**	**55.718**	**57.677**	**126.783**	**131.438**	**126.966**	**139.956**	**131.286**	**131.286**	**132.373**	**133.725**	**132.168**	**132.388**	**132.664**
Loans and borrowings	-	-	-	3.047	26.136	31.229	11.028	16.908	21.325	21.325	17.647	19.301	19.900	19.543	19.098
Deferred license fees income	1.936	2.200	2.200	2.207	0.943	0.877	0.811	0.806	0.859	0.859	0.834	0.840	0.848	0.845	0.842
Derivative financial liabilities	1.215	4.147	4.266	0.953	9.982	12.407	7.354	21.121	12.716	12.716	13.477	15.007	13.479	13.670	13.908
Convertible bonds	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Restructuring provision	1.232	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trade and other payables	3.690	5.812	7.781	7.005	14.054	16.882	15.002	17.031	15.742	15.742	15.879	16.099	15.866	15.896	15.935
Finance lease liabilities	0.895	0.766	0.626	0.263	0.263	0.196	0.266	0.266	0.248	0.248	0.257	0.255	0.252	0.253	0.254
Total current liabilities	**8.968**	**12.925**	**14.873**	**13.475**	**51.378**	**61.591**	**34.461**	**56.132**	**50.891**	**50.891**	**48.094**	**51.502**	**50.344**	**50.207**	**50.037**
Loans and borrowings	-	-	-	11.757	40.395	33.566	78.628	70.800	55.847	55.847	65.281	61.944	59.730	60.700	61.914
Deferred license fees income	13.495	12.222	10.022	7.808	2.270	2.068	1.867	1.667	1.968	1.968	1.868	1.868	1.918	1.905	1.890
Finance lease liabilities	1.961	1.207	0.965	0.798	0.599	0.599	0.572	0.471	0.560	0.560	0.541	0.533	0.549	0.546	0.542
Other liabilities	0.072	0.044	0.015	-	4.674	4.674	4.674	4.674	4.674	4.674	4.674	4.674	4.674	4.674	4.674
Total liabilities	**24.496**	**26.398**	**25.875**	**33.838**	**99.316**	**102.498**	**120.202**	**133.744**	**113.940**	**113.940**	**120.457**	**120.520**	**117.214**	**118.033**	**119.056**
Share capital	10.092	3.346	4.077	4.120	4.556	4.789	4.839	5.201	4.846	4.846	4.933	4.957	4.896	4.908	4.923
Share premium	231.866	254.901	282.260	283.396	301.876	308.320	310.907	316.858	309.490	309.490	311.686	311.881	310.637	310.924	311.282
Other reserves	14.144	14.874	0.036	0.066	0.060	0.040	(0.612)	(0.421)	(0.233)	(0.233)	(0.375)	(0.316)	(0.289)	(0.303)	(0.321)
Accumulated deficit	(263.754)	(268.111)	(256.530)	(263.743)	(279.025)	(284.209)	(308.370)	(315.426)	(296.758)	(296.758)	(304.328)	(303.317)	(300.290)	(301.173)	(302.277)
Total shareholders' equity	**(7.652)**	**5.010**	**29.843**	**23.839**	**27.467**	**28.940**	**6.764**	**6.212**	**17.35**	**17.346**	**11.917**	**13.205**	**14.953**	**14.355**	**13.608**
Total liabilities and shareholders' equity	**16.844**	**31.408**	**55.718**	**57.677**	**126.783**	**131.438**	**126.966**	**139.956**	**131.29**	**131.286**	**132.373**	**133.725**	**132.168**	**132.388**	**132.664**

Source: Company reports, Oppenheimer & Co.

Stock prices of other companies mentioned in this report (as of 11/8/2017):

Adverum Biotechnologies (ADVM-Nasdaq, $3.25, Not Covered)
Alnylam Pharmaceuticals (ALNY-Nasdaq, $132.36, Not Covered)
AntriaBio, Inc. (ANTB-OTC, $0.97, Not Covered)
Arrowhead Pharmaceuticals (ARWR-Nasdaq, $3.71, Not Covered)
BioCryst Pharmaceuticals (BCRX-Nasdaq, $4.85, Not Covered)
Ionis Pharmaceuticals (IONS-Nasdaq, $54.16, Not Covered)
KalVista Pharmaceuticals (KALV-Nasdaq, $13.14, Not Covered)
Prometric Life Sciences (PLI-TSE, C$1.41, Not Covered)
Sanofi (SAN-FR, €78.82, Not Covered)
Shire plc (SHP-LON, £37.23, Not Covered)
Sinopharm Group (1099-HKG, HK$33.35, Not Covered)
Valeant Pharmaceuticals (VRX-NYSE, $11.80, Not Covered)

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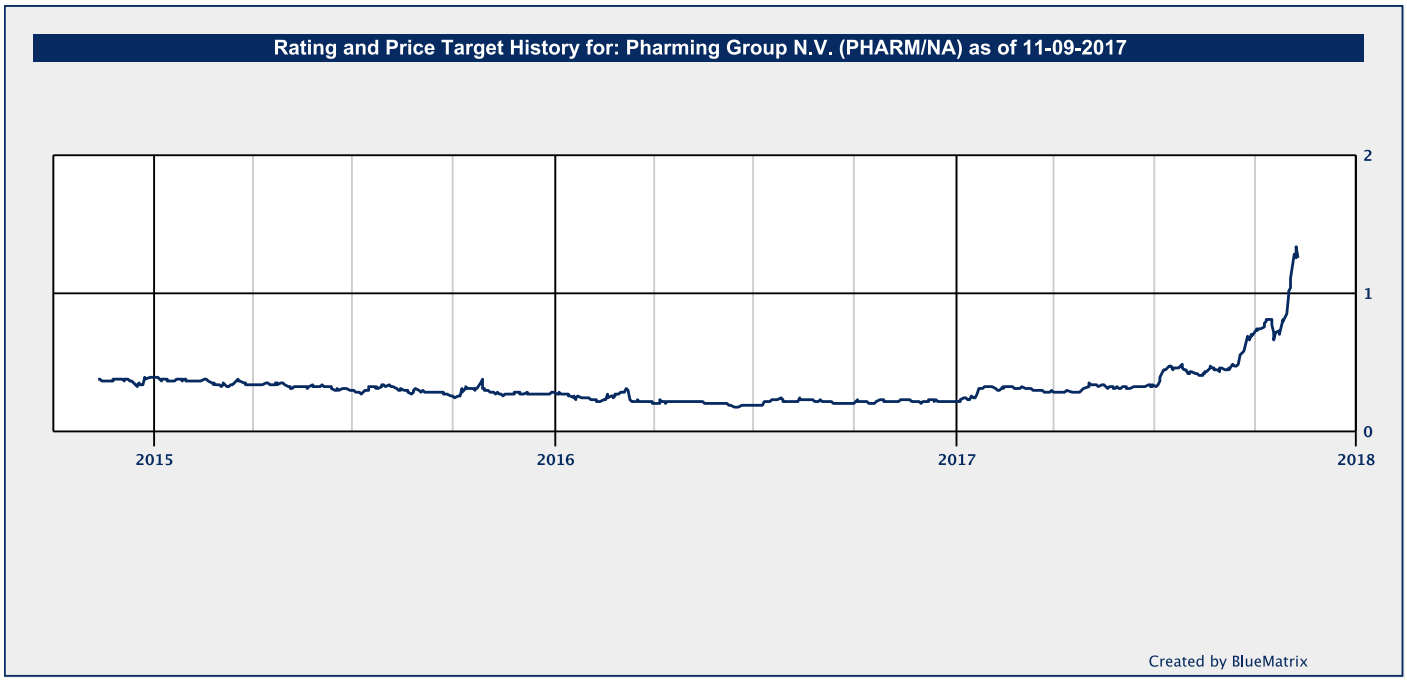

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			IB Serv/Past 12 Mos.	
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