Delivering On Our Strategy

Q2 2017 Results

August 3, 2017

Flemming Ornskov, MD, MPH – CEO

Jeff Poulton – CFO

“Safe Harbor” Statement Under The Private Securities Litigation Reform Act Of 1995

Statements included herein that are not historical facts, including without limitation statements concerning future strategy, plans, objectives, expectations and intentions, the anticipated timing of clinical trials and approvals for, and the commercial potential of, inline or pipeline products, are forward-looking statements. Such forward-looking statements involve a number of risks and uncertainties and are subject to change at any time. In the event such risks or uncertainties materialize, Shire’s results could be materially adversely affected. The risks and uncertainties include, but are not limited to, the following:

- Shire’s products may not be a commercial success;
- increased pricing pressures and limits on patient access as a result of governmental regulations and market developments may affect Shire’s future revenues, financial condition and results of operations;
- Shire conducts its own manufacturing operations for certain of its products and is reliant on third party contract manufacturers to manufacture other products and to provide goods and services. Some of Shire’s products or ingredients are only available from a single approved source for manufacture. Any disruption to the supply chain for any of Shire’s products may result in Shire being unable to continue marketing or developing a product or may result in Shire being unable to do so on a commercially viable basis for some period of time;
- the manufacture of Shire’s products is subject to extensive oversight by various regulatory agencies. Regulatory approvals or interventions associated with changes to manufacturing sites, ingredients or manufacturing processes could lead to, among other things, significant delays, an increase in operating costs, lost product sales, an interruption of research activities or the delay of new product launches;
- certain of Shire’s therapies involve lengthy and complex processes, which may prevent Shire from timely responding to market forces and effectively managing its production capacity;
- Shire has a portfolio of products in various stages of research and development. The successful development of these products is highly uncertain and requires significant expenditures and time, and there is no guarantee that these products will receive regulatory approval;
- the actions of certain customers could affect Shire’s ability to sell or market products profitably. Fluctuations in buying or distribution patterns by such customers can adversely affect Shire’s revenues, financial conditions or results of operations;
- Shire’s products and product candidates face substantial competition in the product markets in which it operates, including competition from generics;
- adverse outcomes in legal matters, tax audits and other disputes, including Shire’s ability to enforce and defend patents and other intellectual property rights required for its business, could have a material adverse effect on the Company’s revenues, financial condition or results of operations;
- inability to successfully compete for highly qualified personnel from other companies and organizations;
- failure to achieve the strategic objectives, including expected operating efficiencies, cost savings, revenue enhancements, synergies or other benefits at the time anticipated or at all with respect to Shire’s acquisitions, including NPS Pharmaceuticals Inc., Dyax Corp. or Baxalta Incorporated may adversely affect Shire’s financial condition and results of operations;
- Shire’s growth strategy depends in part upon its ability to expand its product portfolio through external collaborations, which, if unsuccessful, may adversely affect the development and sale of its products;
- a slowdown of global economic growth, or economic instability of countries in which Shire does business, as well as changes in foreign currency exchange rates and interest rates, that adversely impact the availability and cost of credit and customer purchasing and payment patterns, including the collectability of customer accounts receivable;
- failure of a marketed product to work effectively or if such a product is the cause of adverse side effects could result in damage to Shire’s reputation, the withdrawal of the product and legal action against Shire;
- investigations or enforcement action by regulatory authorities or law enforcement agencies relating to Shire’s activities in the highly regulated markets in which it operates may result in significant legal costs and the payment of substantial compensation or fines;
- Shire is dependent on information technology and its systems and infrastructure face certain risks, including from service disruptions, the loss of sensitive or confidential information, cyber-attacks and other security breaches or data leakages that could have a material adverse effect on Shire’s revenues, financial condition or results of operations;
- Shire incurred substantial additional indebtedness to finance the Baxalta acquisition, which has increased its borrowing costs and may decrease its business flexibility; and

a further list and description of risks, uncertainties and other matters can be found in Shire’s most recent Annual Report on Form 10-K and in Shire’s subsequent Quarterly Reports on Form 10-Q, in each case including those risks outlined in “ITEM 1A: Risk Factors”, and in subsequent reports on Form 8-K and other Securities and Exchange Commission filings, all of which are available on Shire’s website.

All forward-looking statements attributable to us or any person acting on our behalf are expressly qualified in their entirety by this cautionary statement. Readers are cautioned not to place undue reliance on these forward-looking statements that speak only as of the date hereof. Except to the extent otherwise required by applicable law, we do not undertake any obligation to update or revise forward-looking statements, whether as a result of new information, future events or otherwise.

Agenda

1. Quarterly business update		Flemming Ornskov, MD, MPH
2. Financial review		Jeff Poulton
3. Expectations beyond 2017		Flemming Ornskov, MD, MPH
4. Q & A		

Shire is the global leader in rare diseases

1. An innovative rare disease-focused biotechnology company committed to differentiated and high patient-impact medicines; ~40 marketed products and ~40 clinical programs in development
2. Focused on 7 core therapeutic areas; 5 of them generating annual global sales of over $1.5B each and our newest category, ophthalmology, targeting similar future sales
3. Well diversified portfolio with a focus on biologics and products to treat rare conditions that frequently impact children and young adults
4. Global research, clinical, regulatory, manufacturing, and commercial capabilities enabling us to develop and sell products in over 100 countries, world-wide

Delivering strong product sales growth and committed to driving efficiencies, increasing cash generation, paying down debt, and creating shareholder value

Shire

Key priorities for 2017

- Commercial execution and new product launches
- Further integration
- Pipeline progression
- Optimize portfolio and strengthen focus
- Debt pay-down

RARE DISEASES LEADER ▸ FUELING GROWTH

Strong business performance continued in Q2

GROWTH

- Achieved quarterly product sales of $3.6B
  - An increase of 55% from Q2 2016
- Delivered Non GAAP diluted earnings per ADS of $3.73[1][4]
  - An increase of 10% from Q2 2016
- Q2 pro forma combined product sales grew 7%[2]
- Continued advancement of our innovative late-stage clinical portfolio

EFFICIENCY

- Baxalta integration continues to track ahead of plan with ~$400MM in synergies realized by end of Year 1 compared to $300MM target
- Non GAAP EBITDA margin of 43%[3][4]
- Ongoing supply network study with full read-out expected in Q3 2017

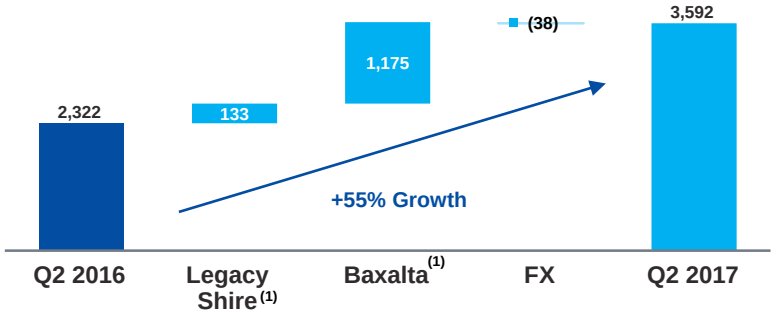
CAPITAL ALLOCATION

- $880MM reduction in Non GAAP net debt[4] in Q2 2017
- On track to meet our 2-3x Non GAAP net debt / Non GAAP EBITDA target by end of 2017[4]
- Completed two in-licensing business development opportunities (Parion and Novimmune)

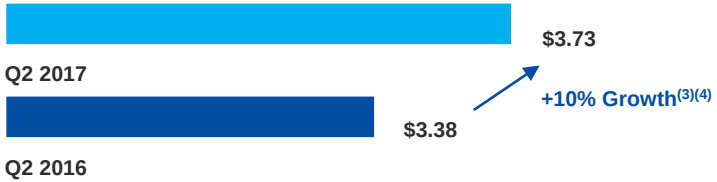
(1) This is a Non GAAP financial measure. The most directly comparable measure under US GAAP is Diluted EPS-ADS (Q2 2017: $0.79, Q2 2016: -$0.71).
(2) Growth rates represent Q2 2017 reported sales compared to Q2 2016 pro forma sales.
(3) This is a Non GAAP financial measure as a percentage of total revenue. The most directly comparable measure under US GAAP is Net Income Margin (Q2 2017: 6%).
(4) See slide 52 for a list of items excluded from the US GAAP equivalent used to calculate all Non GAAP measures detailed above. See slides 46 to 51 for a reconciliation of Non GAAP financial measures to the most directly comparable measure under US GAAP.

Robust product sales and Non GAAP earnings growth

PRODUCT SALES ($MM)



NON GAAP DILUTED EARNINGS PER ADS(3)(4)



FINANCIAL HIGHLIGHTS

- Addition of Baxalta franchises led to product sales of $3.6B and 55% growth
- On a pro forma combined basis, total product sales were 7%(2) higher in Q2 2017 compared to Q2 2016
  - Legacy Shire franchises delivered 7% growth, while legacy Baxalta franchises grew 8% on a pro forma basis
- Non GAAP diluted earnings per ADS growth of 10%
- Net cash provided by operating activities grew 107% to $1,223MM

(1) Product sales are at Constant exchange rates ("CER"), a Non GAAP financial measure. CER performance is determined by comparing 2017 performance (restated using 2016 exchange rates for the relevant period) to actual 2016 reported performance.
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Q2 sales growth generated across our broad portfolio

Business Franchise	~% of total sales	Key Highlights
Hematology sales $965MM; **+1%**(1)	27%	• Strong contribution from U.S. Factor VIII sales, which benefited from some stocking in the quarter, while growth in INHIBITOR THERAPIES was impacted by the timing of international orders following a strong Q1 2017
Genetic Diseases sales $705MM; **+2%**	20%	• Good growth from LSD portfolio • HAE franchise continues to add new patients but growth impacted by CINRZYE destocking and FIRAZYR utilization
Immunology sales $683MM; **+18%**(1)	19%	• Strong demand seen for our Immunology franchise, with strong growth from our subcutaneous IG portfolio, as well as GAMMAGARD LIQUID and Albumin
Neuroscience sales $635MM; **-3%**	18%	• Overall franchise growth was negatively impacted by increased generic competition in the ADDERALL XR market as well as VYVANSE U.S. destocking
Internal Medicine sales $484MM; **+15%**	13%	• Continued growth from new patient adds on GATTEX and NATPARA
Oncology sales $63MM; +**18%**(1)	2%	• ONCASPAR continues to perform well in the U.S with initial launches of ONIVYDE in Europe proceeding well
Ophthalmology sales $57MM; **N/A**	2%	• Positive contribution from XIIDRA with strong prescription trends and improving gross-to-nets

(1) Growth rates represent Q2 2017 reported sales compared to Q2 2016 pro forma sales.

Key pipeline progressions in Q2

REGULATORY ACTIONS AND COMMERCIAL LAUNCHES

- MYDAYIS (ADHD) approval in U.S.
- VEYVONDI (VWD) MMA in EU
- NATPAR MA conditional approval in Europe
- INTUNIV (ADHD) launch in Japan
- ADYNOVI (Hemophilia A) launch in Switzerland - first European market
- CUVITRU (PID) launch in key European markets
- VYVANSE (ADHD) submission of NDA in Japan
- FIRAZYR (HAE) submission of NDA in Japan

CLINICAL AND BUSINESS DEVELOPMENT UPDATES

- Positive SHP643 (lanadelumab) Phase 3 results with plans for regulatory submission in Q4 2017 – Q1 2018
- Publication of positive Phase 2 results for SHP647 (UC) with plans to initiate pivotal Phase 3 trial in H2 2017
- Submission of IND for Shire's Hemophilia A gene therapy candidate SHP654 with plans to initiate Phase 1 trial by end of 2017
- Licensing agreement with Novimmune for a bi-specific antibody in pre-clinical development for the treatment of Hemophilia A and Hemophilia A patients with inhibitors

Strong execution on Baxalta integration plan

Operating Cost Savings

- ✓ Year 1 savings greater than projected ($400MM vs. $300MM target)
- ✓ Confident in our ability to drive future savings and meet our $700MM commitment by Year 3 and mid-40% Non GAAP EBITDA margins(2)

Tax Profile

- ✓ 16% Non GAAP tax rate(1)(2) in both Q1 and Q2 2017 is in-line with previously communicated expectations of 16-17%

Revenue Synergies

- ✓ Combined commercial organizations allowing Shire to more quickly and effectively launch new products across the globe
- ✓ 80+ international product launches planned in 2017
- ✓ Immunology business – when IG and HAE products are combined – is now the largest commercial platform at Shire

(1) This is a Non GAAP financial measure. The most directly comparable measure under US GAAP is Effective Tax Rate (Q2 2017: 9%, Q1 2017: 2%).
(2) See slide 52 for a list of items excluded from the US GAAP equivalent used to calculate all Non GAAP measures detailed above. See slides 46 to 51 for a reconciliation of Non GAAP financial measures to the most directly comparable measure under US GAAP.

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2. Financial review

Jeff Poulton

3. Expectations beyond 2017

Flemming Ornskov, MD, MPH

4. Q & A

Q2 2017 reported key financials summary

	Q2 2017 $MM[1]	Q2 2016 $MM[1]	Reported Growth	CER Growth[2][8]
Product sales	3,592	2,322	+55%	+56%
Royalties and other revenues	154	107	+44%	+46%
Total revenue	3,746	2,429	+54%	+56%
Non GAAP combined R&D and SG&A[3][8]	1,237	934	+32%	+33%
Non GAAP EBITDA[4][8]	1,612	1,020	+58%	+59%
Non GAAP EBITDA margin[5][8]	43%	42%	1 ppc	n/a
Non GAAP effective tax rate[6][8]	16%	16%	n/a	n/a
Non GAAP diluted EPS – ADS[7][8]	3.73	3.38	+10%	+11%
Net cash provided by operating activities	1,223	591	+107%	n/a

(1) Results include Baxalta (acquired on June 3, 2016).
(2) Growth rates are at Constant exchange rates ("CER"), a Non GAAP financial measure. CER performance is determined by comparing 2017 performance (restated using 2016 exchange rates for the relevant period) to actual 2016 reported performance.
(3) This is a Non GAAP financial measure. The most directly comparable measure under US GAAP is Combined R&D and SG&A (Q2 2017: $1,442m, Q2 2016: $970m).
(4) This is a Non GAAP financial measure. The most directly comparable measure under US GAAP is Net Income (Q2 2017: $240m, Q2 2016: -$162m).
(5) This is a Non GAAP financial measure as a percentage of total revenue. The most directly comparable measure under US GAAP is Net Income Margin (Q2 2017: 6%, Q2 2016: -7%).
(6) This is a Non GAAP financial measure. The most directly comparable measure under US GAAP is Effective Tax Rate (Q2 2017: 9%, Q2 2016: -427%).
(7) This is a Non GAAP financial measure. The most directly comparable measure under US GAAP is Diluted EPS-ADS (Q2 2017: $0.79, Q2 2016: -$0.71).
(8) See slide 52 for a list of items excluded from the US GAAP equivalent used to calculate all Non GAAP measures detailed above. See slides 46 to 51 for a reconciliation of Non GAAP financial measures to the most directly comparable measure under US GAAP.

Q2 product sales performance pro forma[1]

$MM	Q2 2017 Sales U.S.	International	Total	Pro forma growth vs. 2016 Reported	CER[2][3]
HEMOPHILIA	383	361	744	+3%	+5%
INHIBITOR THERAPIES	76	145	221	-7%	-5%
Hematology Total	**459**	**505**	**965**	**+1%**	**+2%**
CINRYZE	165	11	176	+2%	+2%
FIRAZYR	118	19	137	+1%	+1%
KALBITOR	21	-	21	+16%	+16%
ELAPRASE	40	121	161	+5%	+5%
REPLAGAL	-	122	122	+3%	+6%
VPRIV	37	51	88	-0%	+2%
Genetic Disease Total	**381**	**324**	**705**	**+2%**	**+3%**
IMMUNOGLOBULIN THERAPIES	408	103	511	+19%	+20%
BIO THERAPEUTICS	76	96	172	+18%	+20%
Immunology Total	**484**	**199**	**683**	**+18%**	**+20%**
VYVANSE	460	58	518	+0%	+0%
ADDERALL XR	67	4	71	-30%	-30%
MYDAYIS	16	-	16	n/a	n/a
Other Neuroscience	5	25	30	-16%	-12%
Neuroscience Total	**548**	**87**	**635**	**-3%**	**-2%**
LIALDA	188	20	208	+7%	+8%
PENTASA	83	-	83	+14%	+14%
GATTEX	64	12	75	+69%	+70%
NATPARA	35	-	35	+73%	+73%
Other Internal Medicine	31	52	83	-6%	-3%
Internal Medicine Total	**400**	**84**	**484**	**+15%**	**+16%**
Oncology	46	17	63	+18%	+20%
Ophthalmology	57	-	57	n/a	n/a
Total Product Sales	**2,375**	**1,217**	**3,592**	**+7%**	**+8%**

(1) Growth rates represent Q2 2017 reported sales compared to Q2 2016 pro forma sales.
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H1 2017 reported performance metrics

Year on Year Growth:	H1 2017[1]
Product sales	77%
Non GAAP R&D[2][9]	53%
Non GAAP SG&A[3][9]	56%
Combined Non GAAP R&D and SG&A[4][9]	55%

Ratios: As % of Total Revenue	H1 2017[1]	H1 2016[1]
Non GAAP gross margin[5][9]	77%	83%
Non GAAP R&D[6][9]	10%	12%
Non GAAP SG&A[7][9]	23%	26%
Non GAAP EBITDA[8][9]	44%	45%

(1) Results include Baxalta (acquired on June 3, 2016) and Dyax (acquired on January 22, 2016).
(2) This is a Non GAAP financial measure. The most directly comparable measure under US GAAP is R&D (H1 2017: +80%).
(3) This is a Non GAAP financial measure. The most directly comparable measure under US GAAP is SG&A (H1 2017: +55%).
(4) This is a Non GAAP financial measure. The most directly comparable measure under US GAAP is Combined R&D and SG&A (H1 2017: +63%).
(5) This is a Non GAAP financial measure. The most directly comparable measure under US GAAP is Gross Margin (H1 2017: 67%, H1 2016: 75%).
(6) This is a Non GAAP financial measure. The most directly comparable measure under US GAAP is R&D (H1 2017: 13%, H1 2016: 12%).
(7) This is a Non GAAP financial measure. The most directly comparable measure under US GAAP is SG&A (H1 2017: 24%, H1 2016: 28%).
(8) This is a Non GAAP financial measure. The most directly comparable measure under US GAAP is Net Income Margin (H1 2017: 8%, H1 2016: 6%).
(9) See slide 52 for a list of items excluded from the US GAAP equivalent used to calculate all Non GAAP measures detailed above. See slides 46 to 51 for a reconciliation of Non GAAP financial measures to the most directly comparable measure under US GAAP.

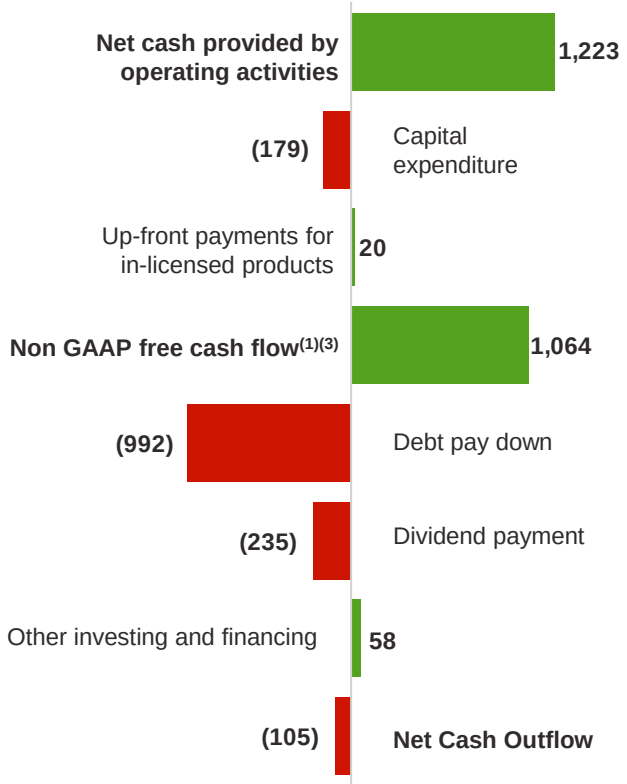
Strong Q2 operating cash flow drives $880M reduction in Non GAAP net debt

2017 Non GAAP Net Debt Progression

$MM	March 31, 2017	June 30, 2017	Q2 Change	December 31, 2016	YTD Change
Cash and cash equivalents	**369**	**264**	**(105)**	**529**	**(265)**
Long term borrowings	19,151	18,011		19,553	
Short term borrowings	3,043	3,198		3,062	
Capital leases	352	351		354	
Total borrowings, capital leases, and other debt	**22,546**	**21,560**	**(986)**	**22,969**	**(1,409)**
Non GAAP net debt[3]	**22,176**	**21,296**	**(880)**	**22,439**	**(1,143)**

Leverage at June 30, 2017
Non GAAP net debt / Non GAAP EBITDA ratio[2][3] 3.5x

Q2 2017 Cash Flow $MM



(1) This is a Non GAAP financial measure. The most directly comparable measure under US GAAP is Net cash provided by operating activities (Q2 2017: $1,223m).
(2) Non GAAP EBITDA on a trailing 12 month basis to June 30, 2017.
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2017 guidance update

	Full year 2017 Dynamics			
	Original Guidance	Impact of FX Rates on Guidance	Updated Guidance	Impact of FX Rates on Guidance
Product Sales	$14.5 - $14.8 billion	-1% to -2%	$14.3 - $14.6 billion ↓	0% to -1%
Royalties & other revenues	$600 - $700 million		$600 - $700 million	
Non GAAP gross margin(1)	74.5% - 76.5%		74.5% - 76.5%	
Non GAAP combined R&D and SG&A(1)	$5.0 - $5.3 billion		$4.9 - $5.1 billion ↓	
Non GAAP depreciation(1)	$400 - $450 million		$450 - $500 million ↑	
Non GAAP net interest/other(1)	$500 - $600 million		$500 - $600 million	
Non GAAP effective tax rate(1)	16% - 17%		16% - 17%	
Non GAAP diluted earnings per ADS(1)	$14.60 - $15.20	-1% to -2%	$14.80 - $15.20 ↑	0% to -1%
Capital Expenditure	~$1 billion		$800 - $900 million ↓	

Our 2017 Outlook is based on July 11, 2017 actual exchange rates (€:$1.14, £:$1.28, CHF:$1.03, CAD:$0.77, ¥:$0.0088). The estimated impact of a 10% appreciation in the US Dollar against the respective currency, over the remainder of the year, on our 2017 Guidance is as follows:

	Revenue	Earnings
EUR	-1.5%	-0.7%
GBP	-0.2%	-0.3%
CHF	-0.1%	0.1%
CAD	-0.2%	-0.4%
JPY	-0.2%	-0.4%
Other	-0.4%	-0.2%

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Four key drivers of shareholder value as we look beyond 2017

1. Product sales growth fueled by innovation
2. Margin expansion
3. Capital allocation priorities
4. Strength and durability of the Neuroscience franchise

Summary of key revenue tailwinds and headwinds

KEY REVENUE TAILWINDS

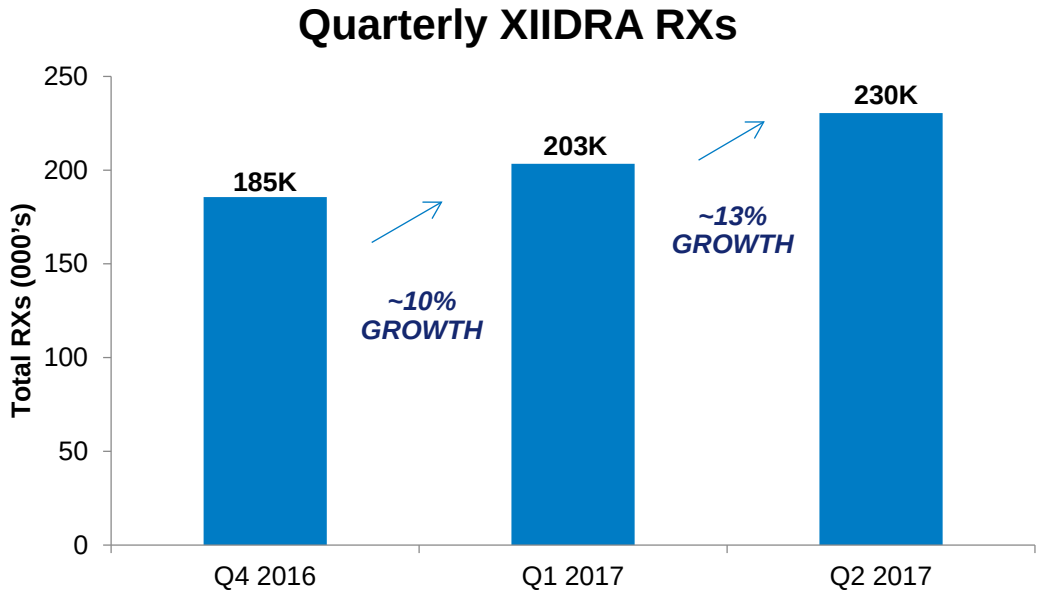
- **Continued growth from existing products**
  - Diversified and differentiated portfolio with many products launched in recent years
  - Numerous products in underpenetrated and/or underdiagnosed therapeutic markets
- **Important additional geographic launches of existing products**
  - Examples include NATPAR, CUVITRU, ADYNOVI, XIIDRA, and ADHD portfolio
- **Near-term new product launches** including MYDAYIS, SHP643(1), SHP555(1)
- **Contributions from late-stage pipeline**

KEY REVENUE HEADWINDS

- **Launch of 1st LIALDA generic in H2 2017 and potential for additional generics in 2018+**
- **Expected impact of ACE910(1)**
- **New entrant in HAE prior to potential launch of SHP643 (lanadelumab)(1) which is expected in H2 2018**

(1) Subject to regulatory approval.

XIIDRA prescription growth continues to reinforce underlying demand and strong commercial execution



ADDITIONAL PROGRESS

- Overall dry eye disease market growth of 26% (*H1 2017 vs. H1 2016)*
- XIIDRA overall market share now 23%
- Increased contribution from Medicare Part D expected in 2018
- Planned international regulatory submissions on track

SHP643 (lanadelumab) has the potential to change the treatment paradigm in HAE[1] and serve as key growth driver for our HAE franchise

KEY FEATURES OF SHP643

- Positive efficacy and safety profile from Phase 3 HELP Study[2]
  - Most effective dose demonstrated 87% reduction in monthly attack rate vs. placebo
  - No treatment related serious adverse events reported in trial
  - Most commonly noted treatment emergent adverse event was mild to moderate injection site pain
- Potent, fully human monoclonal antibody
- Novel mechanism of action specifically engineered to bind to plasma kallikrein and prevent production of bradykinin
- Long half-life (~14 days)
- High concentration / low volume ready-to-use formulation (1-2 ml)

OPPORTUNITIES FOR GROWTH

- Expand use of prophylaxis treatment, including those on acute-only or no treatment today
- Increase treatment rates, especially in international markets
- Gain share from competitors, including generic androgens
- Gross margin expansion for patients who switch from CINRYZE
- Extends Shire's leadership position in HAE

(1) Subject to regulatory approval.
(2) Based on topline data from Phase 3 trial. Data on file with Shire.

Hemophilia will continue to be a core component of our rare disease strategy

SHIRE IS THE TRUSTED LEADER

- Global market leader with the longest heritage & broadest portfolio
- 70+ years of innovation and +100 launches across +40 countries
- Increasing standard of care through focus on early diagnosis, early prophylaxis and personalization
- Patient Association partnerships increased diagnosis of 30,000 patients across 27 countries

PROVEN SAFETY AND EFFICACY

- Unrivaled portfolio supported by proven safety and efficacy data for the broadest range of rare bleeding indications
- Proven efficacy in Hemophilia A, including in patients with inhibitors
- Targeted efficacy for rare bleeding indications (AHA, Hemophilia B, Von Willebrand disease)
- Well established product safety profiles with decades of real world experience

SHIRE DRIVES INNOVATION

- **ADVATE** is the #1FVIII brand with proven efficacy
- **ADYNOVATE/ADYNOVI** is delivering improved extended half-life efficacy
- **myPKFiT** is the 1st and only registered medical device for Hemophilia dosing(1)
- **FEIBA** has over 40 years of efficacy and safety data
- Gene therapy IND recently filed for **SHP654 in Hem A**
- Progressing innovative **bi-specific antibody** technology via partnership

(1) myPKFiT is registered in 30 countries as of June 2017.

Key insights from recent publication of ACE910 clinical data

DATA IMPLICATIONS

- Efficacy was not the same across all patients and comparisons to FEIBA remain unclear
- Important questions remain related to patient safety
- Clinicians must carefully weigh the potential benefits and risks of ACE910 when making treatment decisions

INHIBITOR MARKET

- Greatest level of unmet need
- FEIBA sales represent ~5% of Shire's expected 2017 revenues with ~65% of sales coming from international markets
  - Potential uptake for new entrants could vary widely by geography
- Current market expectations for ~50% FEIBA erosion by 2022 appears reasonable based on current information but will ultimately depend on timing, label, long-term data, and real-world physician and patient experience

HEMOPHILIA A / FACTOR VIII MARKET

- The level of patient satisfaction (efficacy and safety) is much greater in this population than in the inhibitor population
- For patients who first present with inhibitors, Immune Tolerance Induction (ITI) is the standard of care to return patients to FVIII treatment
- While we have not seen clinical data for ACE910 in this population, we continue to believe that Factor VIII will remain the standard of care

Shire

Eight key late-stage clinical programs, each with the potential to generate multi-hundred million $ in peak sales[1]

RARE DISEASES

1. **SHP621** – Eosinophilic esophagitis (currently in Phase 3)
2. **SHP620** – CMV infection in transplant patients (currently in Phase 3)
3. **SHP607** – Complications of prematurity (Phase 3 expected to begin H2 2017)

OPHTHALMOLOGY

4. **SHP640** – Infectious conjunctivitis (currently in Phase 3)
5. **SHP659** – Dry eye disease (currently in Phase 2)

INTERNAL MEDICINE AND NEUROSCIENCE

6. **SHP647** – Ulcerative colitis (UC) and Crohn's disease (Phase 3 in UC expected to begin in H2 2017)
7. **SHP555** – Chronic constipation (potential to file with FDA by end of 2017)
8. **Buccolam in the U.S.** – Epilepsy (engaging with FDA to develop Phase 3 U.S. pivotal studies for NDA submission)

Shire

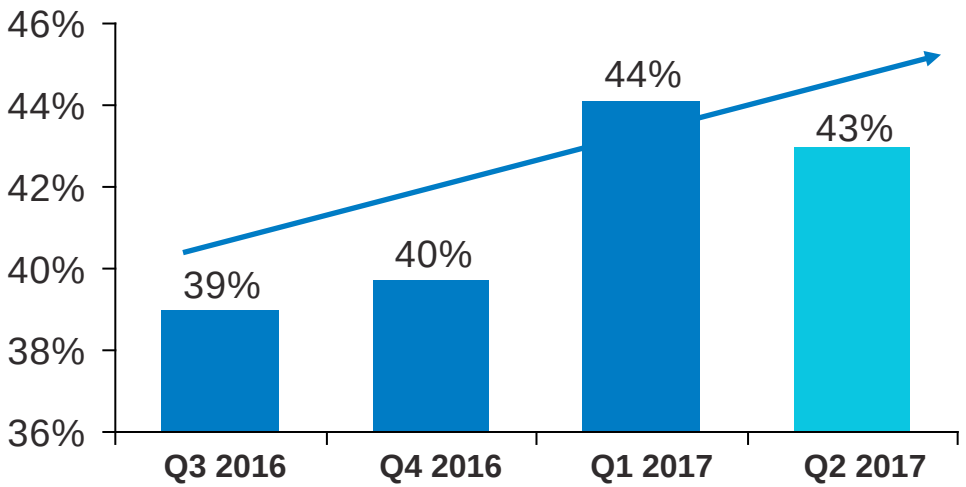
(1) Subject to regulatory approval.

Four key drivers of shareholder value as we look beyond 2017

1. Product sales growth fueled by innovation
2. Margin expansion
3. Capital allocation priorities
4. Strength and durability of Neuroscience franchise

Non GAAP EBITDA margin progression over past four quarters with expectations for additional improvement

Non GAAP EBITDA Margin[(1)(2)] as a Percentage of Total Revenue



- Q1 2017 favorably impacted by phasing of costs related to gross margins not expected to continue throughout the year
- Year 1 synergies post Baxalta acquisition were ~$400MM compared to $300MM forecast

(1) This is a Non GAAP financial measure as a percentage of total revenue. The most directly comparable measure under US GAAP is Net Income Margin (Q2 2017: 6%, Q1 2017: 10%, Q4 2016: 12%, Q3 2016: -11%).

(2) See slide 52 for a list of items excluded from the US GAAP equivalent used to calculate all Non GAAP measures detailed above. See slides 46 to 51 for a reconciliation of Non GAAP financial measures to the most directly comparable measure under US GAAP.

Four key drivers of shareholder value as we look beyond 2017

1. Product sales growth fueled by innovation
2. Margin expansion
3. Capital allocation priorities
4. Strength and durability of the Neuroscience franchise

Capital allocation priorities for 2018

CREATING SHAREHOLDER VALUE

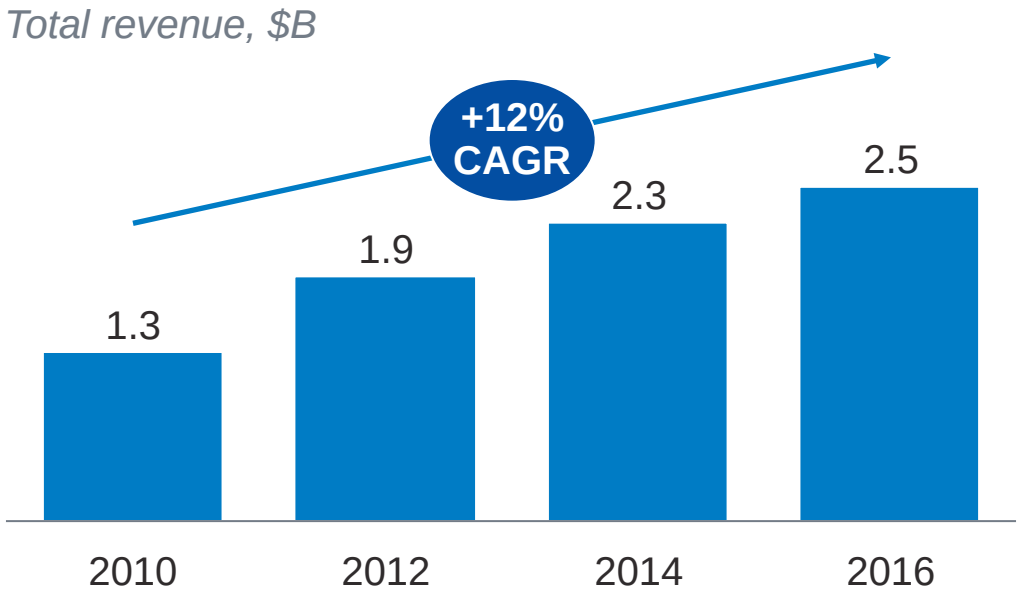
1. **Organic growth** - Invest in innovation to support core franchises
2. **Reduce leverage** - Maintain an investment grade credit rating
3. **Dividends** - Maintain a progressive policy
4. **Surplus capital**
   - **Selective business development** - Focus on in-licensing and bolt-on opportunities
   - **Share buybacks** - To be considered

Four key drivers of shareholder value as we look beyond 2017

1. Product sales growth fueled by innovation
2. Margin expansion
3. Capital allocation priorities
4. Strength and durability of the Neuroscience franchise

Shire Neuroscience – a strong performer and global leader in ADHD

Strong Neuroscience revenue trajectory



Shire is the global leader in ADHD, building on 20 years of innovation

Three disease areas

- Attention Deficit Hyperactivity Disorder (ADHD)
- Binge Eating Disorder (BED)
- Epilepsy

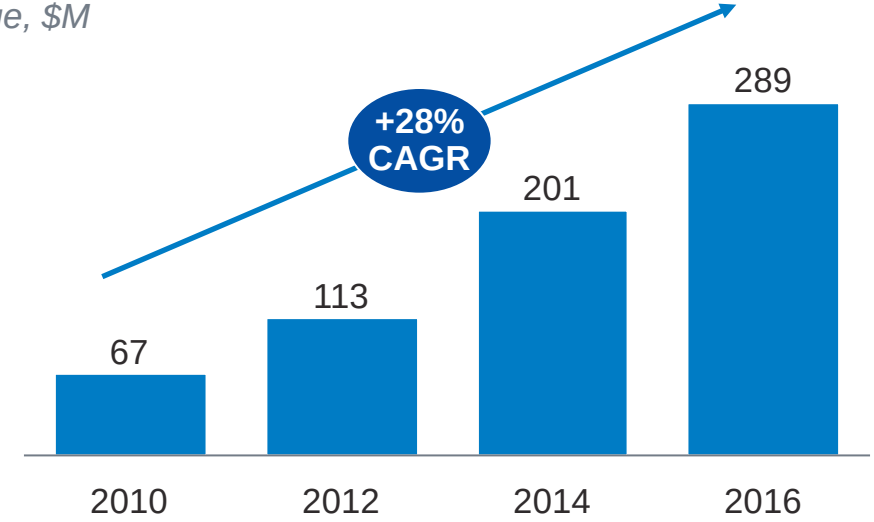
Current growth driven by

- Adult market growth & market share
- International expansion

Strong international growth with expectations beyond 2023

Strong International growth

Total revenue, $M



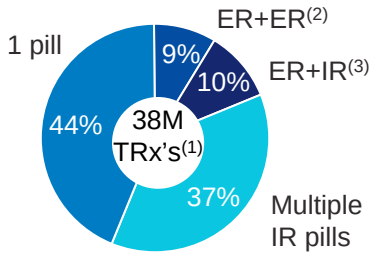
***Shire portfolio market share*(1)** 24% → 33%

- **Shire growth outpacing ADHD international market** (13% in 2016)
- **Market leader** in 6 of top 10 Int'l ADHD markets
- **Presence in 22 countries**, with 39 launches since 2013
- **Strong growth drivers beyond 2023**
  - VYVANSE / INTUNIV penetration
  - Increased adult diagnosis rate
  - Geographic expansion (e.g. INTUNIV in Japan)
  - Commercial execution

(1) By value for the top 10 international markets with at least one Shire product by end of 2016.

MYDAYIS launch to further drive growth

Significant patient needs in adults – a large growing segment



- 56% of adult TRx's are prescribed >1 pill/day(4)
- $6.1B U.S. adult market(5) with 6.7% annual growth in volume(6)

Addressing need – efficacy at 2-4 hours to 16 hours post dose in label

14h+ is ideal adult duration for ~30% HCPs

39% HCPs have been hoping for this advancement(7)

"Go early program" – positive early experience

- Innovative 6-week trial program for HCPs and patients ahead of full stock availability/launch
- Rapid uptake after 19 business days: over 2,000 HCPs enrolled and nearly 800 patients now receiving MYDAYIS

Full launch in September 2017 – readiness activities on track

- ✓ Marketing campaign submitted to FDA
- ✓ National pharmacy stocking
- ✓ Reframing full adult day (disease state education)
- ✓ Sharing science of three bead formulation

(1) Total prescriptions.
(2) Extended Release.
(3) Immediate Release.
(4) Symphony Transaction Level Data Analysis (Jun 2015–Aug 2015).
(5) IMS Data Analysis – 12 months ending May 2017.
(6) IMS Health TRX Analysis – 12 months ending May 2017 vs. previous 12 months.
(7) Shire Internal Market research – ADHD Market Structure & Unmet Needs Assessment, November 2015.

Continue clinical development of SHP680 targeting indications for multiple neurological conditions with high unmet need

SHP680: Prodrug of D-amphetamine

Today

- New chemical entity
- 20 preclinical studies
- Phase 1 PK study showing unique PK profile
- Belongs to a class of molecules with an established and well understood safety profile

Next steps

- Advance clinical development of SHP680 targeting indications for multiple neurological conditions with high unmet need

In addition to potential regulatory exclusivity, Shire has granted patents relating to SHP680 that expire in 2027/2028, and additional pending patent applications, which, if granted, will have later expiration dates

Exploring potential strategic options for our Neuroscience franchise

- Neuroscience franchise is in a position of **great strength** and remains poised for **future growth**
- Baxalta acquisition has further transformed Shire into a **leading biotechnology** company, focused on **rare diseases**
- With the addition of the Baxalta business, Shire is now in a position of much greater **long-term financial and strategic flexibility**
- Reflecting this change, and consistent with our previously-stated objective to **optimize and strengthen our focus**, we have begun a formal evaluation of the full range of **strategic options for the future of our Neuroscience franchise**

Over the coming months, we will consider strategic options, including the potential of an independent public listing, that could drive even greater value

SUMMARY

On track for continued success in 2017 and beyond

- Continuing to deliver on our 2017 strategic objectives
- Another quarter of strong top and bottom-line growth
- Excellent progress integrating Baxalta and reducing our cost structure
- Important pipeline progress and near-term growth opportunities
- Evaluating strategic options for our Neuroscience franchise
- Committed to executing on our existing growth strategy and maximizing synergy opportunities, longer-term

Thank you… Questions and Answers

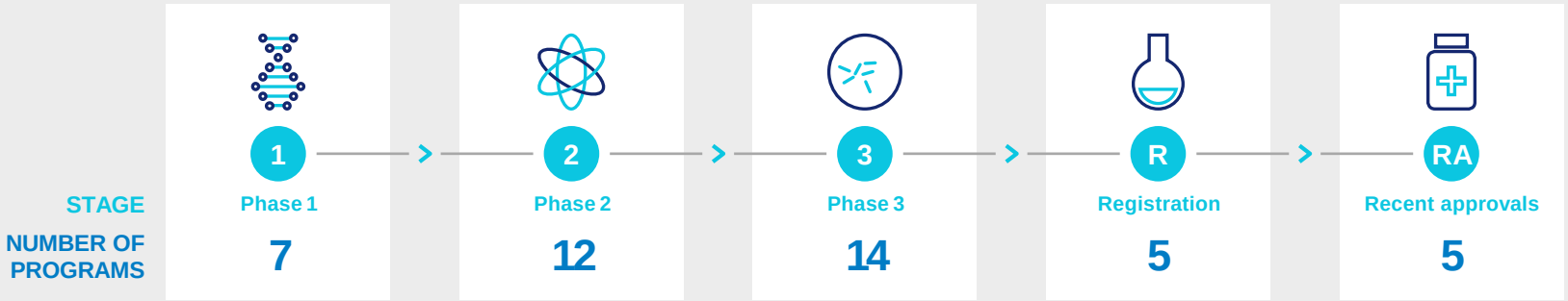
APPENDIX

Innovation is the lifeblood of our current and future success

We focus our innovation across areas with **high unmet medical need**

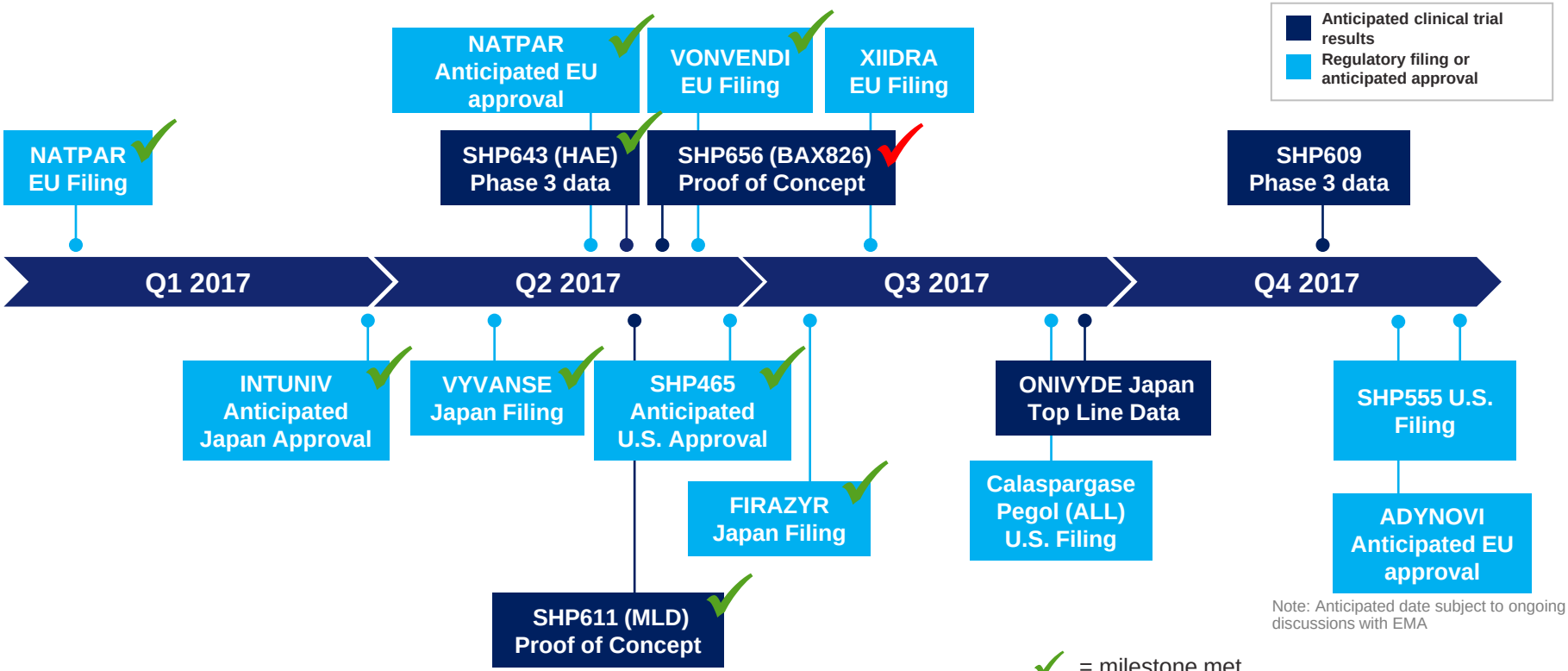
We aim to **expand our rare disease expertise** and offerings through **research and partnerships**, and to extend our existing portfolio of products to **new indications and therapeutic areas**

CLINICAL PROGRAMS IN PIPELINE



Pipeline as of July 2017.

Key anticipated events in 2017



Note: Anticipated date subject to ongoing discussions with EMA

Note: Timings are approximated to the nearest quarter and where appropriate subject to regulatory approval.

✓ = milestone met

✓ = milestone met but program not advancing

Pipeline is robust at all stages of development

RESEARCH AND PRECLINICAL

35+ programs

- Internally developed and via partnership
- Both rare disease and specialty conditions
- Multiple modalities including NCEs, MAbs, proteins, and gene therapy

PHASE 1	PHASE 2		PHASE 3		REGISTRATION	RECENT APPROVALS
SHP611 (MLD)	**SHP673** (Pancreatic Cancer, 1st line)	**SHP625**[3] (PFIC)	**SHP609** (Hunter IT) Ph 2/3	**SHP663** (ALL)	**SHP660**[4] **– EU** (Hemophilia A)	**INTUNIV – Japan** (ADHD)
SHP623 (rC1-INH) (NMO)	**SHP673 - Japan**[1] (Pancreatic Cancer, post gemcitabine)	**SHP625** (ALGS)	**SHP621**[3] (EoE)	**SHP671** (CIDP)	**SHP489 – Japan** (ADHD) Ph2/3	**XIIDRA – U.S.** (Dry eye)
SHP631 (Hunter CNS)	**SHP607**[2] (BPD and IVH)	**SHP626** (NASH)	**SHP643**[3] (HAE Prophylaxis)	**SHP671** (Pediatric PID)	**SHP677** (VWD)	**MYDAYIS – U.S.** (ADHD)
SHP673 (Small Cell Lung Cancer, 1st Line)	**SHP647** (UC)	**SHP647** (CD)	**SHP616 – Japan** (HAE Prophylaxis)	**SHP555 – U.S.** (Chronic Constipation)	**SHP667** (Pediatric HAE)	**NATPARA – EU** (Hypoparathyroidism)
SHP639 (Glaucoma)	**SHP659** (Dry Eye Disease)	**SHP652 (SM101)**[5] (SLE)	**SHP616 SC** (HAE Prophylaxis)	**SHP620** (CMV infection in transplant patients)	**SHP667 – Japan** (HAE)	**CINRYZE – EU** (Pediatric HAE Prophylaxis)
SHP634 – Japan (Hypoparathyroidism)	**SHP655** (cTTP)	**SHP615 – Japan (Seizures)**	**SHP616** (AMR)	**SHP640** (Infectious Conjunctivitis)		
SHP680 (Neurological Conditions)			**SHP633 – Japan** (Adult SBS)	**SHP633** (Pediatric SBS)		

Rare indication

Non-rare indication

Pipeline excludes: Oncaspar lyophilized, and Alpha-1 prophylaxis.

(1) Registrational study. (2) SHP607 originally developed for ROP. (3) Granted breakthrough designation by FDA.
(4) Aproved in U.S. for on-demand, prophylaxis in adults and children and in perioperative management.
(5) On clinical hold and working closely with the FDA to resolve their questions.

Note: Phase 2/3 programs shown as Phase 3.

Programs terminated in Q2 2017
- GLASSIA for GvHD
- SHP656 for Hemophilia A
- SHP672 for CHAWI surgery

Reported regional product sales and pro forma growth analysis

Q2 2017	US	EU	LATAM	APAC[4]	Other	Total
Product Sales $MM[1]	2,375	626	172	203	215	3,592
% of Product Sales	66%	17%	5%	6%	6%	
Pro forma YoY Growth[3]	**10%**	**-1%**	**-9%**	**20%**	**4%**	**7%**

H1 2017	US	EU	LATAM	APAC[4]	Other	Total
Product Sales $MM[2]	4,659	1,210	342	399	394	7,004
% of Product Sales	67%	17%	5%	6%	6%	
Pro forma YoY Growth[3]	**9%**	**0%**	**22%**	**16%**	**6%**	**8%**

(1) Results include Baxalta (acquired on June 3, 2016).
(2) Results include Baxalta (acquired on June 3, 2016) and Dyax (acquired on January 22, 2016).
(3) Growth rates represent Q2 2017 and H1 2017 reported sales compared to Q2 and H1 2016 pro forma sales.
(4) APAC region includes Japan.

Royalties and other revenues

	Q2 2017 $MM[1]	Q2 2016 $MM[1]	Reported Growth
SENSIPAR	46	36	+30%
ADDERALL XR	13	5	+158%
FOSRENOL	12	11	+6%
3TC and ZEFFIX	8	12	-32%
Other Royalties	33	19	+76%
Royalties	**113**	**83**	**+36%**
Other Revenues	6	4	+46%
Contract Manufacturing Revenue[2]	35	20	+76%
Total Royalties & Other Revenues	**154**	**107**	**+44%**

(1) Results include Baxalta (acquired on June 3, 2016).
(2) Prior to acquisition, Baxalta reported in Bio Therapeutics business unit as net product sales.

Income statement growth analysis

$MM	2016 Q1[1]	2016 Q2[1]	2016 Q3[1]	2016 Q4[1]	2016 FY[1]	2017 Q1[1]	2017 Q2[1]
Total Product Sales	$1,627	$2,322	$3,315	$3,621	$10,886	$3,412	$3,592
versus prior year	*+14%*	*+57%*	*+110%*	*+123%*	*+78%*	*+110%*	*+55%*
Royalties & Other Revenues	$82	$107	$137	$185	$511	$160	$154
versus prior year	*+26%*	*+31%*	*+75%*	*+101%*	*+61%*	*+95%*	*+44%*
Total Revenue	$1,709	$2,429	$3,452	$3,806	$11,397	$3,572	$3,746
versus prior year	*+15%*	*+57%*	*+109%*	*+122%*	*+78%*	*+109%*	*+54%*
Non GAAP Gross Margin[2][7]	86.7%	80.4%	74.9%	75.3%	78.0%	78.3%	76.1%
Combined Non GAAP R&D and SG&A[3][7]	$651	$934	$1,239	$1,354	$4,178	$1,221	$1,237
versus prior year	*+14%*	*+34%*	*+90%*	*+97%*	*+60%*	*+88%*	*+32%*
Non GAAP EBITDA Margin[4][7]	49%	42%	39%	40%	41%	44%	43%
Non GAAP Tax Rate[5][7]	18%	16%	13%	17%	16%	16%	16%
Non GAAP diluted Earnings per ADS[6][7]	$3.19	$3.38	$3.17	$3.37	$13.10	$3.63	$3.73
versus prior year	*+12%*	*+29%*	*-2%*	*+13%*	*+12%*	*+14%*	*+10%*

(1) Results from continuing operations including Baxalta (acquired on June 3, 2016) and Dyax (acquired on January 22, 2016).
(2) This is a Non GAAP financial measure as a percentage of total revenue. The most directly comparable measure under US GAAP is Gross Margin (Q2 2017: 70%, Q2 2016: 68%).
(3) This is a Non GAAP financial measure. The most directly comparable measure under US GAAP is Combined R&D and SG&A (Q2 2017: +49%, Q2 2016: -24%).
(4) This is a Non GAAP financial measure as a percentage of total revenue. The most directly comparable measure under US GAAP is Net Income Margin (Q2 2017: 6%, Q2 2016: -7%).
(5) This is a Non GAAP financial measure. The most directly comparable measure under US GAAP is Effective Tax rate (Q2 2017: 9%, Q2 2016: -427%).
(6) This is a Non GAAP financial measure. The most directly comparable measure under US GAAP is Diluted EPS-ADS (Q2 2017: $0.79, Q2 2016: -$0.71).
(7) See slide 52 for a list of items excluded from the US GAAP equivalent used to calculate all Non GAAP measures detailed above. See slides 46 to 51 for a reconciliation of Non GAAP financial measures to the most directly comparable measure under US GAAP.

Reported Non GAAP performance metrics comparison

Ratios: As % of Total Revenue	H1 2017[1]	H1 2016[1]
Non GAAP gross margin[2][10]	77%	83%
Non GAAP R&D[3][10]	10%	12%
Non GAAP SG&A[4][10]	23%	26%
Non GAAP EBITDA[5][10]	44%	45%

Ratios: As % of Net Product Sales	H1 2017[1]	H1 2016[1]
Non GAAP gross margin[6][10]	77%	83%
Non GAAP R&D[7][10]	11%	12%
Non GAAP SG&A[8][10]	24%	28%
Non GAAP EBITDA[5][9][10]	42%	43%

(1) Results include Baxalta (acquired on June 3, 2016) and Dyax (acquired on January 22, 2016).
(2) This is a Non GAAP financial measure. The most directly comparable measure under US GAAP is Gross Margin (H1 2017: 67%, H1 2016: 75%).
(3) This is a Non GAAP financial measure. The most directly comparable measure under US GAAP is R&D (H1 2017: 13%, H1 2016: 12%).
(4) This is a Non GAAP financial measure. The most directly comparable measure under US GAAP is SG&A (H1 2017: 24%, H1 2016: 28%).
(5) This is a Non GAAP financial measure. The most directly comparable measure under US GAAP is Net Income Margin (H1 2017: 8%, H1 2016: 6%).
(6) Non GAAP Gross Margin as a percentage of net product sales, excludes royalties and other revenues and cost of sales related to contract manufacturing revenue. The most directly comparable measure under US GAAP is Gross Margin (H1 2017: 67%, H1 2016: 74%).
(7) This is a Non GAAP financial measure. The most directly comparable measure under US GAAP is R&D (H1 2017: 13%, H1 2016: 13%).
(8) This is a Non GAAP financial measure. The most directly comparable measure under US GAAP is SG&A (H1 2017: 26%, H1 2016: 29%).
(9) Non GAAP EBITDA as a percentage of product sales, excludes royalties and other revenues and cost of sales related to contract manufacturing revenue.
(10) See slide 52 for a list of items excluded from the US GAAP equivalent used to calculate all Non GAAP measures detailed above. See slides 46 to 51 for a reconciliation of Non GAAP financial measures to the most directly comparable measure under US GAAP.

Non GAAP free cash flow measures

Net cash provided by operating activities and Non GAAP free cash flow reconciliation	Q2 2017 $MM[(1)]	Q2 2016 $MM[(1)]	Reported Growth
Net cash provided by operating activities	**1,223**	**591**	**+107%**
Capital expenditure	(179)	(128)	
Up-front payments for in-licensed products	20	-	
Non GAAP free cash flow[(2)(3)]	**1,064**	**463**	**+130%**

(1) Results include Baxalta (acquired on June 3, 2016).
(2) This is a Non GAAP financial measure. The most directly comparable measure under US GAAP is Net cash provided by operating activities (see details above).
(3) See slide 52 for a list of items excluded from the US GAAP equivalent used to calculate all Non GAAP measures detailed above. See slides 46 to 51 for a reconciliation of Non GAAP financial measures to the most directly comparable measure under US GAAP.

Q2 2017 – operating income US GAAP and Non GAAP

	Q2 2017 $MM[1]	Q2 2016 $MM[1]	Reported Growth
Non GAAP Operating Income[2][3] from continuing operations	**1,492**	**972**	**+53%**
Integration and acquisition costs	(612)	(644)	
Amortization and asset impairment	(454)	(222)	
Divestments and reorganization costs	(18)	(9)	
Legal and litigation costs	(8)	(2)	
US GAAP Operating Income from continuing operations	**399**	**96**	**+315%**

(1) Results include Baxalta (acquired on June 3, 2016).
(2) This is a Non GAAP financial measure. The most directly comparable measure under US GAAP is US GAAP Operating Income (see details above).
(3) See slide 52 for a list of items excluded from the US GAAP equivalent used to calculate all Non GAAP measures detailed above. See slides 46 to 51 for a reconciliation of Non GAAP financial measures to the most directly comparable measure under US GAAP.

GAAP to Non GAAP reconciliation
For the three months ended June 30, 2017

$MM	GAAP	Adjustments					Non GAAP
		(a)	(b)	(c)	(d)	(e)	
Total Revenues	**3,745.8**	**-**	**-**	**-**	**-**	**-**	**3,745.8**
Costs and expenses:							
Cost of product sales	1,108.9	-	(145.0)	-	-	(67.0)	896.9
R&D	542.4	(20.0)	(123.7)	-	-	(12.8)	385.9
SG&A	899.1	-	-	-	(7.6)	(40.9)	850.6
Amortization of acquired intangible assets	434.1	(434.1)	-	-	-	-	-
Integration and acquisition costs	343.7	-	(343.7)	-	-	-	-
Reorganization costs	13.6	-	-	(13.6)	-	-	-
Loss on sale of product rights	4.8	-	-	(4.8)	-	-	-
Depreciation	-	-	-	-	-	120.7	120.7
Total operating expenses	3,346.6	(454.1)	(612.4)	(18.4)	(7.6)	-	2,254.1
Operating Income	**399.2**	**454.1**	**612.4**	**18.4**	**7.6**	**-**	**1,491.7**
Total other expense, net	(137.7)	-	1.7	(13.2)	-	-	(149.2)
Income from continuing operations before income							
taxes and equity earnings of equity method investees	261.5	454.1	614.1	5.2	7.6	-	1,342.5
Income taxes	(24.3)	(111.5)	(69.9)	(3.2)	(3.0)	-	(211.9)
Equity in earnings of equity method investees, net of taxes	4.3	-	-	-	-	-	4.3
Income from continuing operations	**241.5**	**342.6**	**544.2**	**2.0**	**4.6**	**-**	**1,134.9**
Loss from discontinued operations, net of tax	(1.2)	-	-	1.2	-	-	-
Net income	**240.3**	**342.6**	**544.2**	**3.2**	**4.6**	**-**	**1,134.9**
No. of Shares	912.7						912.7
Diluted earnings per ADS	**$0.79**	**$1.13**	**$1.79**	**$0.01**	**$0.02**	**-**	**$3.73**

The following items are included in Adjustments:

(a) Amortization and asset impairments: Impairment of IPR&D intangible asset ($20.0 million), amortization of intangible assets relating to intellectual property rights acquired ($434.1 million), and tax effect of adjustments;

(b) Acquisition and integration activities: Expense related to the unwind of inventory fair value adjustments primarily associated with Baxalta ($145.0 million), costs relating to license arrangements ($123.7 million), acquisition and integration costs primarily associated with Baxalta ($192.5 million), net charge related to the change in the fair value of contingent consideration liabilities primarily related to SHP643 ($151.2 million), amortization of one-time upfront borrowing costs for Baxalta and Dyax ($1.7 million), and tax effect of adjustments;

(c) Divestments, reorganizations and discontinued operations: Net loss on re-measurement of DAYTRANA contingent consideration to fair value ($4.8 million), reorganization costs primarily relating to facility consolidations ($13.6 million), gains on sale of long-term investments ($13.2 million), tax effect of adjustments and loss from discontinued operations, net of tax ($1.2 million);

(d) Legal and litigation costs: Costs related to litigation, government investigations, other disputes and external legal costs ($7.6 million), and tax effect of adjustments; and

(e) Depreciation reclassification: Depreciation of $120.7 million included in Cost of product sales, R&D and SG&A for US GAAP separately disclosed for the presentation of Non GAAP earnings.

GAAP to Non GAAP reconciliation
For the three months ended June 30, 2016

$MM	GAAP	Adjustments						Non GAAP
		(a)	(b)	(c)	(d)	(e)	(f)	
Total Revenues	**2,429.1**	**-**	**-**	**-**	**-**	**-**	**-**	**2,429.1**
Costs and expenses:								
Cost of product sales	778.1	-	(280.7)	-	-	(22.4)		475.0
R&D	294.8	(8.9)	-	-	-	(5.8)		280.1
SG&A	675.3	-	-	-	(1.6)	(19.7)		654.0
Integration and acquisition costs	363.0	-	(363.0)	-	-	-		-
Amortization of acquired intangible assets	213.0	(213.0)	-	-	-	-		-
Reorganization costs	11.0	-	-	(11.0)	-	-		-
Gain on sale of product rights	(2.3)	-	-	2.3	-	-		-
Depreciation	-	-	-	-	-	47.9		47.9
Total operating expenses	2,332.9	(221.9)	(643.7)	(8.7)	(1.6)	-		1,457.0
Operating income	**96.2**	**221.9**	**643.7**	**8.7**	**1.6**	**-**		**972.1**
Total other expense, net	(79.6)	-	25.9	-	-	-		(53.7)
Income from continuing operations before income taxes and equity losses of equity method investees	16.6	221.9	669.6	8.7	1.6	-		918.4
Income taxes	70.9	(56.4)	(155.7)	(3.1)	(0.6)	-		(144.9)
Equity in losses of equity method investees, net of taxes	(0.9)	-	-	-	-	-		(0.9)
Income from continuing operations	**86.6**	**165.5**	**513.9**	**5.6**	**1.0**	**-**		**772.6**
Loss from discontinued operations, net of tax	(248.7)	-	-	248.7	-	-		-
Net loss/income	**(162.1)**	**165.5**	**513.9**	**254.3**	**1.0**	**-**		**772.6**
No. of Shares	682.8						3.8	686.6
Diluted (loss)/earnings per ADS	**($0.71)**	**$0.72**	**$2.25**	**$1.12**	**-**	**-**		**$3.38**

The following items are included in Adjustments:
(a) Amortization and asset impairments: Impairment of SHP627 IPR&D intangible asset ($8.9 million), amortization of intangible assets relating to intellectual property rights acquired ($213.0 million), and tax effect of adjustments;
(b) Acquisition and integration activities: Amortization of inventory fair value adjustments primarily associated with NPS, Dyax and Baxalta ($280.7 million), acquisition and integration costs primarily associated with NPS, Dyax and Baxalta ($419.5 million), net credit related to the change in the fair value of contingent consideration liabilities ($56.5 million), amortization of one-time upfront borrowing costs for Baxalta and Dyax ($25.9 million), and tax effect of adjustments;
(c) Divestments, reorganizations and discontinued operations: Net gain on re-measurement of DAYTRANA contingent consideration to fair value ($2.3 million), costs relating to facility consolidations ($11.0 million), tax effect of adjustments and loss from discontinued operations, net of tax ($248.7 million);
(d) Legal and litigation costs: Costs related to litigation, government investigations, other disputes and external legal costs ($1.6 million), and tax effect of adjustments; and
(e) Depreciation reclassification: Depreciation of $47.9 million included in Cost of product sales, R&D and SG&A for US GAAP separately disclosed for the presentation of Non GAAP earnings.
(f) Impact of dilutive shares

GAAP to Non GAAP reconciliation
For the six months ended June 30, 2017

$MM	GAAP	Adjustments						Non GAAP
		(a)	(b)	(c)	(d)	(e)	(f)	
Total Revenues	**7,318.1**	**-**	**-**	**-**	**-**	**-**	**-**	**7,318.1**
Costs and expenses:								
Cost of product sales	2,435.9	-	(625.4)	-	-	-	(139.1)	1,671.4
R&D	921.7	(20.0)	(123.7)	-	-	-	(26.2)	751.8
SG&A	1,788.0	-	-	-	(7.6)	4.0	(78.3)	1,706.1
Amortization of acquired intangible assets	798.1	(798.1)	-	-	-	-	-	-
Integration and acquisition costs	459.7	-	(459.7)	-	-	-	-	-
Reorganization costs	19.1	-	-	(19.1)	-	-	-	-
Gain on sale of product rights	(0.7)	-	-	0.7	-	-	-	-
Depreciation	-	-	-	-	-	-	243.6	243.6
Total operating expenses	6,421.8	(818.1)	(1,208.8)	(18.4)	(7.6)	4.0	-	4,372.9
Operating income	**896.3**	**818.1**	**1,208.8**	**18.4**	**7.6**	**(4.0)**	**-**	**2,945.2**
Total other expense, net	(272.4)	-	3.5	(13.2)	-	-	-	(282.1)
Income from continuing operations before income taxes and equity earnings of equity method investees	623.9	818.1	1,212.3	5.2	7.6	(4.0)	-	2,663.1
Income taxes	(31.1)	(196.8)	(193.8)	(5.0)	(3.0)	0.1	-	(429.6)
Equity in earnings of equity method investees, net of taxes	3.5	-	-	-	-	-	-	3.5
Income from continuing operations	**596.3**	**621.3**	**1,018.5**	**0.2**	**4.6**	**(3.9)**	**-**	**2,237.0**
Gain from discontinued operations, net of tax	19.0	-	-	(19.0)	-	-	-	-
Net income	**615.3**	**621.3**	**1,018.5**	**(18.8)**	**4.6**	**(3.9)**	**-**	**2,237.0**
No. of Shares	912.3							912.3
Diluted earnings per ADS	**$2.02**	**$2.04**	**$3.35**	**($0.06)**	**$0.02**	**($0.01)**	**-**	**$7.36**

The following items are included in Adjustments:
(a) Amortization and asset impairments: Impairment of IPR&D intangible asset ($20.0 million), amortization of intangible assets relating to intellectual property rights acquired ($798.1 million), and tax effect of adjustments;
(b) Acquisition and integration activities: Expense related to the unwind of inventory fair value adjustments primarily associated with Baxalta ($625.4 million), costs relating to license arrangements ($123.7million), acquisition and integration costs primarily associated with Baxalta ($312.0 million), net charge related to the change in the fair value of contingent consideration liabilities primarily related to SHP643 ($147.7 million), amortization of one-time upfront borrowing costs for Baxalta and Dyax ($3.5 million), and tax effect of adjustments;
(c) Divestments, reorganizations and discontinued operations: Net gain on re-measurement of DAYTRANA contingent consideration to fair value ($0.7 million), reorganization costs primarily relating to facility consolidations ($19.1 million), gains on sale of long-term investments ($13.2 million), tax effect of adjustments and gain from discontinued operations, net of tax ($19.0 million);
(d) Legal and litigation costs: Costs related to litigation, government investigations, other disputes and external legal costs ($7.6 million), and tax effect of adjustments;
(e) Other: One-time adjustment to pension expense ($4.0 million), and tax effect of adjustments; and
(f) Depreciation reclassification: Depreciation of $243.6 million included in Cost of product sales, R&D and SG&A for US GAAP separately disclosed for the presentation of Non GAAP earnings.

GAAP to Non GAAP reconciliation
For the six months ended June 30, 2016

$MM	GAAP	Adjustments					Non GAAP
		(a)	(b)	(c)	(d)	(e)	
Total Revenues	**4,138.4**	**-**	**-**	**-**	**-**	**-**	**4,138.4**
Costs and expenses:							
Cost of product sales	1,026.7	-	(293.5)	-	-	(30.7)	702.5
R&D	511.9	(8.9)	-	-	-	(11.7)	491.3
SG&A	1,150.2	-	-	-	(16.6)	(39.8)	1,093.8
Integration and acquisition costs	454.1	-	(454.1)	-	-	-	-
Amortization of acquired intangible assets	347.6	(347.6)	-	-	-	-	-
Reorganization costs	14.3	-	-	(14.3)	-	-	-
Gain on sale of product rights	(6.5)	-	-	6.5	-	-	-
Depreciation	-	-	-	-	-	82.2	82.2
Total operating expenses	3,498.3	(356.5)	(747.6)	(7.8)	(16.6)	-	2,369.8
Operating Income	**640.1**	**356.5**	**747.6**	**7.8**	**16.6**	**-**	**1,768.6**
Total other expense, net	(131.8)	-	44.1	6.0	-	-	(81.7)
Income from continuing operations before income taxes and equity losses of equity method investees	508.3	356.5	791.7	13.8	16.6	-	1,686.9
Income taxes	(11.2)	(96.0)	(164.1)	(4.1)	(6.1)	-	(281.5)
Equity in losses of equity method investees, net of taxes	(1.0)	-	-	-	-	-	(1.0)
Income from continuing operations	**496.1**	**260.5**	**627.6**	**9.7**	**10.5**	**-**	**1,404.4**
Loss from discontinued operations, net of tax	(239.2)	-	-	239.2	-	-	-
Net income	**256.9**	**260.5**	**627.6**	**248.9**	**10.5**	**-**	**1,404.4**
No. of Shares	640.0						640.0
Diluted earnings per ADS	**$1.20**	**$1.22**	**$2.94**	**$1.17**	**$0.05**	**-**	**$6.58**

The following items are included in Adjustments:
(a) Amortization and asset impairments: Impairment of SHP627 IPR&D intangible asset ($8.9 million), amortization of intangible assets relating to intellectual property rights acquired ($347.6 million), and tax effect of adjustments;
(b) Acquisition and integration activities: Amortization of inventory fair value adjustments primarily associated with NPS, Dyax and Baxalta ($293.5 million), acquisition and integration costs primarily associated with NPS, Dyax and Baxalta ($499.2 million), net credit related to the change in the fair value of contingent consideration liabilities ($45.1 million), amortization of one-time upfront borrowing costs for Baxalta and Dyax ($44.1 million), and tax effect of adjustments;
(c) Divestments, reorganizations and discontinued operations: Net gain on re-measurement of DAYTRANA contingent consideration to fair value ($6.5 million), costs relating to facility consolidations ($14.3 million), loss on divestment of non-core subsidiary ($6.0 million), tax effect of adjustments and loss from discontinued operations, net of tax ($239.2 million);
(d) Legal and litigation costs: Costs related to litigation, government investigations, other disputes and external legal costs ($16.8 million), and tax effect of adjustments; and
(e) Depreciation reclassification: Depreciation of $82.2 million included in Cost of product sales, R&D and SG&A for US GAAP separately disclosed for the presentation of Non GAAP earnings.

Non GAAP measures

This presentation contains financial measures not prepared in accordance with US GAAP. These measures are referred to as “Non GAAP” measures and include: Non GAAP operating income; Non GAAP net income; Non GAAP diluted earnings per ADS; effective tax rate on Non GAAP income before income taxes and (losses/earnings) of equity method investees (effective tax rate on Non GAAP income); Non GAAP CER; Non GAAP cost of sales; Non GAAP gross margin; Non GAAP R&D; Non GAAP SG&A; Non GAAP other expense; Non GAAP free cash flow, Non GAAP net debt, Non GAAP EBITDA and Non GAAP EBITDA margin.

The Non GAAP measures exclude the impact of certain specified items that are highly variable, difficult to predict, and of a size that may substantially impact Shire’s operations. Upfront and milestone payments related to in-licensing and acquired products that have been expensed as R&D are also excluded as specified items as they are generally uncertain and often result in a different payment and expense recognition pattern than ongoing internal R&D activities. Intangible asset amortization has been excluded from certain measures to facilitate an evaluation of current and past operating performance, particularly in terms of cash returns, and is similar to how management internally assesses performance. The Non GAAP financial measures are presented in this press release as Shire’s management believes that they will provide investors with an additional analysis of Shire’s results of operations, particularly in evaluating performance from one period to another.

Shire’s management uses Non GAAP financial measures to make operating decisions as they facilitate additional internal comparisons of Shire’s performance to historical results and to competitor’s results, and provides them to investors as a supplement to Shire’s reported results to provide additional insight into Shire’s operating performance. Shire’s Remuneration Committee uses certain key Non GAAP measures when assessing the performance and compensation of employees, including Shire’s executive directors.

The Non GAAP financial measures used by Shire may be calculated different from, and therefore may not be comparable to, similarly titled measures used by other companies - refer to the section “Non GAAP Financial Measure Descriptions” below for additional information. In addition, these Non GAAP financial measures should not be considered in isolation as a substitute for, or as superior to, financial measures calculated in accordance with US GAAP, and Shire’s financial results calculated in accordance with US GAAP and reconciliations to those financial statements should be carefully evaluated.

Non GAAP Financial Measure Descriptions

Where applicable, the following items, including their tax effect, have been excluded when calculating Non GAAP earnings and from our Non GAAP outlook:

Amortization and asset impairments:
- Intangible asset amortization and impairment charges; and
- Other than temporary impairment of investments.

Acquisitions and integration activities:
- Up-front payments and milestones in respect of in-licensed and acquired products;
- Costs associated with acquisitions, including transaction costs, fair value adjustments on contingent consideration and acquired inventory;
- Costs associated with the integration of companies; and
- Non-controlling interests in consolidated variable interest entities.

Divestments, reorganizations and discontinued operations:
- Gains and losses on the sale of non-core assets;
- Costs associated with restructuring and reorganization activities;
- Termination costs; and
- Income/(losses) from discontinued operations.

Legal and litigation costs:
- Net legal costs related to the settlement of litigation, government investigations and other disputes (excluding internal legal team costs).

Additionally, in any given period Shire may have significant, unusual or non-recurring gains or losses which it may exclude from its Non GAAP earnings for that period. When applicable, these items would be fully disclosed and incorporated into the required reconciliations from US GAAP to Non GAAP measures.

Depreciation, which is included in Cost of sales, R&D and SG&A costs in our US GAAP results, has been separately disclosed for presentational purposes.

Free cash flow represents net cash provided by operating activities, excluding up-front and milestone payments for in-licensed and acquired products, but including capital expenditure in the ordinary course of business.

Non GAAP net debt represents cash and cash equivalents less short and long term borrowings, capital leases and other debt.

A reconciliation of Non GAAP financial measures to the most directly comparable measure under US GAAP is presented on pages 46 to 51.

Non GAAP CER growth is computed by restating 2017 results using average 2016 foreign exchange rates for the relevant period.

Average exchange rates used by Shire for the three months ended June 30, 2017 were $1.28:£1.00 and $1.09:€1.00 (2016: $1.45:£1.00 and $1.13:€1.00). Average exchange rates used by Shire for the six months ended June 30, 2017 were $1.26:£1.00 and $1.08:€1.00 (2016: $1.44:£1.00 and $1.11:€1.00).

See slides 46 to 51 for a reconciliation of Non GAAP financial measures to the most directly comparable measure under US GAAP.