Science For A Better Life

INVESTOR HANDOUT

Meet Management

March 15, 2017 | London

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Certain statements contained in this communication may constitute "forward-looking statements." Actual results could differ materially from those projected or forecast in the forward-looking statements. The factors that could cause actual results to differ materially include the following: uncertainties as to the timing of the transaction; the possibility that the parties may be unable to achieve expected synergies and operating efficiencies in the merger within the expected time-frames or at all and to successfully integrate Monsanto Company's ("Monsanto") operations into those of Bayer Aktiengesellschaft ("Bayer"); such integration may be more difficult, time-consuming or costly than expected; revenues following the transaction may be lower than expected; operating costs, customer loss and business disruption (including, without limitation, difficulties in maintaining relationships with employees, customers, clients or suppliers) may be greater than expected following the announcement of the transaction; the retention of certain key employees at Monsanto; risks associated with the disruption of management's attention from ongoing business operations due to the transaction; the conditions to the completion of the transaction may not be satisfied, or the regulatory approvals required for the transaction may not be obtained on the terms expected or on the anticipated schedule; the parties' ability to meet expectations regarding the timing, completion and accounting and tax treatments of the merger; the impact of indebtedness incurred by Bayer in connection with the transaction and the potential impact on the rating of indebtedness of Bayer; the effects of the business combination of Bayer and Monsanto, including the combined company's future financial condition, operating results, strategy and plans; other factors detailed in Monsanto's Annual Report on Form 10-K filed with the U.S. Securities and Exchange Commission (the "SEC") for the fiscal year ended August 31, 2016 and Monsanto's other filings with the SEC, which are available at http://www.sec.gov and on Monsanto's website at www.monsanto.com; and other factors discussed in Bayer's public reports which are available on the Bayer website at www.bayer.com. Bayer assumes no obligation to update the information in this communication, except as otherwise required by law. Readers are cautioned not to place undue reliance on these forward-looking statements that speak only as of the date hereof.

Disclaimer

Science For A Better Life

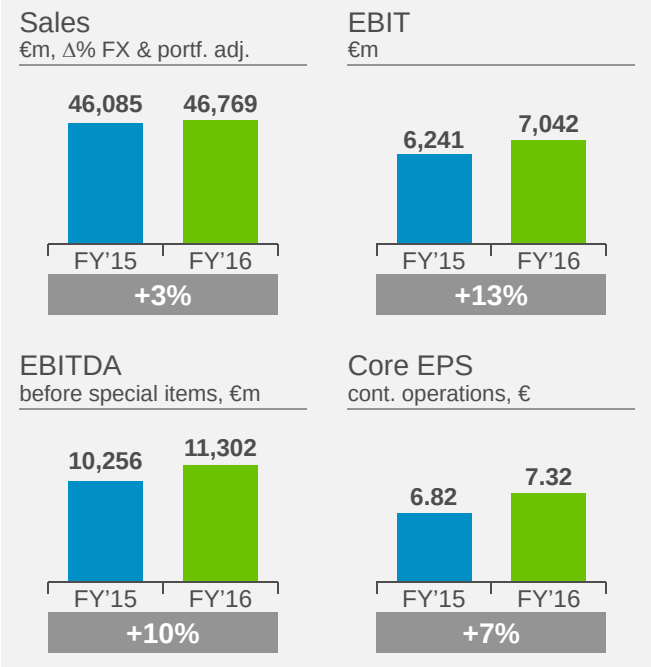
Investor Presentation - Group

Werner Baumann, CEO of Bayer AG

Meet Management in London – March 15, 2017

2016: Another Record Year for Bayer – Good Progress with the Agreed Acquisition of Monsanto

FY 2016 – Another Record Year for Bayer



Main Achievements

- ✓ Further growth in sales and earnings
- ✓ Agreed Monsanto acquisition
- ✓ Closing of Diabetes Care divestment
- ✓ Closing of divestiture of Environmental Science Consumer business
- ✓ Stake in Covestro reduced
- ✓ Patent term for Rivaroxaban extended in USA
- ✓ Major innovation milestones achieved - ≥€6bn PSP of key pharma pipeline assets
- ✓ Successful placement of €4bn MCN

2015 figures restated
PSP: Peak sales potential; MCN: Mandatory convertible notes

FY 2017 – Group Forecast Projects Further Growth in Sales and Earnings

Sales Δ % yoy Fx and portfolio adj., EBITDA before special items
Continuing operations

		2016	Forecast 2017
Sales	Group	€46.8bn	Low- to mid-single-digit % increase to >€49bn
	Life Sciences	€34.9bn	Mid-single-digit % increase to ~€37bn
adj. EBITDA	Group	€11.3bn	Mid-single-digit % increase
	Life Sciences	€9.3bn	Mid- to high-single-digit % increase
core EPS	Group	€7.32	Mid-single-digit % increase

Assuming end Q4 2016 Fx rates (USD 1.05)
Outlook depends on specific planning assumptions as detailed in the Annual Report

Mid-Term Aspirations Emphasize Attractive Growth and Margin Potential

	Sales Growth CAGR 2015-2018	Adjusted EBITDA Margin 2018
Pharma	~6%	**32-34%** *Despite dilution through Radiology and significant R&D investment*
Consumer Health	4-5%	~25%
Animal Health	4-5%	23-24%
Crop Science (incl. Monsanto)*	Above market growth	>30% after year 3 post closing

Sales Δ Fx & portf. adjusted, EBITDA before special items, continuing operations
Outlook depends on specific planning assumptions outlined in the Interim Report Q2 2016
Acquisition of Monsanto pending
*Not including any potential divestments

Agreed Monsanto Acquisition – Achievements

All-cash offer to Monsanto's Board of Management — May 2016

- **April 18, 2016:** Private meeting among CEOs sharing views on the value of a joint agriculture platform
- **May 10, 2016:** Bayer shared private letter with Monsanto proposing all-cash offer to acquire Monsanto shares
- **May 23, 2016:** Announcement of $122 per share all-cash offer

Signing of definitive merger agreement — September 2016

- **July 1, 2016:** Offer increased to $125 per share
- **Sep 14, 2016:** Signing of definitive merger agreement for $128 per share
- Monsanto's Board of Directors, Bayer's Board of Management and Bayer's Supervisory Board unanimously approved the agreement
- Commenced discussions with regulatory agencies after signing

Pre-merger planning phase — October 2016 - today

- **Q4 2016:** Regulatory filing in the US
- **November 16, 2016:** Successful placement of €4 billion mandatory convertible notes – first component of equity capital measures
- **December 13, 2016**: Monsanto shareowners approved merger with Bayer
- **January 2017:** Submission of CFIUS filing
- Antitrust filings in roughly 2/3 of approx. 30 jurisdictions submitted

Agreed Monsanto Acquisition – Next steps

- Close cooperation with the antitrust authorities continues - we remain confident of closing the transaction before the end of 2017
- Antitrust filing in the European Union planned for Q2 2017
- Appropriate preparations to facilitate the successful completion of the acquisition and the integration of the two companies are underway
- Further take-out financing with debt (incl. hybrid) and equity planned
- Should we identify options to further optimize financing structures, instruments and also the timing of financing steps in the context of this transaction, we will consider these



Life Science Focus Sets Strategic Priorities – Update on Selected Topics

Bayer – A World-Class Life Science Company

Group Strategic Priorities

- **Positioning businesses to mega-trends: Health and Nutrition**
- **Steering a leading portfolio: Leadership in our relevant markets**
- **Driving value: Profitable growth**
- **Focusing on our strength: Innovation**

Divisional Strategies

Pharma-ceuticals	Focused leadership strategy to deliver growth and to create value
Consumer Health	Maintain global OTC leadership and improve profitability
Crop Science / AH	Combined crop science company well positioned to deliver superior performance

AH: Animal Health

Focused Leadership Strategy at Pharma to Deliver Growth and to Create Value

Deliver Growth

- Focus on key therapeutic areas and build / maintain leading positions
  - Cardiovascular
  - Hemophilia
  - Women's Health
  - Oncology
- Continue to maximize growth potential of Xarelto, Eylea, Xofigo, Stivarga, Adempas

Drive Innovation

- Build pipeline organically and pursue in-licensing and bolt-on M&A options
- Focus research on Cardiovascular and Oncology
- Foster late-stage development to fully develop high value projects
- Support leading positions in Hemophilia, Women's Health and Ophthalmology

Create Value

- Deliver on mid-term growth and margin aspirations
- Balance margin expansion and need to invest in securing long-term growth

Pharma – Key Growth Drivers Going Forward

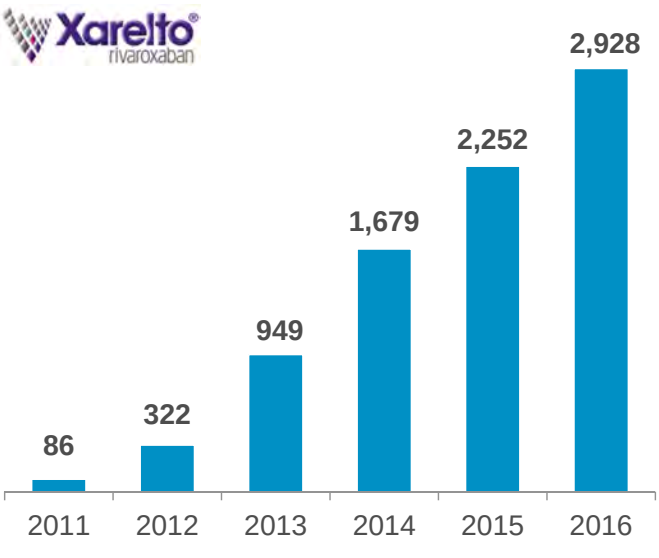
- Mid-term aspirations 2018 reflect further growth and margin potential
- Key growth products[1] with significant potential reflected in combined peak sales estimate of > €10bn
- Execution of a comprehensive life-cycle management program, e.g. potentially adding 5 new indications and uses to expand the usability of Xarelto
- Pipeline holds promise with a combined peak sales potential of selected assets[2] of ≥ €6bn
- Pursuing in-licensing and other external growth opportunities

[1] Xarelto, Eylea, Xofigo, Stivarga, Adempas
[2] Copanlisib, Anetumab Ravtansine, Finerenone, Vericiguat, Vilaprisan and ODM-201 assuming approvals and launches as planned

Xarelto – Continued Attractive Growth

Sales

€ million



- Continued excellent performance – Xarelto now a TOP 10 global Pharma brand[1]; >26 million patients treated since launch[2]
- Guidance 2017: mid-teens percentage increase vs. 2016 (fx-adj.)
- Peak sales estimate: >€5.0bn
- COMPASS Phase III stopped early on success, showing overwhelming efficacy
- Further growth potential driven by:
  - Under-served patient populations in launched indications
  - Demographics
  - Shift from warfarin
  - New indications targeting patients currently not treated with anticoagulants

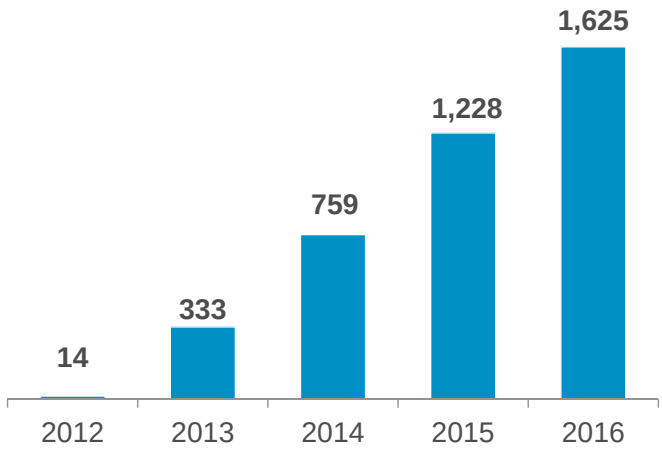
[1] according to IMS; [2] calculation based on IMS Health MIDAS database

Eylea – Well-Positioned in Retinal Diseases

Sales

€ million

EYLEA



- Eylea[1] gaining market share in multiple countries, achieving market leadership across several important ex-US territories[2]
- Confidence in growth potential – peak sales estimates raised to >€2.5bn
- Guidance 2017: mid-teens percentage increase vs. 2016 (fx-adj.)
- Life-cycle management including combination therapy with Ang2-antibody[3]
- Further growth potential driven by:
  - Continued generation of real-life experience in wAMD across key markets and treatment-naïve patient share gains
  - Market expansion in DME

[1] marketed by Bayer ex-US only; [2] source: IMS monthly market share data;
[3] in collaboration with Regeneron; Ang2: Angiopoetin 2

New Product and Life Cycle Management Launches Planned at Pharma

2017	2018	2019	2020	2021	2022	2023
Stivarga HCC 2L	**Visanne** Endo	**Tedizolide**	**Finerenone** DKD	**Vilaprisan** UF	**Xofigo** Breast	**ODM-201** mHSPC
	Amikacin inhale	**ODM-201** nmCRPC	**Xarelto LCM** PAD	**Vericiguat** WCHF	**Riociguat** Syst. Sclerosis	**Anetumab** Cancer
	Xarelto LCM CAD/PAD	**Anetumab** Cancer		**Xarelto LCM** ACS dual		
	Copanlisib Lymphoma	**Xofigo** combo				
	Damoctocog alpha	**Xarelto LCM** • ESUS • CHF • Med. ill				

First expected launches in first countries; Eylea Life Cycle Management not included; Selection of projects, regional and small projects not shown; Launches subject to successful clinical development and regulatory approval

Consumer Health to Maintain Global OTC Leadership and to Improve Profitability

Build Global Brands

- Focus on category-leading, global brands
- Execute brand strategies in a differentiated, country-specific approach, tailored to local market requirements

Drive Key Market Growth

- Deliver growth in key markets including USA, China, Brazil, Russia
- Refocus investments to mature markets which are regaining momentum
- Continue prudent investments in emerging markets
- Leverage scale to grow more profitably

Accelerate Innovation

- Accelerate consumer-centric innovation
- Create more effective innovation processes
- Exploit growth potential of Rx/OTC switches
- Build new digital capabilities

Consumer Health to Focus on Growth and Profitability

- We continue to invest into our growth opportunities
- We are making progress with the turnaround of Dr. Scholl´s and, in particular, Coppertone
- We have implemented a number of organizational changes that allow us to concentrate our investments better than before on individual growth brands in certain countries
- In addition, we have revamped our innovation process

Mid-term aspirations for Consumer Health confirmed

Foster Innovation at Consumer Health

- Tailor development to needs of different product categories,
  e.g. nutritionals, vs OTCs, vs personal care
- Build Rx-to-OTC switches pipeline
- Provide new benefit areas to consumers

Combined Crop Science Company Well Positioned to Deliver Superior Performance

Integrated Solutions

- Create integrated agriculture offerings
- Smarter combinations of products on broader footprint, supported by more targeted digitally enabled agronomic advice
- Enable customized solutions for broad-acre crops corn and soy

Lead Innovation

- Advance strong pipeline across crops, indications and technologies
- Deploy joint innovation capabilities to deliver enhanced solutions for the next generation of farming
- Customized systems based on synergistic technology application and powered by digitally enabled agronomic engine

Deliver Value Proposition

- Realize full synergy potential of the combined businesses
- Deliver above market growth and superior margins

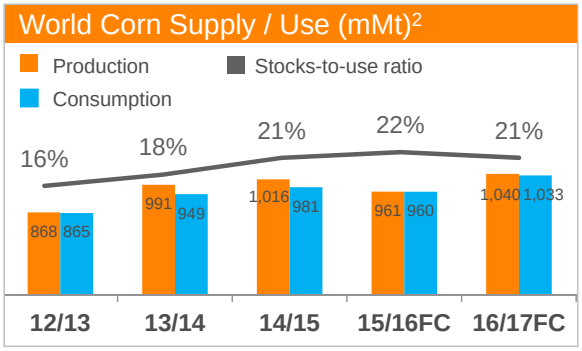
Acquisition of Monsanto pending

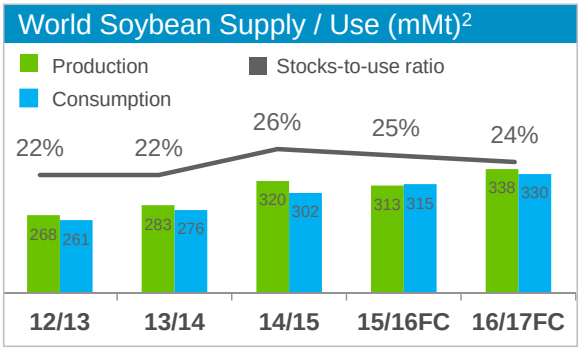
Current Ag Market Downturn Driven by Supply – Demand Steadily Growing

- Demand is steadily growing as long-term drivers are intact
- Several strong harvests in a row hiked global stocks of key commodities
- Stocks-to-use ratios for corn and soybean expected to stabilize
- CBOT[1] futures for corn and soybean trending upwards

➔ Early indicators suggest that bottom of the ag cycle has been reached

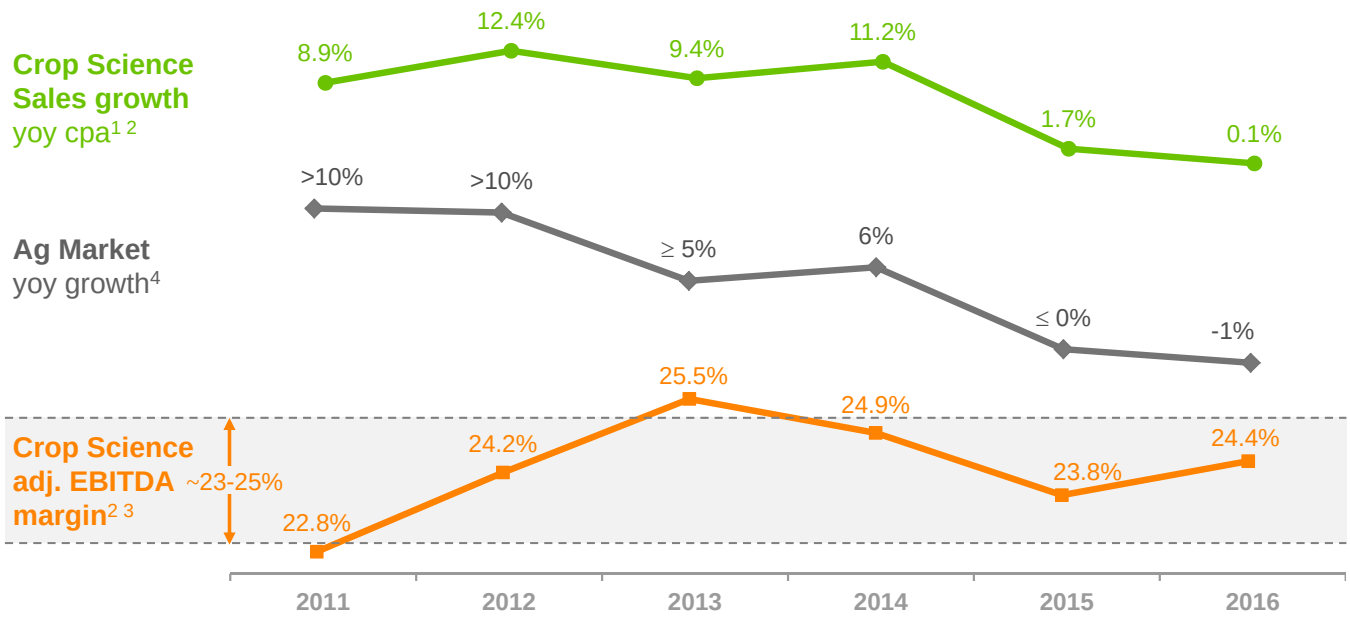
➔ Ag market recovery expected to start in late 2017, depending on harvests over the year





[1] CBOT: Chicago Board of Trade (Corn futures chain; c1 Soybean front month continuation), as of Feb 22, 2017
[2] Source: USDA WASDE, as of Feb 9, 2017

Crop Science Delivers Growth and Robust Margins Over the Ag Cycle



[1] currency and portfolio adjusted [2] 2015 data restated [3] before special items
[4] Seeds, traits and crop protection market; source 2011: internal estimation, source 2012-2016: Bayer Annual Reports

Strong Innovators are Needed to Step-up the Pace in Agriculture R&D

- The Pharma industry spends ~$150bn[1] per year on R&D to enhance health, whilst the Agricultural industry spends only ~$8bn[2] per year on R&D to enhance food security, which is the basis for good health
- United Nations FAO[3] sees need for more sustainable food and agricultural production and calls for innovative systems that protect and enhance the natural resource base, while increasing productivity:
  - More efficient use of land, water and other inputs
  - Climate-smart agriculture: adapting and building resilience to climate change, while capturing potential mitigation co-benefits
  - Greater conservation of biodiversity
  - Achieve a greater quality and quantity of production with shift from "ready-to-use" to "custom-made" production systems

➔ "Adoption and adaptation of sustainable farming systems and practices require technological innovation and investment in R&D"

[1] 2015, source: EvaluatePharma, Aug 2016 [2] Estimation based on Phillips McDougall AgriService data; *2015 R&D expenditure of leading companies in conventional crop protection and agricultural biotechnology*
[3] Source: FAO. 2016. The future of food and agriculture – Trends and challenges. Rome

Accelerating Innovation Through Joint R&D Forces in Combined Entity

- Innovation in agrochemicals, seeds & traits has become more costly and takes longer[1] due to higher regulatory demands
- New unmet needs and challenges (e.g. climate change, resistances) require break-through innovation based on synergistic technology application
- Emerging technologies allow to generate new customized solutions

➔ Increasing need for interdisciplinary approaches to accelerate R&D productivity

Bayer & Monsanto's Joined R&D Forces[2]

- Strong R&D technology platforms with cross-technology capabilities
- Superior access to innovation resources (including emerging technologies like genome-editing) through alliances and ventures

➔ Strong commitment to innovation with 2016 pro forma R&D investment of €2.5bn

[1] Based on: Phillips McDougall, AgriFutura Apr 2016 and AgriService Nov 2016
[2] 2016 Bayer + Monsanto pro forma; Fx rate USD/EUR=1.11; Monsanto R&D investment calendarized to Nov 2016

Bayer – A World-Class Life Science Company

- Delivered record performance in 2016
- Good progress with the agreed acquisition of Monsanto
- Outlook 2017 projects further growth in sales and earnings
- Mid-term aspirations emphasize growth and margin potential
- Focused leadership strategy at Pharma to deliver growth and to create value
- Consumer Health to maintain global OTC leadership and to improve profitability
- Combined crop science company well positioned to deliver superior performance

Science For A Better Life

EPS Accretion / Dilution in the Context of Rights Issues Accounting for Mandatory Convertible Notes

Johannes Dietsch, CFO

Meet Management in London – March 15, 2017

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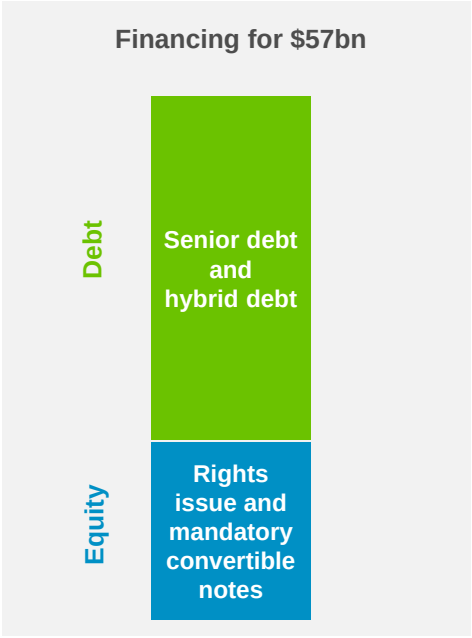
EPS Accretion / Dilution in the Context of Rights Issues

Planned Rights Issue in the Context of Financing the Agreed Monsanto Transaction

Financing Strategy Monsanto



- **Approx. $19bn equity portion** to consist of mandatory convertible notes and planned rights issue
- Rights issue as a **shareholder friendly** and **standard approach** for European issuers to raise equity
- Planned discounted rights issue with subscription rights would be **value neutral** for existing shareholders

European Discounted Rights Issue Precedents

Selected historical examples of M&A related rights issues:

Company	Size ($m)	Launch	Discount to TERP	Take-Up
Numericable Group	6.026	29-Oct-2014	35.3%	99.9%
Telefonica Deutschland	4.781	29-Sep-2014	28.3%	99.9%
Air Liquide	3.672	7-Oct-2016	17.9%	93.4%
Telefonica SA	3.344	25-Mar-2015	18.9%	99.2%
Deutsche Annington	2.536	15-Jun-2015	20.2%	98.1%
Melrose Industries	2.211	24-Aug-2016	20.3%	97.0%
Solvay	1.670	3-Sep-2015	28.3%	95.0%
BBA Aviation	1.153	23-Sep-2015	34.1%	97.7%
Merlin Properties	1.132	15-Jul-2015	20.8%	99.7%

Shareholder friendly and standard approach for European issuers to raise equity

Source: Dealogic, BofAML/Credit Suisse; TERP (Theoretical ex-rights price): Weighted average price of the shares outstanding prior to the rights issue and the new shares issued at the subscription price

Rights Issue with Subscription Rights Offers Three Options for Existing Shareholders

- Shares are **issued at a discount** to the prevailing market price
- At issuance shares will trade at the **TERP** defined as the weighted average price of the shares outstanding prior to the discounted rights issue and the new shares issued at the subscription price
- Shares are offered to existing shareholders by way of **subscription rights on a pro-rata basis**
- **Within 8 working days** after issuance shareholders can decide to:

Exercise all rights	Sell all rights	Partially sell and exercise
No economic or voting dilution	No economic but voting dilution	Cash neutral strategy if proceeds from sale of rights are used to subscribe shares for free No economic but voting dilution

All options are value neutral for existing shareholders

TERP = Theoretical ex-rights price; Illustrative example in appendix

Discounted Rights Issue Requires Restatement of EPS History

- **Cash neutral strategy** shows that a discounted rights issue can be viewed as a combination of an **issue at full price** and a **bonus issue** of shares:
  - **Fair value element**: number of shares deemed to be issued at fair value (rights issue proceeds / TERP)
  - **Bonus element**: number of shares a shareholder could buy for free following a cash neutral strategy (number of new shares less fair value element)
- According to IAS 33, **EPS of the prior period shall be restated** for the bonus element

$$\text{EPS pre rights issue} = \frac{\text{Net income}}{\text{Number of shares pre rights issue}}$$

$$\text{EPS pre rights issue restated for bonus element} = \frac{\text{Net income}}{\text{Number of shares pre rights issue + bonus element}}$$

Bonus element increases with the level of discount

TERP (Theoretical ex-rights price): Weighted average price of the shares outstanding prior to the rights issue and the new shares issued at the subscription price

Discounted Rights Issue - Acquisition Case

Illustrative example

Net Income pre Acquisition:	€1,000 m
Net Income post Acquisition:	€1,500 m
Share Price pre rights issue:	€100
Shares Outstanding pre rights issue:	400 m
Subscription Price:	€75
TERP:	€93.76
Number of new shares issued:	+133 m
Bonus element:	+26 m
Proceeds:	10,000 m

EPS pre rights issue:

$$\frac{€1{,}000\text{ m}}{400\text{ m}} = €2.50$$

Restated EPS pre rights issue:

$$\frac{€1{,}000\text{ m}}{400\text{ m} + 26\text{ m}} = €2.34$$

EPS post discounted rights issue*:

$$\frac{€1{,}500\text{ m}}{400\text{ m} + 133\text{ m}} = €2.81$$

→ EPS accretion of +20%

*incl. net income from acquisition; TERP (Theoretical ex-rights price): Weighted average price of the shares outstanding prior to the rights issue and the new shares issued at the subscription price

Impact on EPS With Different Discounts

Illustrative example

	1 Rights Issue with **low discount**	2 Rights Issue with **high discount**	3 Capital Increase **at Market**
	(+133 m shares at €75)	*(+200 m shares at €50)*	*(+100 m shares at €100)*
Restated EPS pre rights issue:	$\frac{€1{,}000\ m}{400\ m + 26\ m} = €2.34$	$\frac{€1{,}000\ m}{400\ m + 80\ m} = €2.08$	$\frac{€1{,}000\ m}{400\ m} = €2.50$
EPS post rights issue*:	$\frac{€1{,}500\ m}{533\ m} = €2.81$	$\frac{€1{,}500\ m}{600\ m} = €2.50$	$\frac{€1{,}500\ m}{500\ m} = €3.00$
EPS accretion:	+20%	+20%	+20%

Discount to TERP is neutral to EPS accretion

*incl. net income from acquisition; Further details of calculation in appendix

Expected Strategic Actions with EPS Impact

- **Planned Discounted Rights Issue**
  - Impact on nominal share price but discount-neutral to EPS accretion
- **Exit of Covestro**
  - Contributed ~€0.71 / share to core EPS in FY 2016
  - Based on 2016 figures and a stake of 53.3% Covestro would have contributed ~€0.57 to core EPS
- **Expected profit contributions from Monsanto and synergies after closing of the transaction**
  - Agreed transaction expected to be accretive to core EPS in the first full year after closing; double-digit percentage core EPS accretion expected in the third full year after closing
- **€4bn Mandatory Convertible Notes issued in November 2016**
  - No dividend entitlement until conversion but number of shares increases to adjust for dividends paid and for planned rights issue dilution



Accounting for Mandatory Convertible Notes

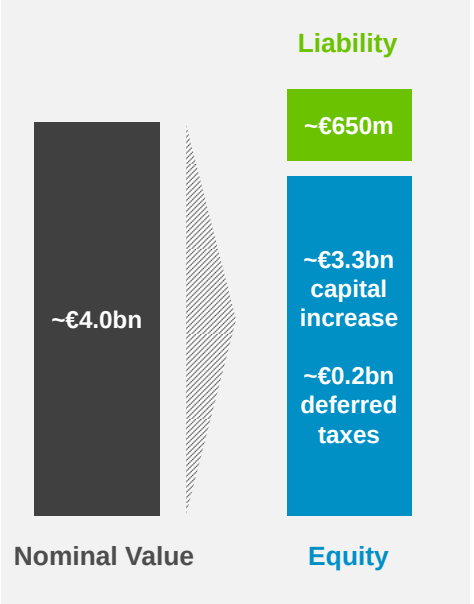
Mandatory Convertible Notes with a Volume of €4bn Issued in November 2016

- **Nominal value:** €4.0bn
- **Coupon:** 5.625%
- **Coupon payment dates:** on 1 July 2017 (short first coupon), 1 July 2018, 1 July 2019 and 22 November 2019 (short last coupon)
- **Min. conversion price:** €90 / share[1]
  Max. conversion price: €108 / share[2]
- **Maturity:** 22 November 2019
- **Conversion price adjustment:** Adjustment for dividend payments and other capital events, e.g. rights issue (MCN holders do not receive subscription rights)

Mandatory convertible notes as part of the re-financing of the Monsanto transaction

MCN: Mandatory convertible notes; [1] equal to share reference price at issuance; [2] 20% premium to share reference price

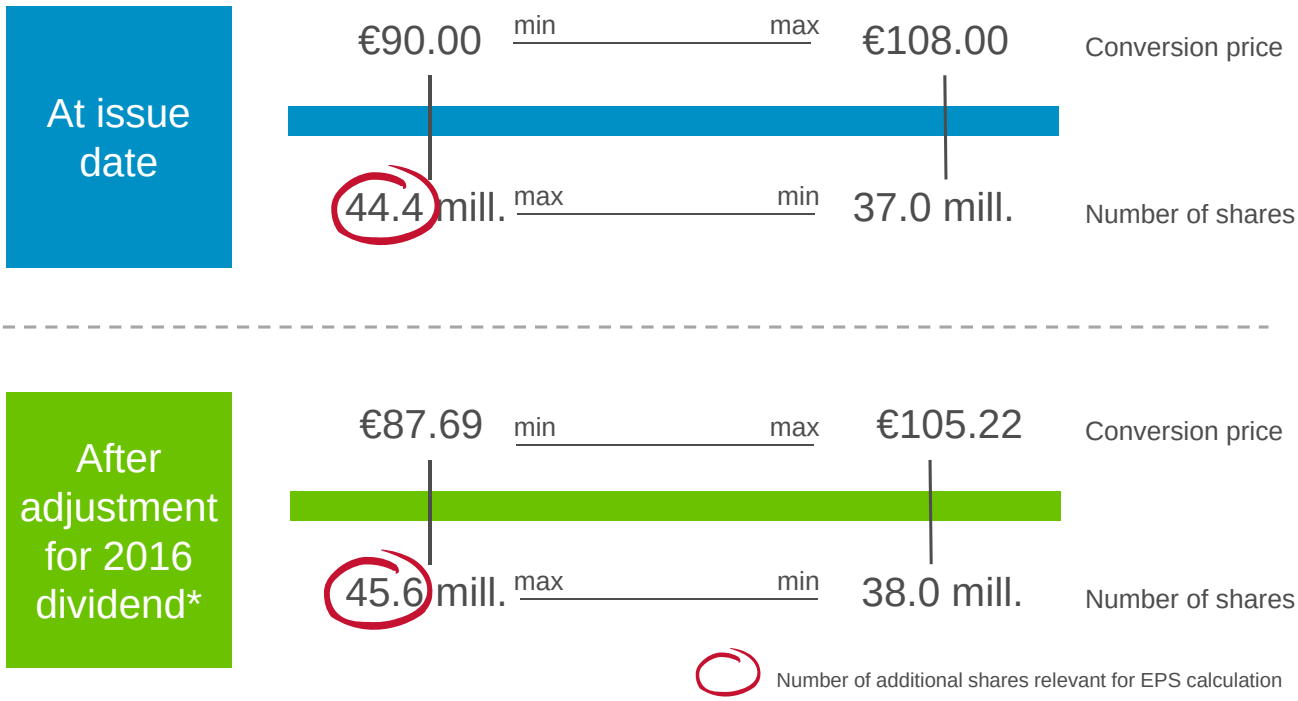
Accounting for Mandatory Convertible Notes



	Year 1	Year 2	Year 3
Liability	~ €650m	~ €436m	~ €218m
Market interest rate	1.64% p.a.	1.64% p.a.	1.64% p.a.
Interest cost	€11m	€7m	€4m
Cash payment to MCN holder	€225m	€225m	€225m

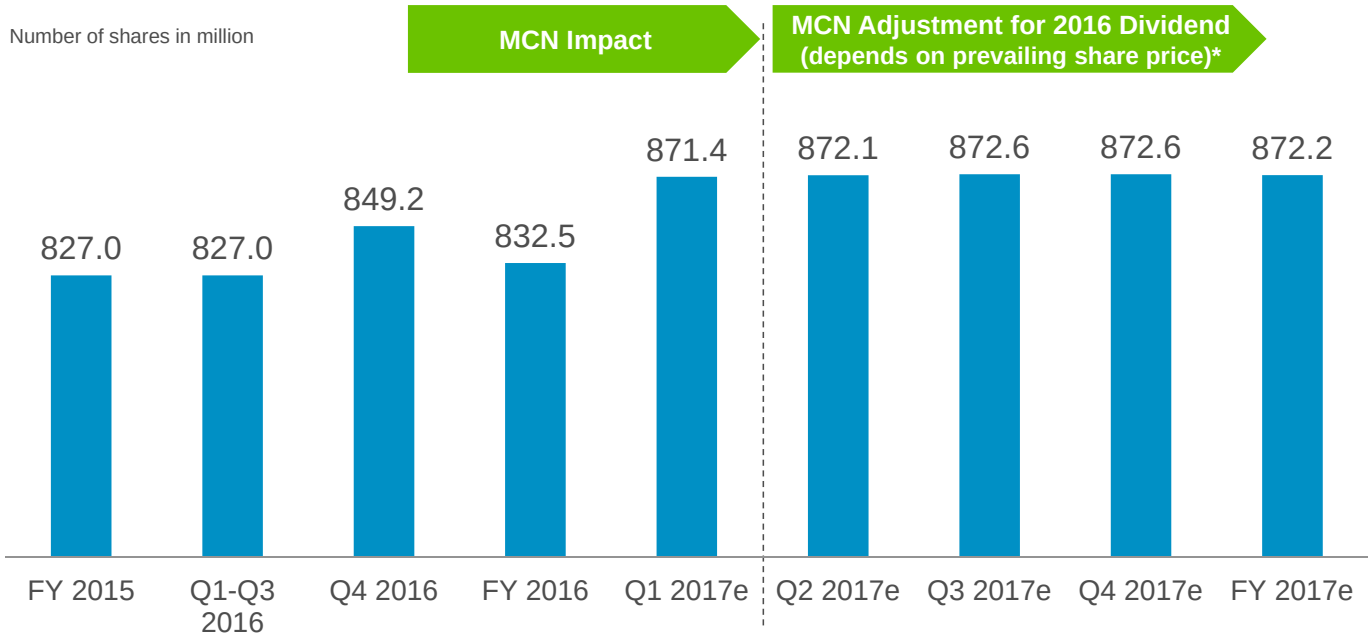
The nominal amount is split between equity and liability

Conversion Price of Mandatory Convertible Notes Will be Adjusted for Dividends



* Based on dividend proposal for 2016 of €2.70/share; assumed market price of €105/share; Underlying formula see appendix

Average Number of Shares Relevant for the EPS Calculation



Weighted average number of shares will be adjusted for each period

* Based on dividend proposal for 2016 of €2.70/share; assumed market price of €105/share; MCN: Mandatory convertible notes issued in Nov. 2016

Conversion Price of Mandatory Convertible Notes Will be Adjusted Post Rights Issue

- In the **context of a planned rights issue**, MCN holders **would not receive subscription rights**
- An **adjustment mechanism** is required to compensate MCN holders for the loss in value of the underlying shares

Illustrative example

	Prior to Adjustment		**Post** Adjustment
Nominal Value of MCN:	€4bn		€4bn
Min. Conversion Price:	€90.00	Adjustment Factor	€84.42
Max. Conversion Price:	€108.00	$\frac{\text{€93.76 (TERP)}}{\text{€100 (share price)}} = 0.938$	€101.30

TERP: Theoretical ex-rights price

Summary

- Discounted rights issue includes a **fair value element** and a **bonus element (bonus shares**)
- These bonus shares should be added in all **prior reported periods** for EPS calculation as well as business case comparisons
- Including this adjustment, the discount to TERP in a rights issue is neutral to **EPS accretion / dilution**
- **Modelling effects of the MCN** mainly on number of shares for EPS calculation as of date of the MCN issuance and cash-out for coupon payments while only minor impact on financial result
- **Adjustment of MCN conversion price** for dividends and rights issue to protect MCN holders from dilution



Appendix

Rights Issue and EPS Adjustment Calculations

Rights Issue Calculations		EPS Adjustment Calculations	
TERP	(Shares Outstanding Pre Rights Issue x Share Price Pre Rights Issue) + (Number of New Shares Issued x Subscription Price) / (Shares Outstanding Pre Rights Issue + Number of New Shares Issued)	**Multiplication Factor**	Share Price Pre Rights Issue / TERP
Fair Value Element Shares	Rights Issue Proceeds / TERP	**EPS Adjust-ment: Two Approaches**	1) Inclusion of bonus element in WASO for previous years or; 2) Division of historical EPS by the Multiplication Factor
Bonus Element Shares	Total New Shares Issued – Fair Value Element Shares		

WASO: Weighted average number of shares outstanding
TERP: Theoretical ex-rights price

Illustrative Example of Possible Subscription Rights Options

Illustrative example

Assumptions:

- Share Price before issuance of new shares **€100**
- Shares Outstanding pre rights issue **400 m**
- Subscription Ratio 1:3 => new shares issued **133 m**
- Subscription Price **€75**
- Theoretical Ex-Rights Price* (TERP) **€93.75**
- Investor holds **300 shares** pre rights issue

	Exercise all rights	Sell all rights	Cash neutral strategy
Value of shares:	€30,000	€30,000	€30,000
Cash held by Investor:	€10,000	€10,000	€10,000
Rights exercised:	**100** (at €75 = €7,500)	0	**20** (at €75 = €1,500)
Rights sold:	0	**100** (at €18.75 = €1,875)	**80** (at €18.75 = €1,500)
Value of shares:	€37,500	€28,125	€30,000
Cash held by Investor:	€2,500	€11,875	€10,000

Shareholder can decide which option would fit best

*Weighted average price of the shares outstanding prior to the rights issue and the new shares issued at the subscription price

Illustrative Example – With Discounted Rights Issue at a High Discount

Illustrative example

2 Acquisition Case with discounted rights issue at **high discount**

Net Income pre Acquisition:	€1,000 m
Net Income post Acquisition:	€1,500 m
Share Price pre rights issue:	€100
Shares Outstanding pre rights issue:	400 m
Subscription Price:	**€50**
TERP:	€83.33
Number of new shares issued:	**+200 m**
Subscription Ratio:	1:2
Bonus element:	**+80 m**

Adjusted EPS pre rights issue:

$$\frac{\text{€1,000 m}}{\text{400 m +}\mathbf{80}\text{ m}} = \text{€2.08}$$

EPS post discounted rights issue*:

$$\frac{\text{€1,500 m}}{\text{400 m +}\mathbf{200}\text{ m}} = \text{€2.50}$$

→ EPS accretion of +20%

*incl. net income from acquisition; TERP (Theoretical ex-rights price): Weighted average price of the shares outstanding prior to the rights issue and the new shares issued at the subscription price

Conversion Price of Mandatory Convertible Notes to be Adjusted for Dividends and Rights Issue

Dividend Adjustment

$$CP_a = CP \times \frac{M - F}{M}$$

- CP_a: adjusted conversion price
- CP: conversion price in effect immediately prior to the adjustment date
- M: average market price (average of last 3 trading days)
- F: fair market value of dividend per share on the ex date

Adjustment for Rights Issue

$$CP_a = CP \times \left[\frac{No}{Nn} \times \left(1 - \frac{I + D}{M}\right) + \frac{I + D}{M}\right] = CP \times \frac{TERP}{M}$$

- CP_a: adjusted conversion price
- CP: conversion price in effect immediately prior to the adjustment date
- N_0: number of issued shares before the share capital increase
- N_n: number of issued shares after the share capital increase
- I: issue price of the new shares
- M: average market price (average of last 3 trading days)
- D: the dividend disadvantage (not discounted), if any, of the new shares compared to the old shares on the Record Date of the rights issue, as determined by the Calculation Agent
- TERP: theoretical ex-rights price

Further details on conversion price adjustments can be found in the terms and conditions of the Mandatory Convertible Notes at http://www.investor.bayer.de/en/bonds/bonds-issued/

Science For A Better Life

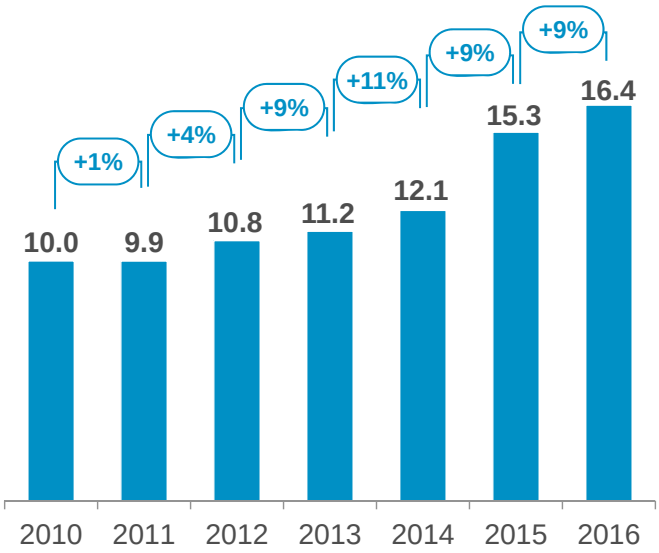
Investor Handout – Pharmaceuticals

Meet Management in London – March 15, 2017

Fast-Growing Pharma Business

Sales

€ billion; Δ% yoy Fx & portfolio adj.



Successful launch of 5 products

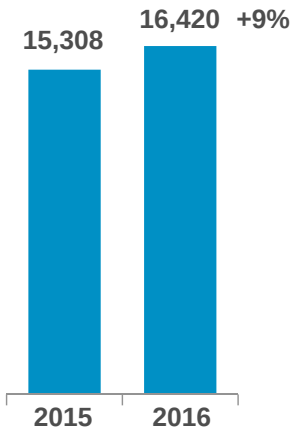
- Xarelto® rivaroxaban — Leading novel oral anticoagulant
- EYLEA — Success in treatment of retinal diseases
- Xofigo® radium Ra 223 dichloride injection — First-in-class α-pharmaceutical
- Adempas® riociguat — First marketed sGC modulating agent
- Stivarga® (regorafenib) tablets — Multi-kinase inhibitor for cancer treatment

2015 figures restated; Radiology business became part of Pharma effective January 1, 2016

FY 2016 – Pharmaceuticals Delivers Substantial Increases in Sales and Earnings

Sales

in € million; Δ% yoy, Fx & portfolio adj.



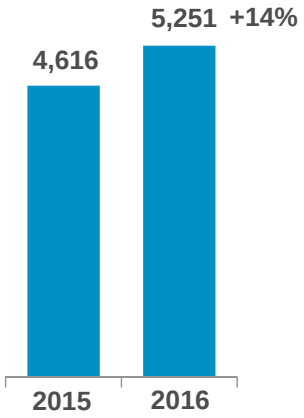
Key Growth Products

2016 sales in € million, Δ% yoy, Fx adj.

Xarelto	2,928	+31%
EYLEA	1,625	+33%
Xofigo	331	+29%
Stivarga	275	-12%
Adempas	254	+39%
Sum	5,413	+29%

EBITDA

before special items, in € million; Δ% yoy



FY 2017 Pharma Guidance – Projecting Profitable Growth

Sales Δ Fx & portf. adjusted, adj. EBITDA margin = EBITDA before special items to sales

	2016	2017
Sales	€16.4bn	Mid-single-digit % increase to >€17bn
Sales of Key Growth Products*	€5.4bn	>€6bn
EBITDA **before special items**	€5.3bn	High-single-digit % increase
Adj. EBITDA margin	32.0%	Improve

Assuming end 2016 Fx rates (USD 1.05); Outlook depends on specific planning assumptions as detailed in the Annual Report;
*key growth products include Xarelto, Eylea, Stivarga, Xofigo, Adempas

As presented on Sept. 20, 2016

Pharma Mid-Term Aspirations 2018

	2015	Aspiration 2018
Sales	+9.1% to €15.3bn	~6% CAGR (2015-2018)
Adj. EBITDA margin	30.1%	32 - 34% *despite dilution through RAD and significant investment in R&D*

Sales Δ Fx & portf. adjusted, EBITDA before special items
Outlook depends on specific planning assumptions outlined in the Interim Report Q2 2016
2015 figures restated; RAD: radiology business – became part of Pharma effective January 1, 2016

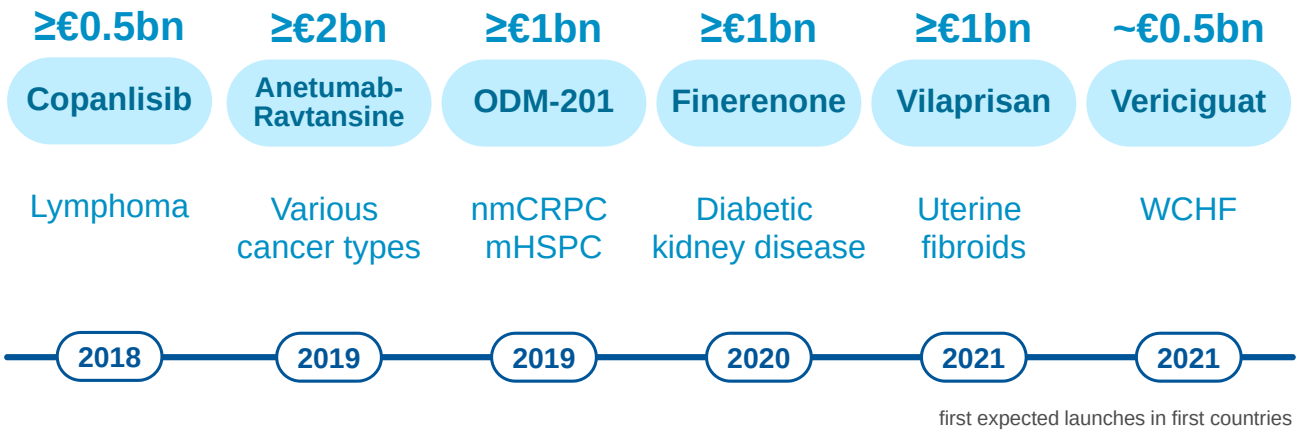
Combined Peak Sales Potential of Key Growth Products Raised to >€10bn

	Old		Current
Xarelto rivaroxaban	~€3.5bn	• Continued successful performance and LCM	>€5bn
EYLEA	≥€1.5bn	• Continued successful performance	>€2.5bn
Xofigo radium Ra 223 dichloride injection	≥€1bn	• Continued successful performance • Broadened LCM activities	>€1bn
Stivarga	≥€1bn	• Positive phase III in 2nd line HCC • Phase III in adjuvant CRC initiated	≥€1bn
Adempas riociguat	≥€0.5bn	• Multiple LCM activities including non-PH indications	>€0.5bn

Combined peak sales potential for Xarelto, Stivarga, Eylea, Xofigo and Adempas assuming approvals and launches as planned;
LCM: life cycle management; CRC: colorectal cancer; HCC: hepatocellular cancer; PH: pulmonary hypertension

Fully Realize Pipeline Potential

Combined* Peak Sales Potential ≥€6bn



* Combined peak sales potential for assets as above assuming approvals and launches as planned; nmCRPC: non-metastatic castration resistant prostate cancer; mHSPC: metastatic hormone-sensitive PC; WCHF: worsening chronic heart failure

Focused Leadership Strategy for Pharma

Build on leading positions in

- Cardiology / Thrombosis
- Woman's HealthCare
- Hemophilia

Establish focused segment leadership positions in Oncology

- Realize blockbuster potential for marketed drugs Xofigo and Stivarga
- Focus and reinforce Oncology R&D

Fully realize pipeline potential

Leading Cardiovascular Portfolio

Thrombosis
- Xarelto performance excellent – peak sales estimate raised to >€5bn
- Continue to invest in Xarelto LCM and launch preparations of LCM indications
- Pursue FXI/FXIa inhibition approach

Heart Failure
- Ph3 program of Vericiguat (HFrEF) in collaboration with Merck & Co. Inc.
- Pursue development of Neladenoson (Partial A1 agonist) in HFrEF and HFpEF in parallel
- Continue to advance chymase inhibitor and dual vasopressin receptor antagonist to PoC

Kidney
- Fully support Finerenone in DKD to build a leadership position in nephrology
- Develop Molidustat in Japan only
- Advance early pipeline projects to establish franchise

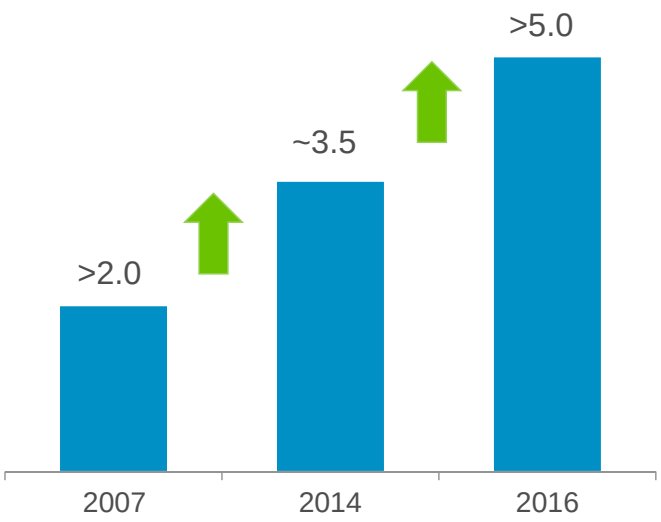
Mature Brands
- Adalat – a cornerstone in CV disease treatment
- Glucobay – continued growth expected in Emerging Markets, especially China
- Aspirin Cardio – continued growth expected

LCM: life cycle management; HFrEF: heart failure with reduced ejection fraction; HFpEF: HF with preserved EF;
PoC: proof of concept; DKD: diabetic kidney disease; CV: cardiovascular

Xarelto – Peak Sales Potential Estimates Raised – Again

Peak Sales Estimates

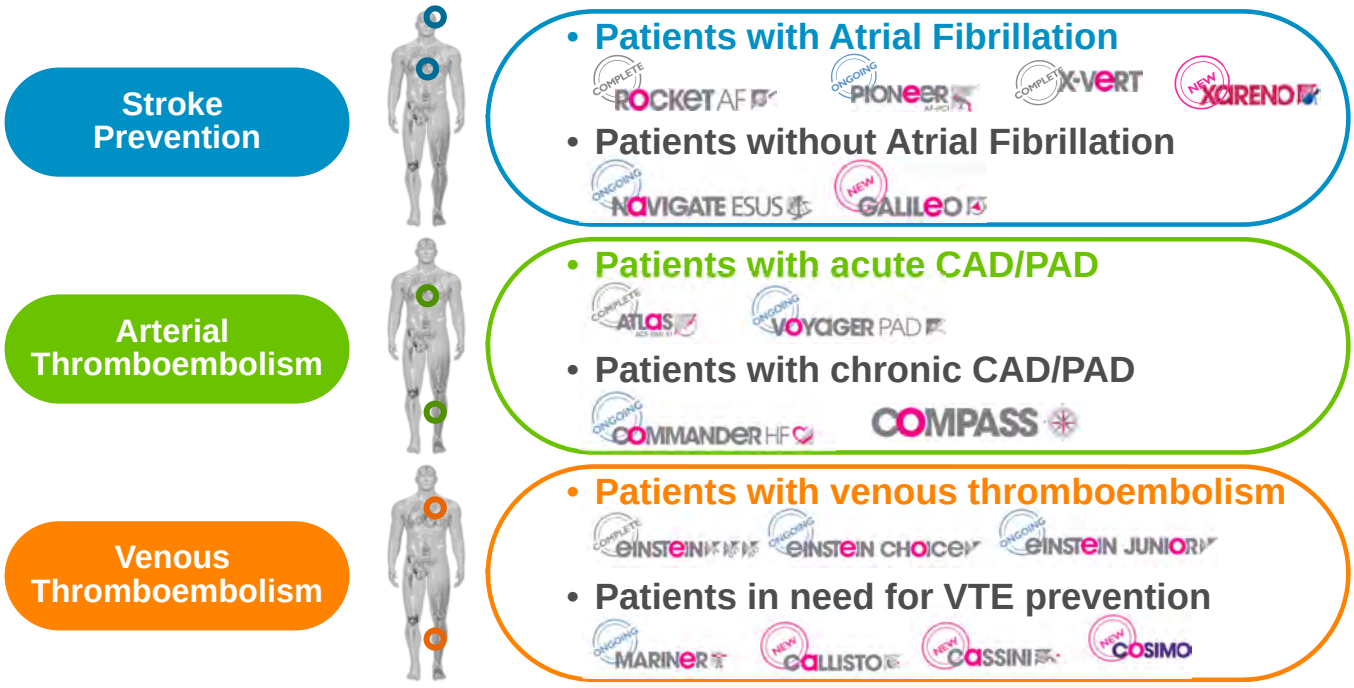
€ billion



- Continued excellent performance – Xarelto now a TOP 10 global Pharma brand[1]
- >26 million patients treated since launch[2]
- Further growth potential driven by:
  - Under-served patient populations in launched indications
  - Demographics
  - Shift from warfarin
  - New indications targeting patients currently not treated with anticoagulants

1: according to IMS; 2: calculation based on IMS Health MIDAS database

Xarelto Life Cycle Management Program Addressing The Full Range of Unmet Need

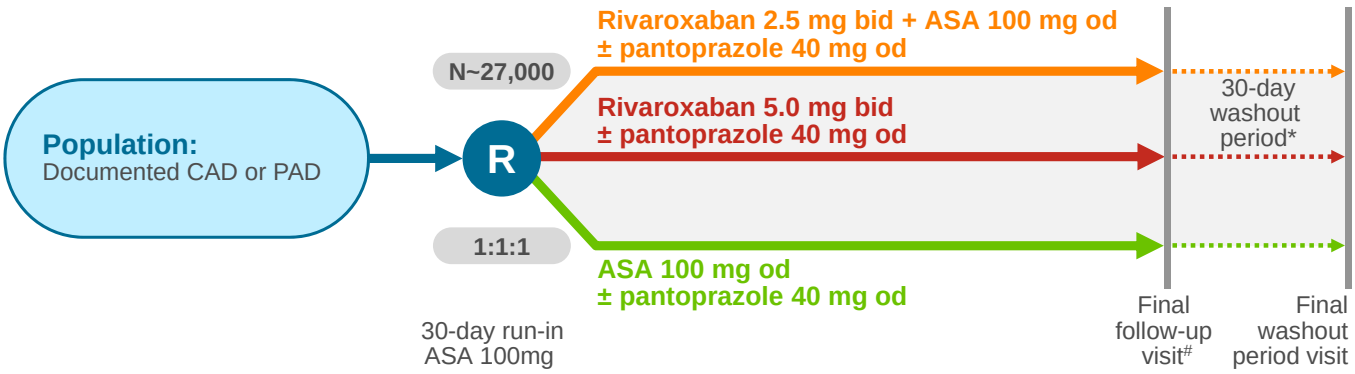


CAD: coronary artery disease; PAD: peripheral artery disease; VTE: venous thromboembolism

COMPASS CAD/PAD Study

Study title: A Randomized Controlled Trial of Rivaroxaban for the Prevention of Major Cardiovascular Events in Patients With Coronary or Peripheral Artery Disease (COMPASS – Cardiovascular OutcoMes for People Using Anticoagulation StrategieS)

Objective: Efficacy and safety of Rivaroxaban, low-dose Rivaroxaban plus ASA or ASA alone for reducing risk of myocardial infarction (MI), stroke or cardiovascular death in coronary artery disease (CAD) or peripheral artery disease (PAD)



Short design: Randomized, double-blind, controlled trial

Indication: CAD/PAD

Start: Q2'13
Stopped early – met primary MACE endpoint

- Patients treated according to local standard of care; # ≤30 days of the required pre-specified number of events having occurred;
- MACE: major adverse cardiac events; www.clinicaltrials.gov/show/NCT01776424; ASA: acetylsalicylic acid; MACE: major adverse cardiac events

COMPASS Study Details

Primary efficacy endpoint

- Composite of myocardial infarction (MI), stroke or cardiovascular death

Primary safety endpoint

- Modified ISTH major bleeding

Key inclusion criteria[#]

- CAD or PAD plus ≥1 of:
  - Age ≥65 years
  - Age <65 years plus atherosclerosis in ≥2 vascular beds or ≥2 additional risk factors

Key exclusion criteria[‡]

- Stroke ≤1 month or any haemorrhagic or lacunar stroke
- Severe HF with known ejection fraction <30% or NYHA class III or IV symptoms
- eGFR <15 ml/min
- Concomitant use of other anticoagulants
- Chronic treatment with non-ASA antiplatelet therapy

[#] including but not limited to; [‡] any other exclusion criteria in conjunction with the local product information and any other contraindication listed in the local labeling for Rivaroxaban or the comparator have to be considered; www.clinicaltrials.gov/show/NCT01776424; CAD: coronary artery disease; PAD: peripheral artery disease; ISTH: International Society on Thrombosis and Haemostasis; NYHA: New York Heart Association; HF: heart failure; eGFR: estimated glomerular filtration rate; ASA: acetylsalicylic acid

COMPASS Phase III Stopped Early on Success*

- Phase III **COMPASS** evaluating Rivaroxaban for the prevention of major adverse cardiac events (MACE) in patients with coronary artery disease (CAD) or peripheral artery disease (PAD) showed overwhelming efficacy and met its primary endpoint ahead of time
- Following a planned interim analysis, the DMC recommended to stop the trial early as the primary MACE endpoint has reached its prespecified criteria for superiority
- Full data planned to be presented at an upcoming scientific conference during 2017

*press release Feb 8, 2017
DMC: independent Data Monitoring Committee; MACE: major adverse cardiac events

Finerenone – Opportunity to Lead in Diabetic Kidney Disease

Finerenone

- Finerenone is a novel non-steroidal MRA with a differentiated profile
- Steroidal MR antagonists are not approved for kidney diseases
- A Finerenone phase IIb (ARTS-DN) study in Diabetic Nephropathy was successfully completed

Diabetic Kidney Disease

- Market for chronic kidney disease estimated at ~$14bn in 2024
- Resulting complications from Diabetes accounting for 35% of CKD
- ~40% of new cases of end-stage renal disease (ESRD) are due to Diabetes Mellitus (DM)
- Patients with Type II DM and CKD are at high risk of cardiovascular (CV) death

→ Significant need for innovative therapies

→ Phase III program in DKD progressing as planned

DKD: diabetic kidney disease; CKD chronic kidney disease; MRA: mineralocorticoid receptor antagonist

Vericiguat – Potential First-in-Class Treatment for Chronic Heart Failure

Novel approach targeting the critical cGMP cardiovascular pathway that is impaired in CHF patients

- A lack of sGC stimulation leads to the reduced activity of the “nitric oxide-sGC-cGMP” pathway, causing coronary dysfunction and progressive myocardial damage
- By directly stimulating the critical enzyme sGC, Vericiguat restores this pathway and in turn may improve heart and vascular function
- Phase III (VICTORIA) trial assesses a potential reduction in mortality and morbidity on top of standard of care in HFrEF patients
- VICTORIA trial ongoing[1]

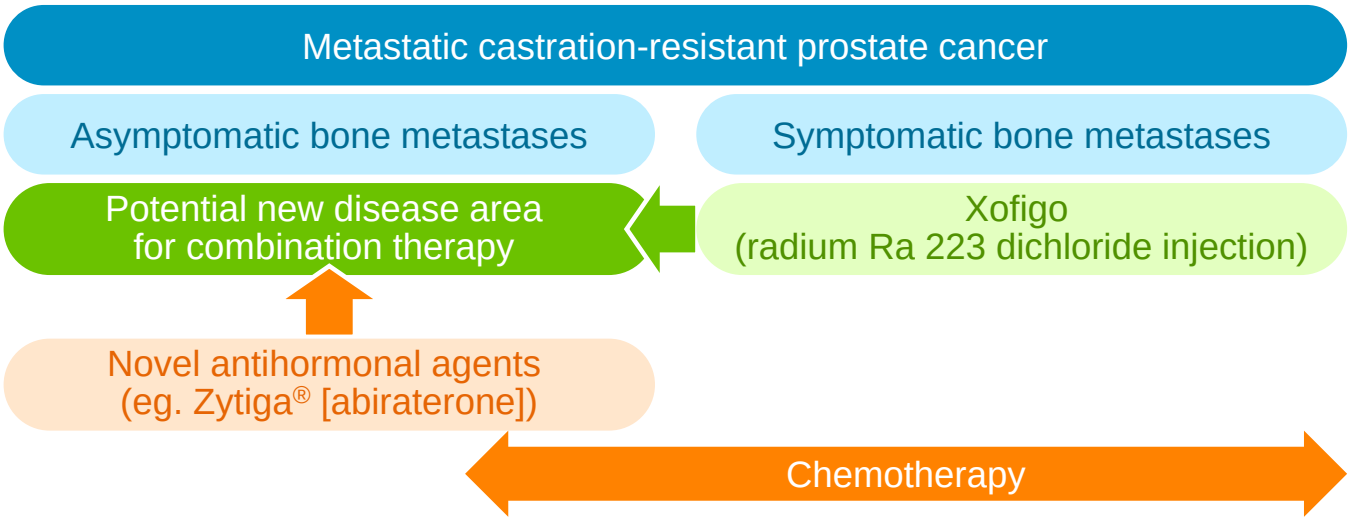
1: study sponsor: Merck Sharp & Dohme Corp; cGMP: cyclic guanosine monophosphate; sGC: soluble guanylate cyclase; CHF: chronic heart failure; HFrEF: heart failure with reduced ejection fraction

Establish Focused Leadership Positions in Oncology

Xofigo	• Target "agent of choice" status - clear survival benefit for patients with bone metastases in prostate cancer demonstrated • Expand in additional cancer types beyond prostate cancer
Stivarga	• Build position in hepatocellular carcinoma (HCC) • Strengthen position in colorectal cancer through LCM in adjuvant setting
Nexavar	• Reinforce leadership in liver cancer through capitalizing on optimal treatment continuum / sequence for Nexavar & Stivarga in HCC
Focus Oncology R&D	• Differentiation for leadership in selected areas (Thorium platform; ADC's) • Focus on differentiated programs
Execute launch pipeline	• Stivarga HCC 2L → launch 2017e • Copanlisib iNHL → launch 2018e • Anetumab R. mesothelioma → launch 2019e • Xofigo additional indications/uses → first launch 2019e • Darolutamide (ODM-201) nmCRPC → launch 2019e

nmCRPC: non-metastatic castration resistant prostate cancer; LCM: life cycle management; ADC: antibody-drug conjugate; iNHL: indolent Non-Hodgkin's lymphoma

Expanding Xofigo's Position in Castration-Resistant Prostate Cancer Treatment



- Combination therapy with abiraterone, an inhibitor of testosterone synthesis
- Expansion to earlier disease stages enhances accessible patient population

For details on approved indications see respective product labels;
Zytiga® is a trademark of Johnson & Johnson

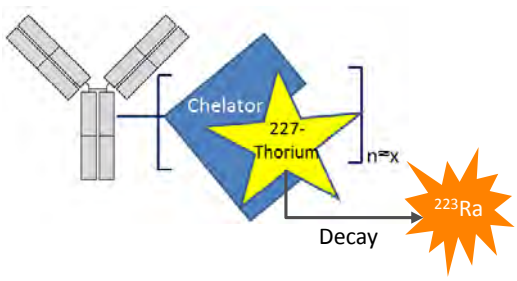
Darolutamide (ODM-201) – A Novel Nonsteroidal AR Antagonist

- Darolutamide is a potent and full AR antagonist – **differentiated** from other AR-targeted therapies
- **Darolutamide showed a promising profile** in preclinical and phase I/II studies in mCRPC:
  - Significantly decreased PSA levels in patients with progressive CRPC
  - Sustained PSA reduction observed at higher dose levels
  - Demonstrated a favorable safety profile
  - Showed negligible brain penetrance in preclinical studies
  - Antagonized mutant ARs linked to resistance to other AR antagonists (i.e. bicalutamide, enzalutamide) in preclinical studies
- **Phase III program ongoing** addressing
  i. hormone sensitive metastatic prostate cancer (ARASENS)
  ii. non-metastatic CRPC (ARAMIS)

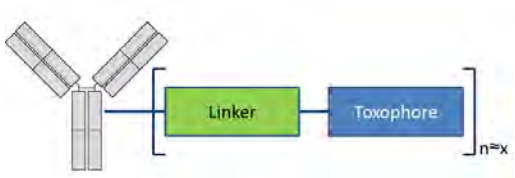
AR: androgen receptor; CRPC: castration-resistant prostate cancer; PSA: prostate-specific antigen

R&D Differentiates Through Targeted Alpha-Pharmaceuticals and Novel Toxophor ADCs

Targeted Thorium Conjugates (TTCs)

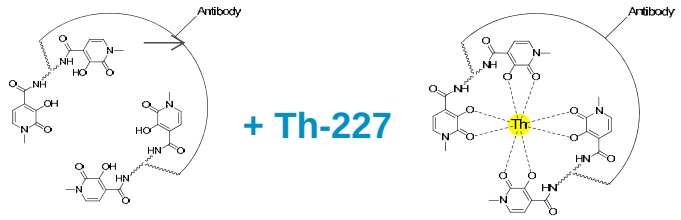


Antibody Drug Conjugates (ADCs)

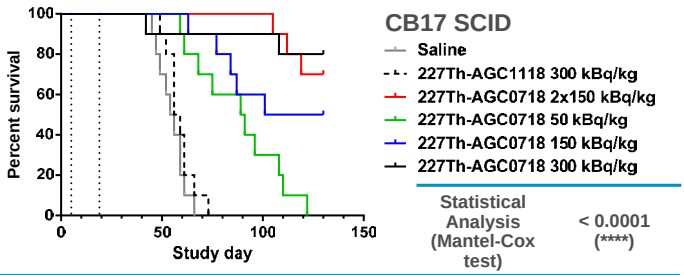


- Thorium-platform unique to Bayer
- Thorium-platform offers to deliver alpha emitters to every tumor
- Thorium-platform offers synergies with Xofigo with respect to manufacturing and supply chain
- Advanced and broad ADC program established
- Synergies between Thorium- and ADC platforms with respect to antigens, antibodies, linker technologies, etc.

Targeted Thorium Conjugates – Expanding the Alpha-Pharmaceuticals Platform



Preclinical disseminated AML tumor model



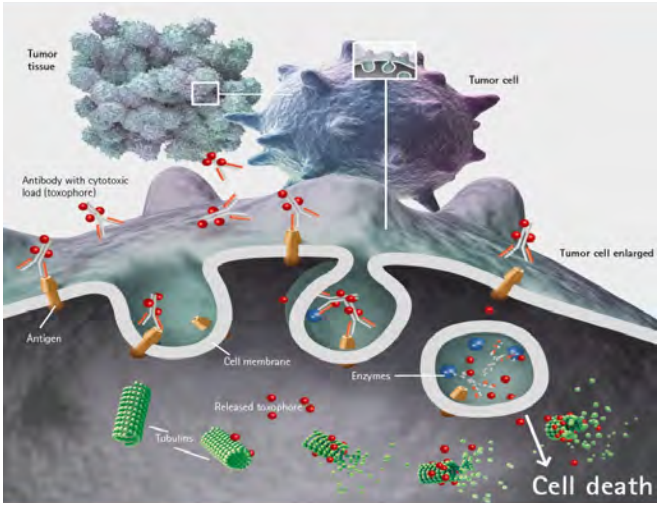
Animals treated 5 days after inoculation of HL60 (AML)

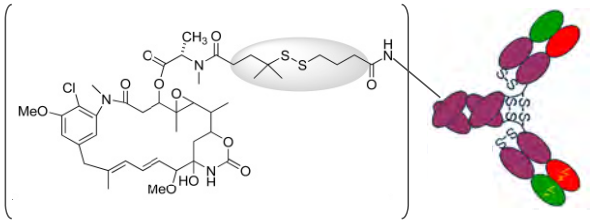
For all surviving animals **no tumors** were found on dissection

AML: acute myeloid leukemia

- High linear energy transfer of alpha particles leads to a high frequency of double strand DNA-breaks and tumor cell death
  - Half-life 18.7 days – suitable for tumor delivery by mAbs
- Significant efficacy demonstrated in preclinical model
- Fast proof of concept targeted – Phase I for α-CD22 Th-227 conjugate progressing
- Next steps initiated to explore Thorium platform in solid tumors

Anetumab Ravtansine Program Advancing





Mode of action:

- ADC targeting tumor-associated antigen mesothelin, and delivering toxophore DM4, which acts on proliferating cells (tubulin inhibitor)

Potential spectrum of indications determined by mesothelin expression pattern:

- mesotheliomas (~90-100%)
- pancreatic cancer (~65%) and
- ovarian cancer (~65%)

Clinical program:

- Phase I* with promising results including duration of treatment of >1,000 days
- Registrational phase II in metastatic pleural mesothelioma ongoing

* Blumenschein et al. ASCO 2016; ADC: antibody drug conjugate

Expected Pipeline Newsflow 2017

Life Cycle Management Programs

Asset	Newsflow	Timing
Rivaroxaban	COMPASS Phase III data	Presentation planned at an upcoming conference
Rivaroxaban	EINSTEIN CHOICE Phase III data	Presentation at ACC March 2017e
Rivaroxaban	GEMINI Phase II data	Presentation at ACC March 2017e
Regorafenib	Launch 2L HCC*	During 2017e*
Radium-223	Phase III combi. with abiraterone	Primary completion end 2017e

2L HCC: second line hepatocellular carcinoma; *subject to regulatory approval

Expected Pipeline Newsflow 2017

Mid-/Late Stage Pipeline Programs

Asset	Indication	Newsflow	Timing
Copanlisib	Non-Hodgkin's Lymphoma	CHRONOS-1 Phase II data	Presentation planned at an upcoming conference
Vilaprisan	Uterine Fibroids	ASTEROID-2 Phase II data	Presentation planned at an upcoming conference
Damoctocog alfa pegol	Hemophilia A	First filing	mid 2017e
Amikacin Inhale	Lung Infection	Phase III	Primary completion 1H 2017e
Molidustat	Renal Anemia	Phase III initiation (Japan)	During 2017e
Vilaprisan	Uterine Fibroids	Phase III initiation	During 2017e

Summary

- Projecting future growth for Pharma
- Peak sales estimates for key growth products increased to >€10bn
- Pipeline holds promise with a peak sales potential* of selected assets of ≥€6bn
- Build on existing leading positions in key therapeutic areas
- Expand successful cardiovascular business
- Focus Oncology portfolio and build leading segment positions

* Combined peak sales potential for Copanlisib, Anetumab Ravtansine, Finerenone, Vericiguat, Vilaprisan and ODM-201 assuming approvals and launches as planned

APPENDIX

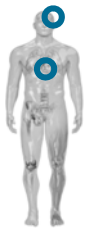
Leading Cardiovascular Portfolio

Bayer – A Leading Player in Thrombosis

- Xarelto continued its outstanding performance in 2016 – became one of the TOP 10 Global Pharma Brands according to IMS
- Confident in growth potential – Xarelto's peak sales potential estimate raised to >€5bn
- Comprehensive life cycle management program to support future growth
- Beyond Xarelto, Factor XI pathway is a research focus to potentially lead the next wave of innovation in thrombosis

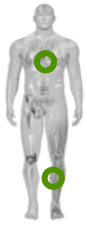
Xarelto Life Cycle Management Program Addressing The Full Range of Unmet Need

Stroke Prevention



- **Patients with Atrial Fibrillation**
  - ROCKET AF (COMPLETE)
  - PIONEER (ONGOING)
  - X-VERT (COMPLETE)
  - XARENO (NEW)
- **Patients without Atrial Fibrillation**
  - NAVIGATE ESUS (ONGOING)
  - GALILEO (NEW)

Arterial Thromboembolism



- **Patients with acute CAD/PAD**
  - ATLAS (COMPLETE)
  - VOYAGER PAD (ONGOING)
- **Patients with chronic CAD/PAD**
  - COMMANDER HF (ONGOING)
  - COMPASS

Venous Thromboembolism

- **Patients with venous thromboembolism**
  - EINSTEIN (COMPLETE)
  - EINSTEIN CHOICE (ONGOING)
  - EINSTEIN JUNIOR (ONGOING)
- **Patients in need for VTE prevention**
  - MARINER (ONGOING)
  - CALLISTO (NEW)
  - CASSINI (NEW)
  - COSIMO (NEW)

CAD: coronary artery disease; PAD: peripheral artery disease; VTE: venous thromboembolism

Xarelto Life Cycle Management Studies: Addressing Stroke Prevention

Study	Indication	Objective	Completion*
NAVIGATE ESUS	Secondary stroke prevention in patients with a recent ESUS	Evaluate whether Rivaroxaban is superior to aspirin in reducing the risk of recurrent stroke and systemic embolism in patients with a recent Embolic Stroke of Undetermined Source (ESUS) (N~7,000)	Q4'17e
PIONEER AF-PCI	SPAF/ ACSsp	Safety of two Rivaroxaban regimens vs. VKA after PCI in non-valvular AF patients (N~2,100)	Completed and reported
GALILEO	Transcatheter aortic valve replacement (TAVR)	To assess a Rivaroxaban-based anticoagulation regimen following successful TAVR balancing ischemic and bleeding outcome measures (N~1,500)	tbd
X-VERT	SPAF	Efficacy and safety of Rivaroxaban for prevention of CV events in non-valvular AF patients undergoing cardioversion vs. VKA (N=1,504)	Completed and reported
VENTURE AF	SPAF	Safety of uninterrupted Rivaroxaban vs VKA in non-valvular AF patients undergoing catheter ablation (N~250)	Completed and reported
X-TRA	SPAF	Efficacy of Rivaroxaban for LA thrombus resolution in non-valvular AF/flutter patients (N~60)	Completed and reported
XANTUS	SPAF	Safety of Rivaroxaban for stroke prevention in non-valvular AF. Region: Europe (N=6,784)	Completed and reported

* current estimates on primary completion

Xarelto Life Cycle Management Studies: Addressing Arterial Thromboembolism

Study	Indication	Objective	Completion*
COMPASS	Coronary artery disease (CAD) / peripheral artery disease (PAD)	Efficacy and safety of Rivaroxaban vs. low-dose Rivaroxaban plus ASA or ASA alone in reducing the risk of major cardiac events in patients with CAD or PAD (N~27,000)	Completed – press release Feb 8, 2017
COMMANDER HF	Heart failure (HF) / coronary artery disease (CAD)	Efficacy of Rivaroxaban vs. placebo in patients with significant CAD and HF receiving antiplatelet therapy (N=5,000)	1H'18e
VOYAGER PAD	Peripheral artery disease (PAD)	To assess the potential benefits of Rivaroxaban in reducing major thrombotic vascular events in patients with PAD undergoing peripheral artery interventions (N=6,500)	1H'19e
GEMINI ACS 1	ACSsp	Safety of Rivaroxaban vs. ASA in combination with single antiplatelet treatment (Clopidogrel or Ticagrelor) for long-term secondary prevention in patients with recent ACS in a broader range of patients (N=2,000 – 3,000). If successful, this phase II study will be followed by a confirmatory, fully powered global phase III study	Completed – data presentation at ACC, March 2017e
X-PLORER	ACSsp	Rivaroxaban plus dual antiplatelet therapy vs. UFH during elective PCI (N=107)	Completed and reported

* current estimates on primary completion; UFH: unfractionated heparin; PCI: percutaneous coronary intervention

Xarelto Life Cycle Management Studies: Addressing Venous Thromboembolism

Study	Indication	Objective	Completion*
EINSTEIN CHOICE	Long-term prevention of recurrent symptomatic VTE in patients with symptomatic DVT and / or PE	Efficacy and safety of reduced-dosed Rivaroxaban, standard-dosed Rivaroxaban vs. ASA for preventing VTE in patients with symptomatic DVT and/or PE (N=3,300)	Completed – data presentation at ACC, March 2017e
CALLISTO	Rivaroxaban in cancer associated thrombosis	Program with oncology-based, complementary studies to address oncologists questions on treatment and prevention of VTE, while building Xarelto treatment pathways into the cancer care environment. A compilation of different studies	Ongoing
MARINER	Medically ill patients at risk of VTE after hospital discharge	Efficacy and safety of Rivaroxaban vs. placebo in reducing post-discharge VTE risk in medically ill patients (N=8,000)	1H'18e
EINSTEIN JUNIOR	VTEx in children	Efficacy and safety of Rivaroxaban vs. SOC for treatment and secondary prevention of VTE in the paediatric population. A series of phase I, II, III studies (N=160)	1H'19e
XAMOS	VTEp OS	Safety and efficacy of Rivaroxaban vs. SOC in VTE prophylaxis after major orthopaedic surgery (N=17,701)	Completed and reported
XALIA	VTEx	Safety of Rivaroxaban vs. SOC for acute DVT treatment (N=5,142)	Completed and reported

* current estimates on primary completion

Ischaemic Heart Disease Is the Most Common Single Cause of Death Worldwide

Disease or injury	Deaths in 2015 (millions)[1]
1. Ischaemic heart disease	**8.8**
2. Stroke	6.2
4. Lower respiratory infections	3.2
4. COPD	3.2
5. Lung cancer	1.7
6. Diabetes Mellitus	1.6
7. Alzheimer Disease and other dementias	1.5
8. Diarrhoeal diseases	1.4
9. Tuberculosis	1.4
10. Road injury	1.3

1. World Health Organization. http://www.who.int/gho/mortality_burden_disease/causes_death/top_10/en/ (accessed March 2017)

…Our Comprehensive Clinical Program is Addressing Some of the Most Common Causes of Death

A program of 4 phase III studies addressing atherothrombosis:

→ Acute (incident) CAD/PAD – unstable vascular disease:

ATLAS ACS TIMI 51 VOYAGER PAD

→ Chronic (prevalent) CAD/PAD – stable vascular disease:

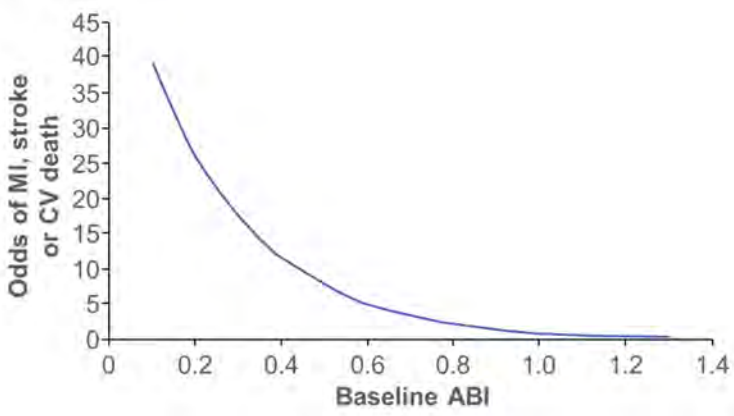
COMMANDER HF COMPASS

CAD: coronary artery disease; PAD: peripheral artery disease

Peripheral Artery Disease Is Strongly Associated with Coronary Artery Disease

Adjusted odds ratio of a CV event by Ankle-Brachial Index (ABI*)[1,2]

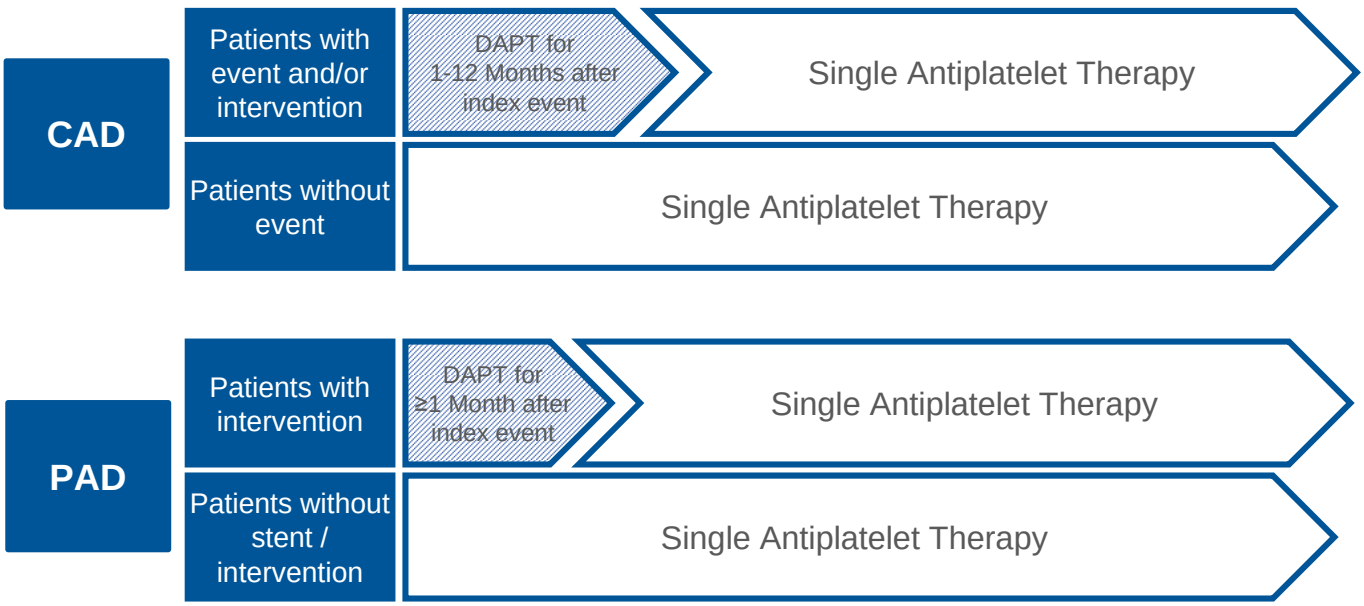
Data from the placebo arm of the Appropriate Blood Pressure Control in Diabetes (ABCD) study[2]



→ The lower the ABI, the higher the 5-year risk of a CV event

*The ratio of the systolic blood pressure in the ankle to the systolic blood pressure in the upper arm (ABI ≤0.90 is indicative of PAD)
1. Norgren L *et al*, *Eur J Vasc Endovasc Surg* 2007; 33 (Suppl 1):S1–S75 (adapted from 2. Mehler PS *et al*, *Circulation* 2003; 107:753–756)

Current Standard of Care for PAD&CAD based on Contemporary Guidelines



Recommended use of dual antiplatelet therapy (excluded from COMPASS)
CAD: coronary artery disease; PAD: peripheral artery disease

Acetylsalicylic Acid: Seen as a Cornerstone Therapy for Prevention of Thrombosis in Patients with CAD

ESC 2013 guidelines on the management of stable CAD

'Aspirin remains the cornerstone of pharmacological prevention of arterial thrombosis … The optimal risk–benefit ratio appears to be achieved with an aspirin dosage of 75–150 mg/day …'

Event prevention		
Low-dose aspirin daily is recommended in all SCAD patients.	I	A
Clopidogrel is indicated as an alternative in case of aspirin intolerance.	I	B
Statins are recommended in all SCAD patients.	I	A
It is recommended to use ACE inhibitors (or ARBs) if presence of other conditions (e.g. heart failure, hypertension or diabetes).	I	A

'… Combined antiplatelet therapy may be beneficial only in selected patients at high risk of ischaemic events, but cannot be recommended systematically in [stable] CAD patients.'

Montalescot G *et al*, *Eur Heart J* 2013;34:2949–3003

PAD: Guidelines Focus on Antiplatelet Therapy

ESC Guidelines 2011

Recommendations in patients with PAD: general treatment

Recommendations	Class[a]	Level[b]	Ref[c]
disease and/or heart failure.			
Antiplatelet therapy is recommended in patients with symptomatic PAD.	I	C[d]	37
In patients with PAD and			

[a]Class of recommendation.
[b]Level of evidence.
[c]References.
[d]Evidence is not available for all sites. When evidence is available, recommendations specific for the vascular site are presented in the respective sections.
$Hb_{A1}c$ = glycated haemoglobin; LDL = low-density lipoprotein; LEAD = lower extremity artery disease; PAD = peripheral artery disease.

Reference European Heart Journal (2011) 32, 2851–2906; doi:10.1093/eurheartj/ehr211

ACC- AHA Guidelines Focus Update 2011

2011 Focused Update Recommendations for ACC AHA

CLASS 1

1. Antiplatelet therapy is indicated to reduce the risk of MI, stroke, and vascular death in individuals with symptomatic atherosclerotic lower extremity PAD, including those with intermittent claudication or critical limb ischemia, prior lower extremity revascularization (endovascular or surgical), or prior amputation for lower extremity ischemia.[43–45] (Level of Evidence: A)

2. Aspirin, typically in daily doses of 75 to 325 mg, is recommended as safe and effective antiplatelet therapy to reduce the risk of MI, stroke, or vascular death in individuals with symptomatic atherosclerotic lower extremity PAD, including those with intermittent claudication or critical limb ischemia, prior lower extremity revascularization (endovascular or surgical), or prior amputation for lower extremity ischemia.[44,45] (Level of Evidence: B)

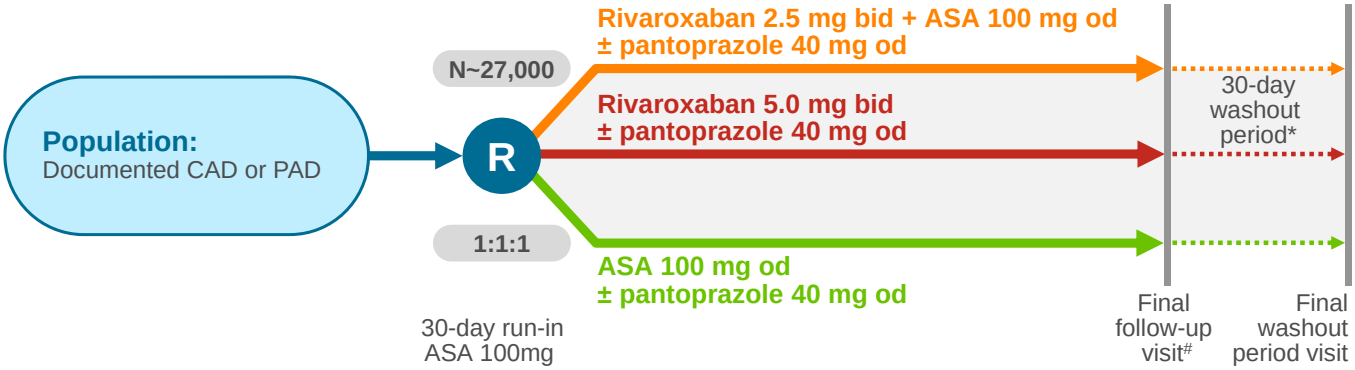
3. Clopidogrel (75 mg per day) is recommended as a safe and effective alternative antiplatelet therapy to aspirin to reduce the risk of MI, ischemic stroke, or vascular death in individuals with symptomatic atherosclerotic lower extremity PAD, including those with intermittent claudication or critical limb ischemia, prior lower extremity revascularization (endovascular or surgical), or prior amputation for lower extremity ischemia.[43] (Level of Evidence: B)

Reference https://doi.org/10.1161/CIR.0b013e31822e80c3 Circulation. 2011;124:2020-2045 Originally published October 31, 2011

COMPASS
CAD/PAD Study

Study title: A Randomized Controlled Trial of Rivaroxaban for the Prevention of Major Cardiovascular Events in Patients With Coronary or Peripheral Artery Disease (COMPASS – Cardiovascular OutcoMes for People Using Anticoagulation StrategieS)

Objective: Efficacy and safety of Rivaroxaban, low-dose Rivaroxaban plus ASA or ASA alone for reducing risk of myocardial infarction (MI), stroke or cardiovascular death in coronary artery disease (CAD) or peripheral artery disease (PAD)



Short design: Randomized, double-blind, controlled trial

Indication: CAD/PAD

Start: Q2'13
Stopped early – met primary MACE endpoint

- Patients treated according to local standard of care; # ≤30 days of the required pre-specified number of events having occurred
- MACE: major adverse cardiac events; www.clinicaltrials.gov/show/NCT01776424; ASA: acetylsalicylic acid; MACE: major adverse cardiac events

COMPASS
Study Details

Primary efficacy endpoint

- Composite of myocardial infarction (MI), stroke or cardiovascular death

Primary safety endpoint

- Modified ISTH major bleeding

Key inclusion criteria#

- CAD or PAD plus ≥1 of:
  - Age ≥65 years
  - Age <65 years plus atherosclerosis in ≥2 vascular beds or ≥2 additional risk factors

Key exclusion criteria‡

- Stroke ≤1 month or any haemorrhagic or lacunar stroke
- Severe HF with known ejection fraction <30% or NYHA class III or IV symptoms
- eGFR <15 ml/min
- Concomitant use of other anticoagulants
- Chronic treatment with non-ASA antiplatelet therapy

including but not limited to; ‡ any other exclusion criteria in conjunction with the local product information and any other contraindication listed in the local labeling for Rivaroxaban or the comparator have to be considered; www.clinicaltrials.gov/show/NCT01776424; CAD: coronary artery disease; PAD: peripheral artery disease; ISTH: International Society on Thrombosis and Haemostasis; NYHA: New York Heart Association; HF: heart failure; eGFR: estimated glomerular filtration rate ; ASA: acetylsalicylic acid

COMPASS Phase III Stopped Early on Success*

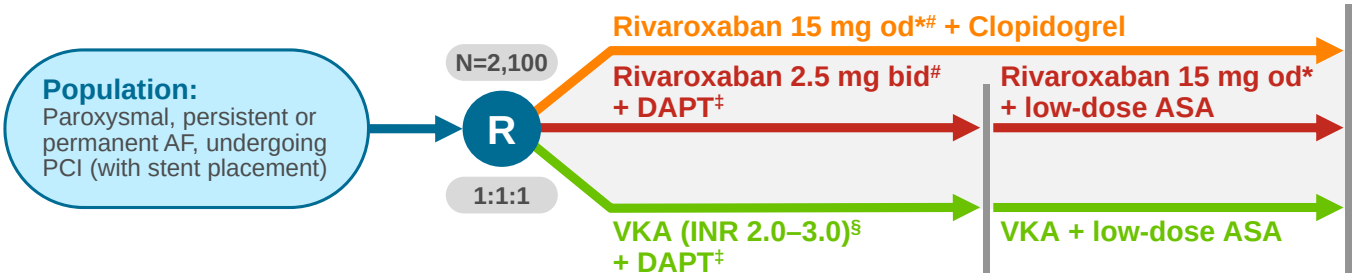
- Phase III **COMPASS** evaluating Rivaroxaban for the prevention of major adverse cardiac events (MACE) in patients with coronary artery disease (CAD) or peripheral artery disease (PAD) showed overwhelming efficacy and met its primary endpoint ahead of time
- Following a planned interim analysis, the DMC recommended to stop the trial early as the primary MACE endpoint has reached its prespecified criteria for superiority
- Full data planned to be presented at an upcoming scientific conference during 2017

*press release Feb 8, 2017
DMC: independent Data Monitoring Committee; MACE: major adverse cardiac events

PIONEER AF-PCI PCI Study

Study title: An Open-label, Randomized, Controlled, Multicenter Study Exploring Two Treatment Strategies of Rivaroxaban and a Dose-Adjusted Oral Vitamin K Antagonist Treatment Strategy in Subjects With Atrial Fibrillation Who Undergo Percutaneous Coronary Intervention

Objective: Safety of two Rivaroxaban regimens versus VKA after PCI (with stent placement) in non-valvular AF



Short design: Open-label, randomized, multicenter study

Indication: SPAF/ACS

Start: Q2'13
Completed and reported

* CrCl 30–49 ml/min: 10 mg od; # first dose 72–96 hours after sheath removal; ‡ ASA (75–100 mg daily) + Clopidogrel (75 mg daily) (alternative use of Prasugrel or Ticagrelor allowed, but capped at 15%); § first dose 12–72 hours after sheath removal; Gibson CM et al. AHJ 2014; www.clinicaltrials.gov/ct2/show/NCT01830543

PIONEER AF-PCI
Study Details

Primary endpoint

- Composite of TIMI major bleeding events, minor bleeding events and bleeding events requiring medical attention

Key inclusion criteria*

- History of paroxysmal, persistent or permanent non-valvular AF
- Undergone PCI (with stent placement) for primary atherosclerotic disease

Key exclusion criteria#

- Prior stroke / TIA
- Suspected or documented stent thrombosis during the index procedure or
- has a PCI with stent placement for a pre-viously stented lesion (stent within a stent) during the index procedure or within the previous 12 months
- Incomplete staged PCI procedure
- CrCl <30 ml/min
- Concomitant use of other anticoagulants

* Including but not limited to; # any other exclusion criteria in conjunction with the local product information and any other contraindication listed in the local labeling for Rivaroxaban or the comparator have to be considered; www.clinicaltrials.gov/ct2/show/NCT01830543; Gibson CM et al. AHJ 2014

Rivaroxaban
PIONEER Phase III Data

Results from **PIONEER AF-PCT** in patients with non-valvular atrial fibrillation after percutaneous intervention with stent placement indicate that:

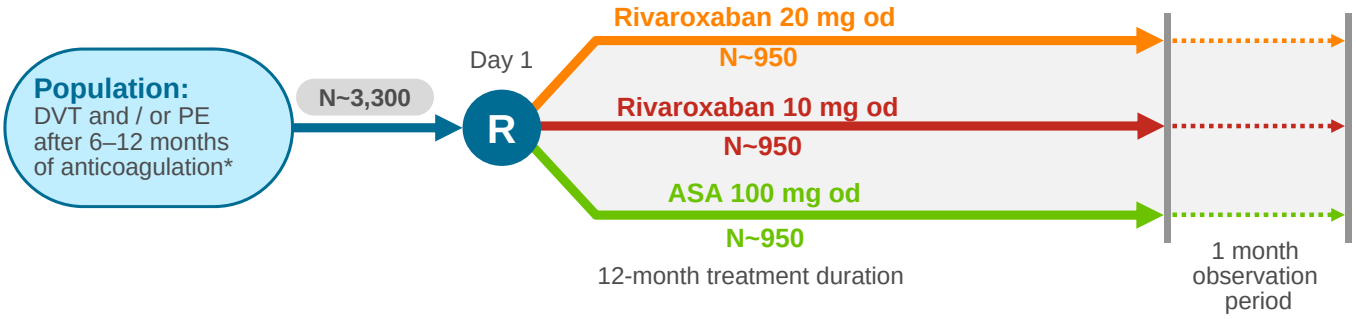
- Both Rivaroxaban dose strategies investigated significantly reduced risk of bleeding compared to a VKA + DAPT
  - Rivaroxaban 15 mg o.d. in combination with single antiplatelet therapy reduced rate of clinically significant bleeding by 41 per cent*
  - Rivaroxaban 2.5 mg twice daily in combination with DAPT reduced the rate of clinically significant bleeding by 37 per cent*
  - Similar rates for exploratory efficacy endpoint (CV death, MI, stroke and stent thrombosis) – however, study not powered for stat. significance on efficacy

Data presented in a late-breaking clinical trial session at AHA 2016 on Nov 14th, simultaneously published in NEJM
VKA: Vitamin K antagonist; DAPT: Dual antiplatelet therapy
*stat. significant

EINSTEIN CHOICE
Long-Term Secondary VTE Prevention Study

Study title: Reduced-dosed Rivaroxaban and Standard-dosed Rivaroxaban Versus ASA in the Long-term Prevention of Recurrent Symptomatic Venous Thromboembolism in Patients With Symptomatic Deep-vein Thrombosis and/or Pulmonary Embolism

Objective: Efficacy and safety of reduced-dosed Rivaroxaban, standard-dosed Rivaroxaban versus ASA for the long-term secondary prevention of recurrent symptomatic VTE in patients with symptomatic DVT and/or PE



Short design: Multicentre, randomized, double-blind, double-dummy, active-comparator, event-driven, superiority study

Indication: VTEx

Start: Q1'2014
Completed – data presentation at ACC,March'17e

* Completed 6–12 months (±1 month) with interruption of anticoagulation ≤1 week at randomization;
www.clinicaltrials.gov/ct2/show/NCT02064439; Weitz JI et al. Thromb Haemost 2015

EINSTEIN CHOICE
Study Details

Primary efficacy endpoint

- Fatal/non-fatal symptomatic recurrent VTE

Primary safety endpoint

- Major bleeding*

Key inclusion criteria#

- Patients with confirmed symptomatic DVT and/or PE treated for 6–12 months (interruption ≤1 week)

Key exclusion criteria‡

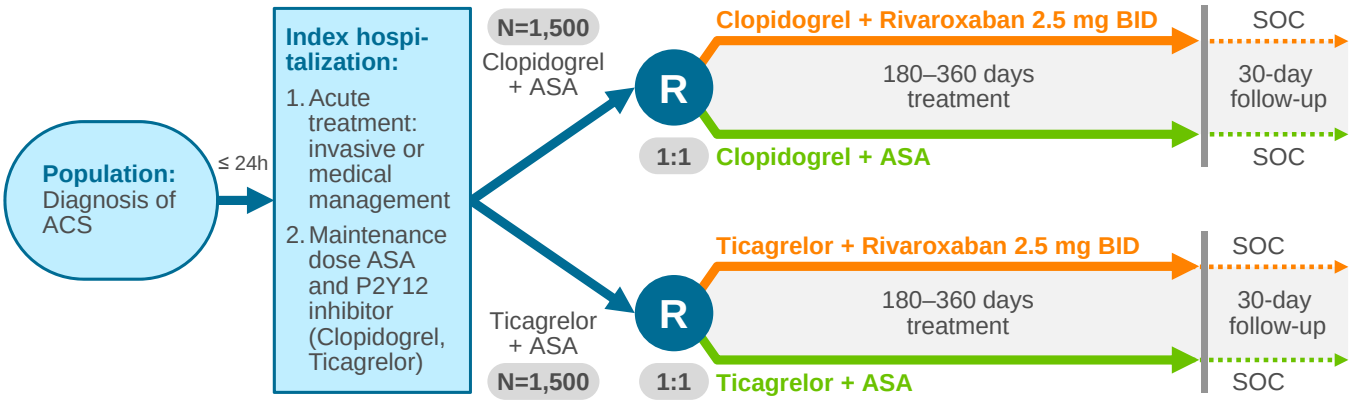
- Life expectancy <6 months
- Legal lower age limitations (country specific)
- CrCl ≤30 ml/min
- Concomitant use of other anticoagulants
- Chronic treatment with antiplatelet therapy

* Bleeding definition – see notes; # including but not limited to; ‡ any other exclusion criteria in conjunction with the local product information and any other contraindication listed in the local labeling for Rivaroxaban or the comparator have to be considered;
www.clinicaltrials.gov/ct2/show/NCT02064439; Weitz JI et al. Thromb Haemost 2015

GEMINI ACS 1
ACS Study with Single vs. Dual APs

Study title: A Study to Compare the Safety of Rivaroxaban Versus Acetylsalicylic Acid in Addition to Either Clopidogrel or Ticagrelor Therapy in Participants With Acute Coronary Syndrome

Objective: Safety of Rivaroxaban in addition to either Clopidogrel or Ticagrelor in ACS



Short design: Multicentre, prospective, randomized, double-blind, double-dummy, active-controlled, parallel-group study

Indication: ACS

Start: Q2'2015
Completed – data presentation at ACC,March'17e

www.clinicaltrials.gov/ct2/show/NCT02293395; study sponsor: Janssen Research & Development, LLC

GEMINI ACS 1
Study Details

Primary endpoint

- Thrombolysis in Myocardial Infarction (TIMI) clinically significant bleeding

Key inclusion criteria*

- Diagnosis of ACS
- Acute treatment for ACS
- Maintenance of dual antiplatelet treatment with either Clopidogrel plus ASA, or Ticagrelor plus ASA
- Younger than 55 years of age must also have either diabetes mellitus, or a prior MI

Key exclusion criteria#

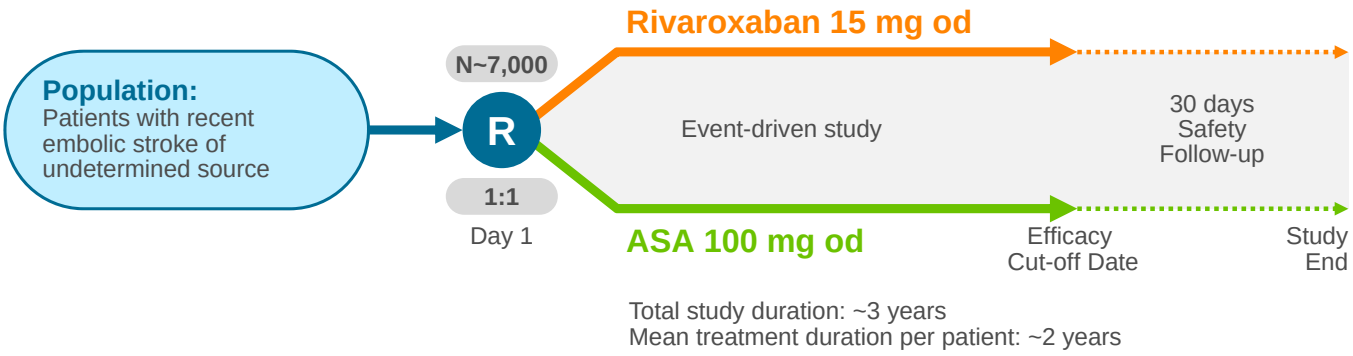
- Prior stroke of any etiology or TIA
- Anticipated need for chronic administration of proton pump inhibitors (PPI) Omeprazole or Esomeprazole concomitantly with Clopidogrel. Other PPIs are allowed
- Participant who received thrombolytic therapy as treatment for the index ACS event cannot be enrolled in the Ticagrelor stratum

* including but not limited to; # any other exclusion criteria in conjunction with the local product information and any other contraindication listed in the local labelling for Rivaroxaban or the comparator have to be considered;
www.clinicaltrials.gov/ct2/show/NCT02293395; study sponsor: Janssen Research & Development, LLC

NAVIGATE ESUS
Embolic Stroke of Undetermined Source Study

Study title: Rivaroxaban Versus Aspirin in Secondary Prevention of Stroke and Prevention of Systemic Embolism in Patients With Recent Embolic Stroke of Undetermined Source (ESUS)

Objective: Efficacy of Rivaroxaban in reducing the risk of recurrent stroke and systemic embolism in patients with a recent Embolic Stroke of Undetermined Source (ESUS)



Total study duration: ~3 years
Mean treatment duration per patient: ~2 years

Short design: Multicentre, randomized, double-blind, double-dummy, active-comparator, event-driven, superiority study

Indication: Secondary stroke prevention in ESUS

Start: Q4'2014
Completion: End 2017e

www.clinicaltrials.gov/ct2/show/NCT02313909

NAVIGATE ESUS
Study Details

Primary efficacy endpoint

- Composite of Stroke (ischemic, hemorrhagic, and undefined stroke, transient ischemic attack with positive neuroimaging) and Systemic embolism

Primary safety endpoint

- ISTH major bleeding

Key inclusion criteria#

- Patients with recent ischemic stroke and
  - Stroke not being lacunar
  - No cervical carotid atherosclerosis
  - No AF
  - No intracardiac thrombus
  - No other specific cause of stroke

Key exclusion criteria‡

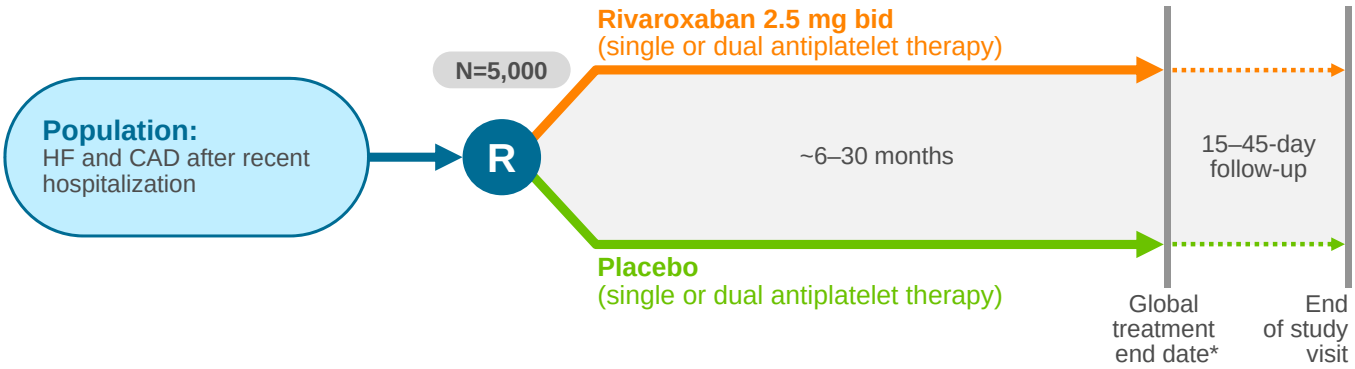
- Severe disabling stroke (modified Rankin score ≥4 at screening)
- CrCl <30 ml/min
- Indication for chronic anticoagulation or antiplatelet therapy

including but not limited to; ‡ any other exclusion criteria in conjunction with the local product information and any other contraindication listed in the local labelling for Rivaroxaban or the comparator have to be considered;
www.clinicaltrials.gov/ct2/show/NCT02313909

COMMANDER HF
Chronic HF/CAD Study

Study title: A Randomized, Double-blind, Event-driven, Multicenter Study Comparing the Efficacy and Safety of Oral Rivaroxaban With Placebo for Reducing the Risk of Death, Myocardial Infarction or Stroke in Subjects With Chronic Heart Failure and Significant Coronary Artery Disease Following a Hospitalization for Exacerbation of Heart Failure

Objective: Efficacy and safety of Rivaroxaban for reducing the risk of MI, stroke or death in HF with CAD



Short design: Randomized, double-blind, placebo-controlled, parallel-group, multicenter, event-driven, superiority study

Indication: HF/CAD

Start: Q3'13
Completion: 1H 2018e

* Date when 984 primary efficacy outcome events have occurred;
www.clinicaltrials.gov/ct2/show/NCT01877915; study sponsor: Janssen Research & Development, LLC; Zannad F et al., Eur J Heart Fail 2015

COMMANDER HF
Study Details

Primary efficacy endpoint

- Composite MI, stroke or all-cause death

Primary safety endpoint

- Fatal bleeding, critical organ bleeding with potential for permanent disability

Key inclusion criteria*

- Symptomatic CHF ≥3 months and hospitalized for exacerbation of CHF
- LVEF ≤40% ≤1 year
- Significant CAD
- Stable HF at randomization
- Treatment according to guidelines

Key exclusion criteria#

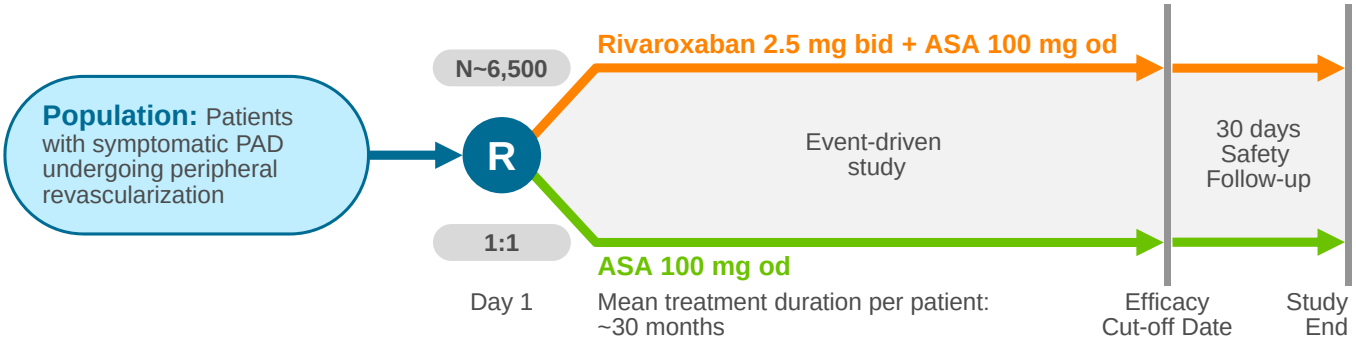
- Prior stroke ≤3 months
- Index hospitalization >21 days
- Planned intermittent outpatient treatment with positive inotropic drugs administered intravenously
- Concomitant use of other anticoagulants

* Including but not limited to; # any other exclusion criteria in conjunction with the local product information and any other contraindication listed in the local labeling for Rivaroxaban or the comparator have to be considered;
www.clinicaltrials.gov/ct2/show/NCT01877915; study sponsor: Janssen Research & Development, LLC; Zannad F et al., Eur J Heart Fail 2015

VOYAGER PAD
PAD Study

Study title: Rivaroxaban in a randomized, double blind, event driven superiority trial to show a significant reduction in thrombotic vascular events in patients with peripheral artery disease (PAD)

Objective: Efficacy and Safety of Rivaroxaban for the Reduction of Thrombotic Vascular Events in Subjects with PAD Undergoing Peripheral Revascularization Procedures



Short design: Randomized, multicenter, prospective, double-blind, double-dummy, parallel-group, placebo-controlled, event-driven

Indication: PAD

Start: Q2'2015
Completion: early 2019e

www.clinicaltrials.gov/ct2/show/NCT02504216

VOYAGER PAD
Study Details

Primary endpoint

- Composite of myocardial infarction (MI), ischemic stroke, cardiovascular (CV) death, acute limb ischemia (ALI), and major amputation of a vascular etiology

Key inclusion criteria*

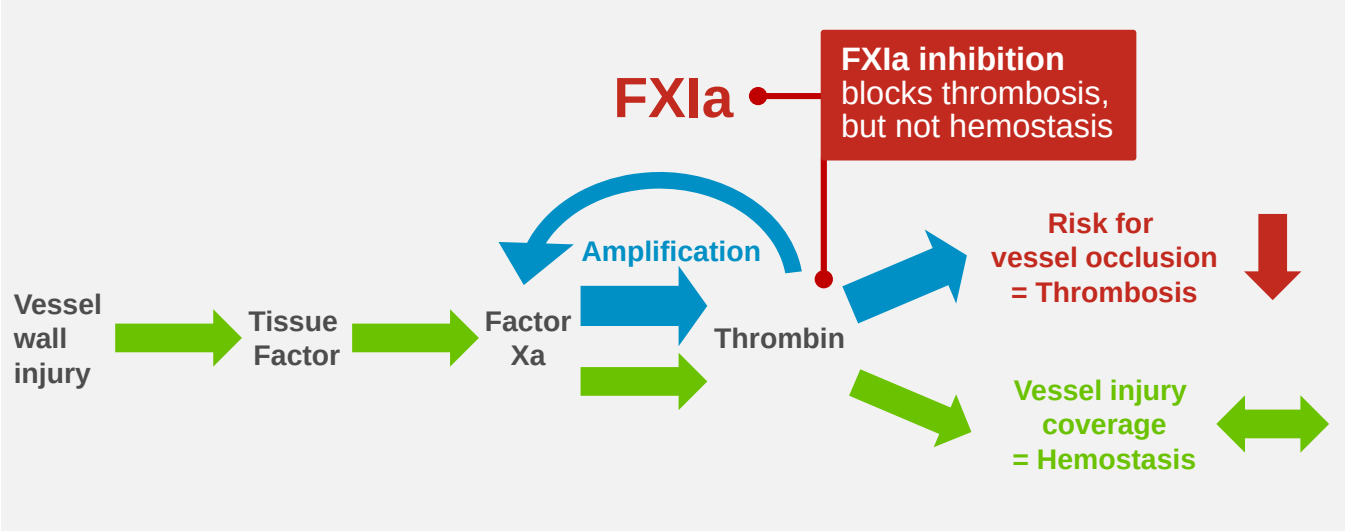
- Both genders, age ≥50 years
- Documented moderate to severe symptomatic lower extremity peripheral artery occlusive disease
- Technically successful peripheral infra-inguinal revascularization for symptomatic PAD within the last 7 days prior to randomization

Key exclusion criteria#

- Prior revascularization on the index leg within 8 weeks of the qualifying revascularization
- Planned post-procedural co-administration of thienopyridines in addition to ASA (exc. Clopidogrel ≤30 days for the qualifying revascularization)
- Confirmed ACS within the last 30 days
- Any medically documented history of intracranial hemorrhage, stroke, or transient ischemic attack (TIA)

* Including but not limited to; # any other exclusion criteria in conjunction with the local product information and any other contraindication listed in the local labeling for Rivaroxaban or the comparator have to be considered;
www.clinicaltrials.gov/ct2/show/NCT02504216

FXIa Inhibition – Exploring a Novel Approach For Anti-Thrombotic Therapy

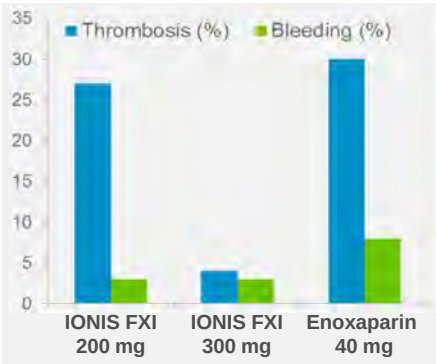


- **FXI pathway inhibition** may have potential for antithrombotic therapy without increased bleeding risk
- **FXI pathway inhibition** may offer an additional pathway for treating patients for whom there are currently no suitable therapeutic options available

Investigating New Approaches in Anticoagulation via FXI / FXIa Inhibition

FXI_{RX} Antisense Drug Candidate

- Antisense oligonucleotide[1] that specifically reduces the biosynthesis of clotting factor XI
- Positive Phase II data[2]



Fully human IgG Anti-FXIa Antibody

- Preclinical studies showed
  - Strong antithrombotic effect in standard animal models of venous & arterial thrombosis
  - No bleeding in sensitive animal models despite high dosing & combination with antiplatelet therapy
- Phase I ongoing

Oral small molecule FXIa Inhibitor

- Preclinical profile confirms anticoagulation potential without affecting bleeding times
- Status preclinical

1) In-licensed from IONIS-Pharmaceuticals
2) Prevention of thrombosis in patients undergoing total knee arthroplasty; Büller et al., NEJM (2015)372; 232

Finerenone – Opportunity to Lead in Diabetic Kidney Disease

Finerenone

- Finerenone is a novel non-steroidal MRA with a differentiated profile
- Steroidal MR antagonists are not approved for kidney diseases
- A Finerenone phase IIb (ARTS-DN) study in Diabetic Nephropathy was successfully completed

Diabetic Kidney Disease

- Market for chronic kidney disease estimated at ~$14bn in 2024
- Resulting complications from Diabetes accounting for 35% of CKD
- ~40% of new cases of end-stage renal disease (ESRD) are due to Diabetes Mellitus (DM)
- Patients with Type II DM and CKD are at high risk of cardiovascular (CV) death

→ Significant need for innovative therapies

→ Phase III program in DKD progressing as planned

DKD: diabetic kidney disease; CKD chronic kidney disease; MRA: mineralocorticoid receptor antagonist

Finerenone – Phase III Program 2 Event-Driven Outcome Trials

Diabetic Kidney Disease

FIGARO-DKD

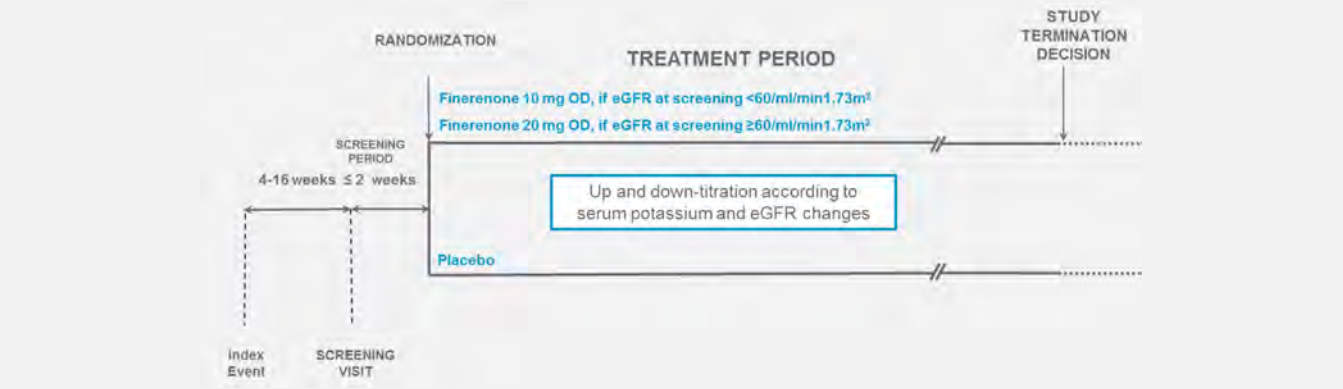
- Type II Diabetes and CKD
- DKD with high risk of developing CV events
- Primary cardiovascular endpoint

FIDELIO-DKD

- Type II Diabetes and CKD
- DKD with high risk of progression of CKD and developing CV events
- Primary renal endpoint

DKD: diabetic kidney disease; CKD chronic kidney disease; CV: cardiovascular

Finerenone – Phase III FIGARO-DKD and FIDELIO-DKD Trial – Design



FIGARO-DKD

- **FI**nerenone in reducin**G** c**A**rdiovascular mo**R**tality and m**O**rbidity in **DKD**
- N~6,400
- **Primary EP:** composite of CV death or non-fatal CV events

FIDELIO-DKD

- **FI**nerenone in reducing ki**D**n**E**y fai**L**ure and d**I**sease pr**O**gression in **DKD**
- N~4,800
- **Primary EP:** composite of kidney failure, decrease of eGFR ≥40% from baseline or renal death

Vericiguat – Potential First-in-Class Treatment for Chronic Heart Failure

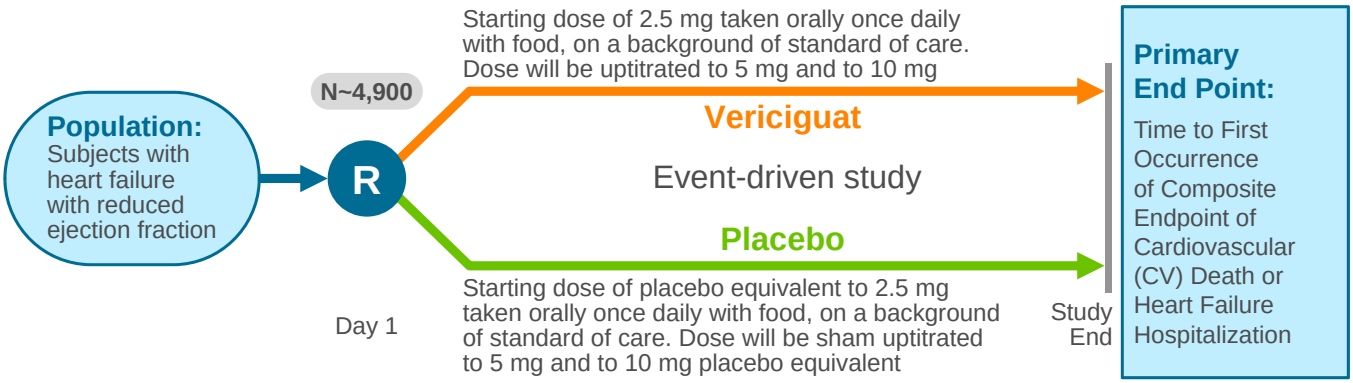
Novel approach targeting the critical cGMP cardiovascular pathway that is impaired in CHF patients

- A lack of sGC stimulation leads to the reduced activity of the “nitric oxide-sGC-cGMP” pathway, causing coronary dysfunction and progressive myocardial damage
- By directly stimulating the critical enzyme sGC, Vericiguat restores this pathway and in turn may improve heart and vascular function
- Phase III (VICTORIA) trial assesses a potential reduction in mortality and morbidity on top of standard of care in HFrEF patients
- VICTORIA trial ongoing[1]

1: study sponsor: Merck Sharp & Dohme Corp; cGMP: cyclic guanosine monophosphate; sGC: soluble guanylate cyclase; CHF: chronic heart failure; HFrEF: heart failure with reduced ejection fraction

Vericiguat – Phase III Study Design (VICTORIA)

Study objective: A randomized, placebo-controlled, parallel-group, multi-center, double-blind, event driven study of Vericiguat in participants with HFrEF. The primary hypothesis is Vericiguat is superior to placebo in increasing the time to first occurrence of the composite of cardiovascular (CV) death or heart failure (HF) hospitalization in participants with HFrEF.

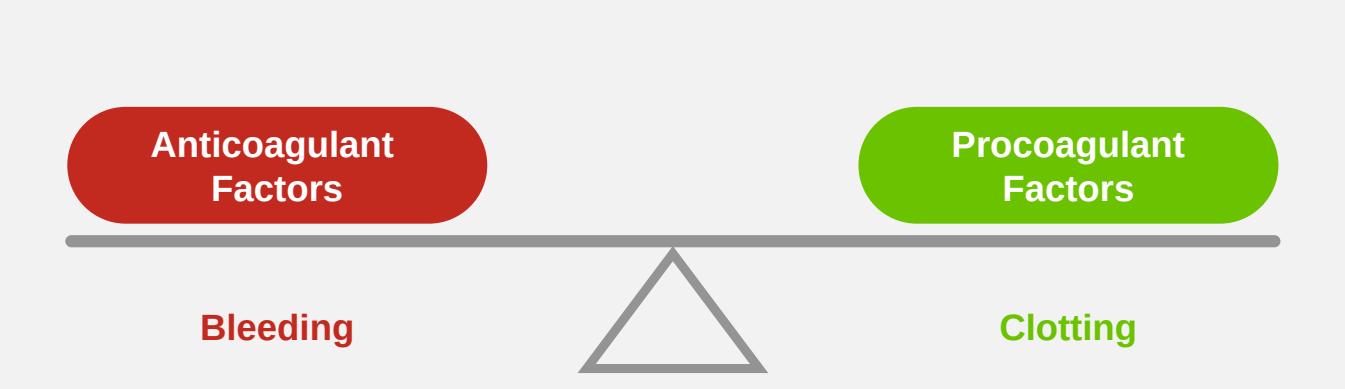


VICTORIA: Ver**IC**igua**T** gl**O**bal study in patients with heart failure and **R**educed eject**I**on fr**A**ction trial
Study conducted in partnership with the Canadian VIGOUR Centre (CVC) at the University of Alberta and the Duke Clinical Research Institute (DCRI).

HFrEF heart failure with reduced ejection fraction;
www.clinicaltrials.gov/ct2/show/NCT02861534; study sponsor: Merck Sharp & Dohme Corp

Leading Hemophilia Franchise

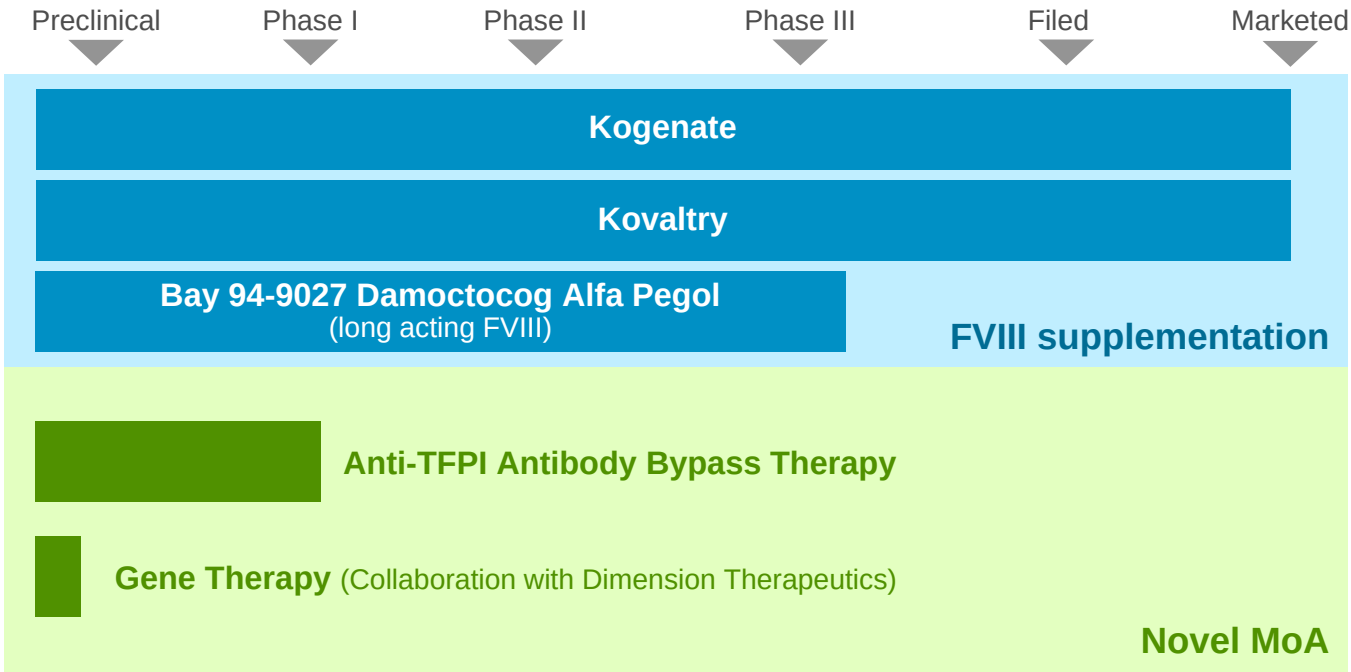
Modulating Hemostatic Balance in Hemophilia



In hemophilia and other bleeding disorders, clotting can be enhanced by:

- Increase in procoagulant factors, e.g. factor VIII supplementation
- Decrease in anticoagulant factors, e.g. inhibition of TFPI (Tissue Factor Pathway Inhibitor)

Robust Innovation Pipeline in Hemophilia and Bleeding Disorders



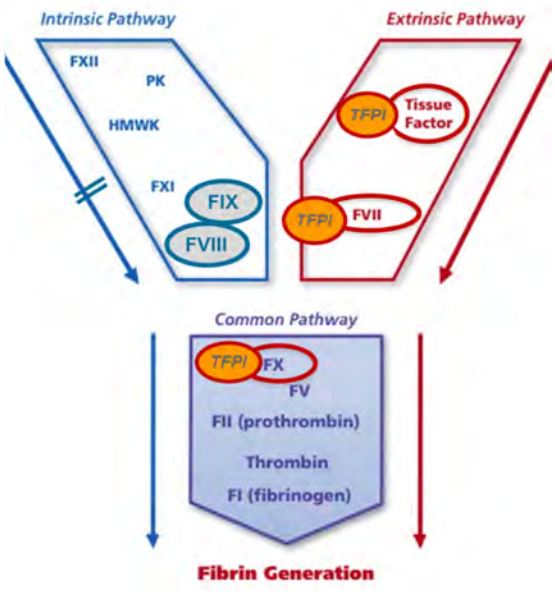
MoA: mode of action
TFPI: tissue factor pathway inhibitor

Kovaltry – Initial Launch Shows Positive Response in EU, US and Japan

- Kovaltry is an improved full-length rFVIII product allowing for prophylaxis treatment with as few as 2 per week application
- Successfully launched in US, Canada, Japan as well as Germany and other EU markets during 2016
- Initial launch KPIs are positive with Kovaltry being chosen by both Kogenate and competitive brand customer for its efficacy and trust

TFPI-Inhibition as a Potential Novel Treatment Principle for Hemophilia A/B

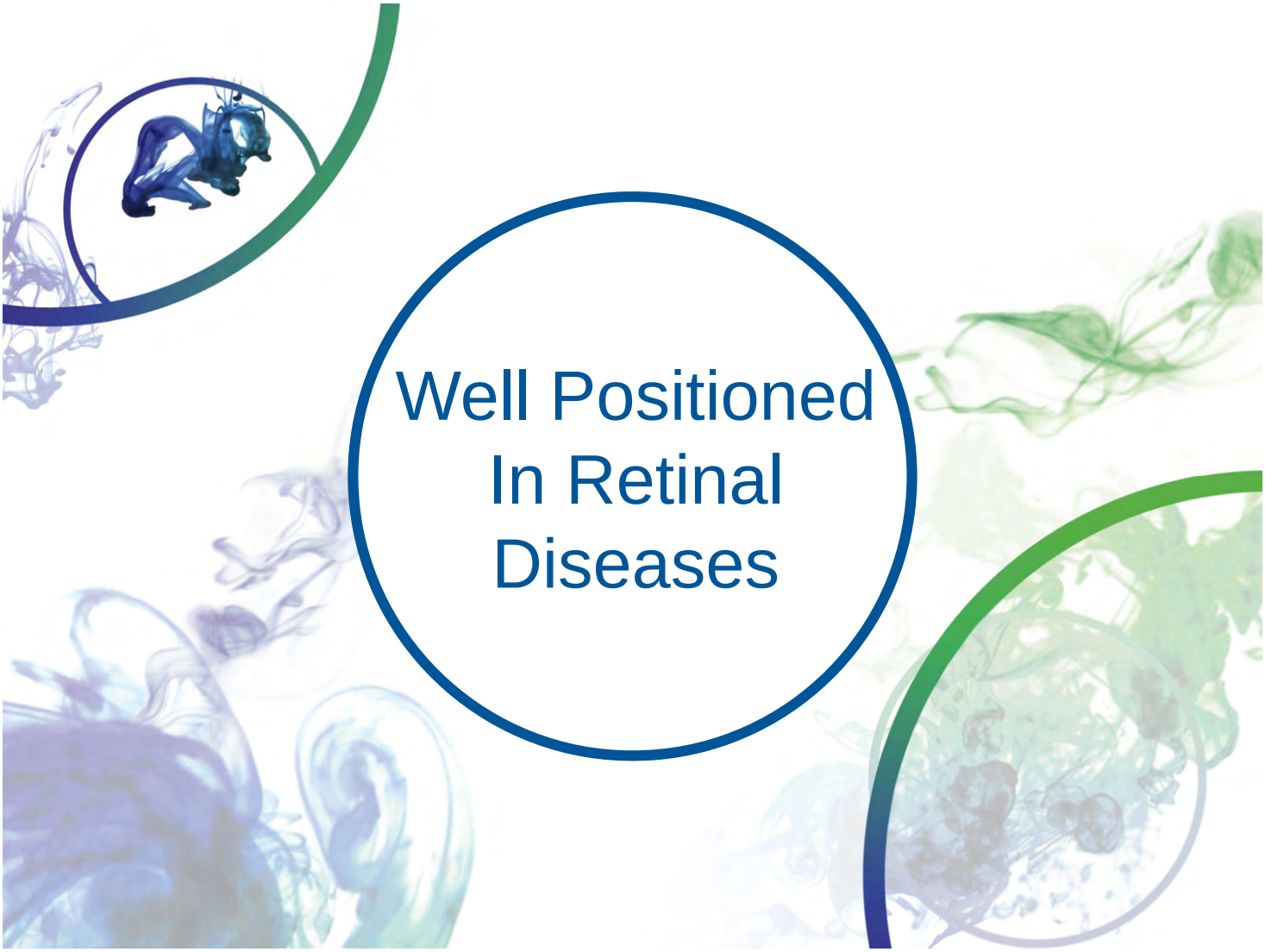
Role of TFPI in Coagulation



anti-TFPI Facts

- Can reversibly inhibit various clotting factors leading to bleeding
- Inhibition of TFPI potentially offers novel treatment option for Hemophilia A/B patients with or without inhibitors
  - Hemophilia patients depend on extrinsic pathway for clotting. anti-TFPI Ab inhibits TFPI – thereby restoring impaired hemostasis
- BAY1093884 is a fully human monoclonal antibody
- Phase I ongoing

TFPI: tissue factor pathway inhibitor



Well-Positioned in Retinal Diseases

- Eylea[1] gaining market share in multiple countries, achieving market leadership across the ex-US territories[2]
- Confident in growth potential – peak sales estimates raised to >€2.5bn
- Life cycle management including combination therapy with Ang2-antibody[3]

1: marketed by Bayer ex-US only
2: source: IMS monthly market share data

3: in collaboration with Regeneron
DME: Diabetic macula edema; mCNV: myopic Choroidal neovascularization; RVO: retinal vein occlusion;

Eylea and Ang2-Antibody – Combination Therapy

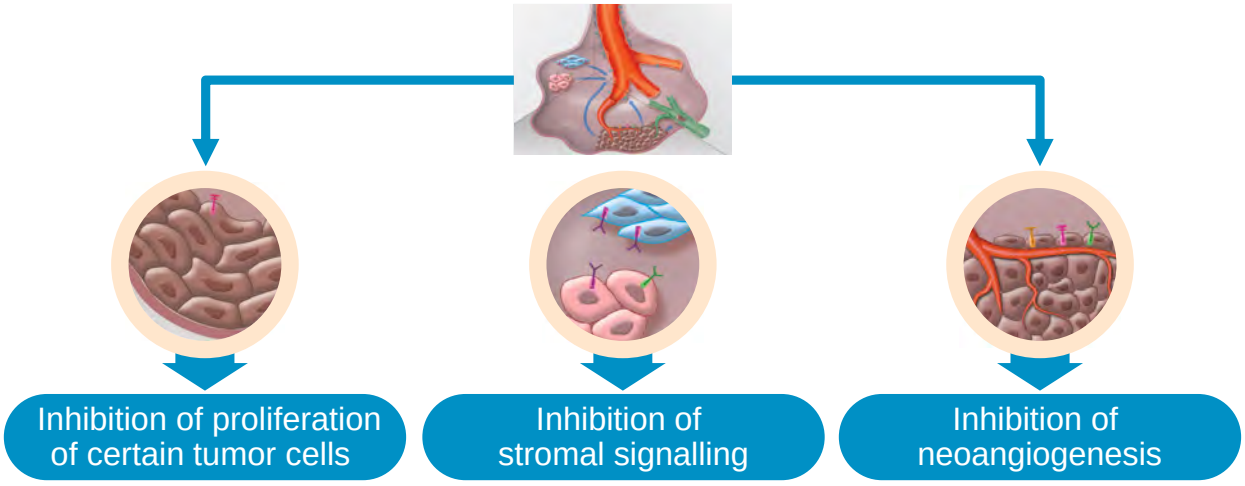
Eylea and Ang2-antibody co-formulation in wet AMD and DME

- 2 ongoing phase II programs[1] evaluating the combination of co-formulated Eylea with the Ang2-antibody nesvacumab
- Ang2 together with VEGF have the potential to influence pathological development of new blood vessels and the permeability of blood vessels in certain eye diseases

[1] In collaboration with Regeneron; Ang2: angiopoietin 2

Striving for Segment Leadership in Oncology

Stivarga – Oral Multikinase Inhibitor with Distinct Profile



Regorafenib is an oral multikinase inhibitor with a distinct profile targeting

- **Angiogenic** (VEGFR1-3, TIE2)
- **Stromal** (PDGFR-β, FGFR)
- **Oncogenic** (KIT, PDGFR and RET) receptor tyrosine kinases

VEGFR: vascular endothelial growth factor receptor; TIE2: tyrosine kinase with immunoglobulin-like and EGF-like domains; PDGFR: platelet derived growth factor receptor; FGFR: fibroblast growth factor receptor

Stivarga – Oral Multikinase Inhibitor with Distinct Profile

- **Stivarga is approved* in:**
  - >90 countries for metastatic colorectal cancer (mCRC) and in
  - >80 countries for advanced gastrointestinal stromal tumors (GIST)
- **Regorafenib submitted for 2L HCC in US, EU and Japan**
  - Priority review granted for 2L HCC in the US and in Japan
- **Ongoing clinical development activities include**
  - Phase III study in adjuvant CRC (ARGO study)

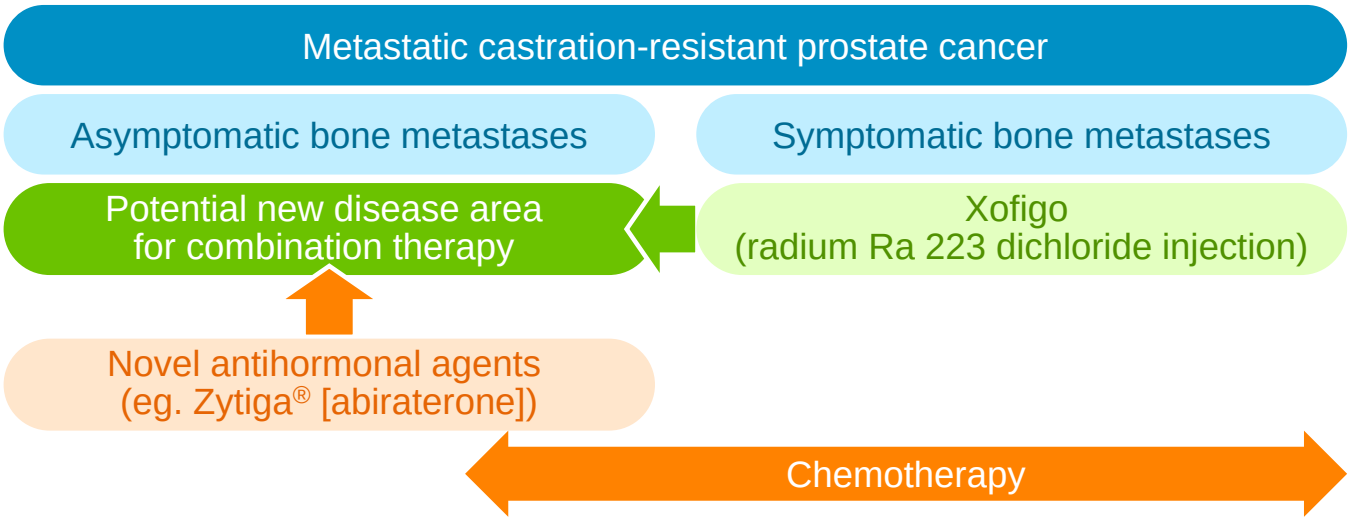
* as of February 2017
HCC: hepatocellular cancer; (m)CRC: (metastatic) colorectal cancer

Stivarga
Phase III Data 2L HCC*

- **RESORCE** study met primary endpoint demonstrating that Regorafenib led to a stat. significant and clinically meaningful improvement in overall survival for patients with HCC who progressed on prior Nexavar treatment:
  - 38% reduction in the risk of death (HR 0.62; 95% CI 0.50-0.78; P <0.001)
  - Median OS 10.6 months vs. 7.8 months
  - Survival benefit was maintained in all predefined subgroups
- **PFS** and **TTP** were significantly improved with Regorafenib
- Patients treated with Regorafenib had significantly higher response rate and almost doubled disease control rate
- Adverse events were manageable and consistent with the known Regorafenib safety profile

* Bruix J. et al. presented at World Congress on Gastrointestinal Cancer 2016
HCC: hepatocellular cancer; OS: overall survival; HR: hazard ratio; PFS: progression free survival; TTP: time to progression

Expanding Xofigo's Position in Castration-Resistant Prostate Cancer Treatment



- Combination therapy with abiraterone, an inhibitor of testosterone synthesis
- Expansion to earlier disease stages enhances accessible patient population

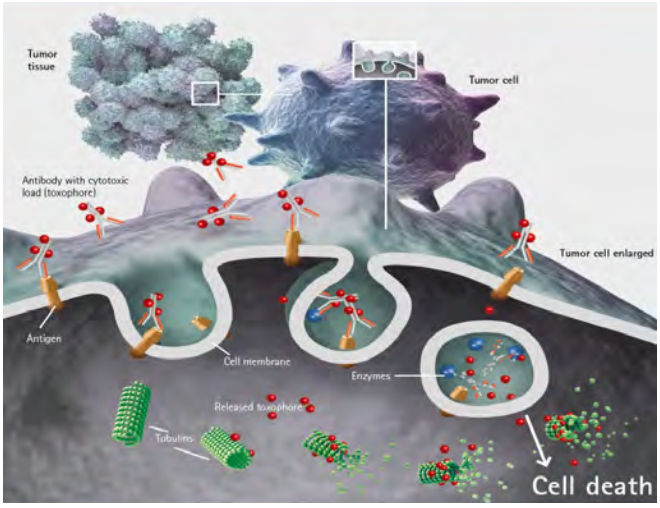
For details on approved indications see respective product labels;
Zytiga® is a trademark of Johnson & Johnson

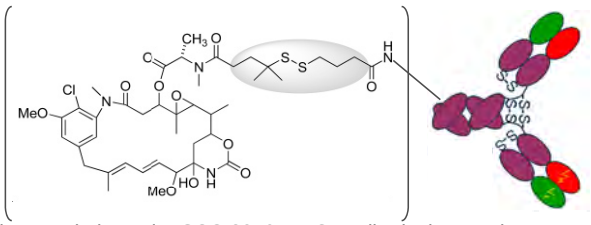
Addressing Multiple Life Cycle Opportunities for Radium-223 Dichloride (Xofigo)

Life cycle opportunities	Addressed through
Repeat dosing in CRPC	Phase II trial assessing the short and long-term safety of re-treatment
Higher dose in CRPC	Phase II trial with dose higher than the approved 50 kBq/kg
Earlier disease stages of CRPC	Phase III combination trial with Abiraterone
Combination studies in CRPC	Phase III trial in combination with Enzalutamide
Expansion into additional cancer types	Clinical studies in breast cancer, osteosarcoma, multiple myeloma and potentially other cancer types

CRPC: castration resistant prostate cancer

Anetumab Ravtansine Program Advancing





Mode of action:

- ADC targeting tumor-associated antigen mesothelin, and delivering toxophore DM4, which acts on proliferating cells (tubulin inhibitor)

Potential spectrum of indications determined by mesothelin expression pattern:

- mesotheliomas (~90-100%)
- pancreatic cancer (~65%) and
- ovarian cancer (~65%)

Clinical program:

- Phase I* with promising results including duration of treatment of >1,000 days
- Registrational phase II in metastatic pleural mesothelioma ongoing

* Blumenschein et al. ASCO 2016; ADC: antibody drug conjugate

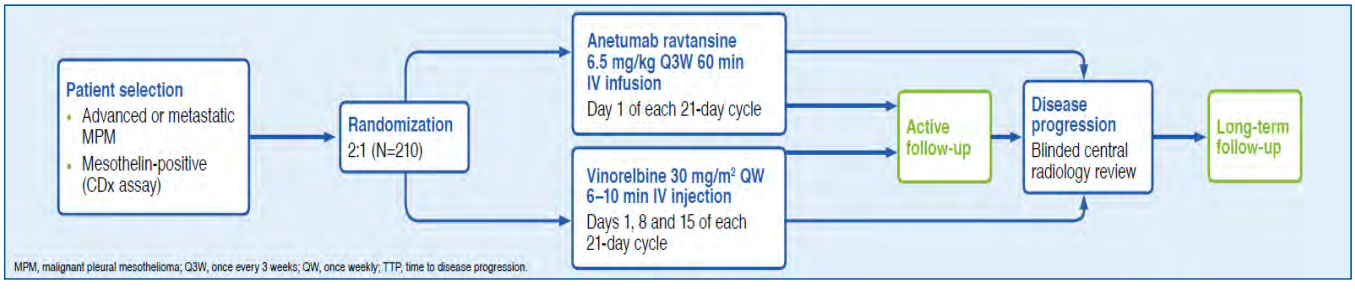
Anetumab Ravtansine – Promising Profile Shown in Phase I*

- Single-agent anetumab ravtansine administered at 6.5 mg/kg Q3W to patients with advanced refractory solid tumors resulted in:
  - PRs in 7 patients (5 of 16 with mesothelioma [31% ORR] and 2 of 21 with advanced ovarian cancer [9.5% ORR])
  - An acceptable safety profile; the most common drug-related TEAEs included fatigue, gastrointestinal AEs, ophthalmological AEs, peripheral neuropathy and elevated serum transaminases

→ A pivotal phase II trial for second-line therapy in metastatic pleural mesothelioma is ongoing

* Blumenschein et al; *ASCO*, 2016;
PR: partial response; Q3W: three times per week; ORR: overall response rate; TEAE: treatment emergent adverse event; AE: adverse event

Anetumab Ravtansine – Phase II Design



Study design

- Randomized, open-label, active-controlled, two-arm, multicenter, Phase II trial (NCT02610140) to evaluate the safety and efficacy of single-agent Anetumab Ravtansine

Patient selection criteria

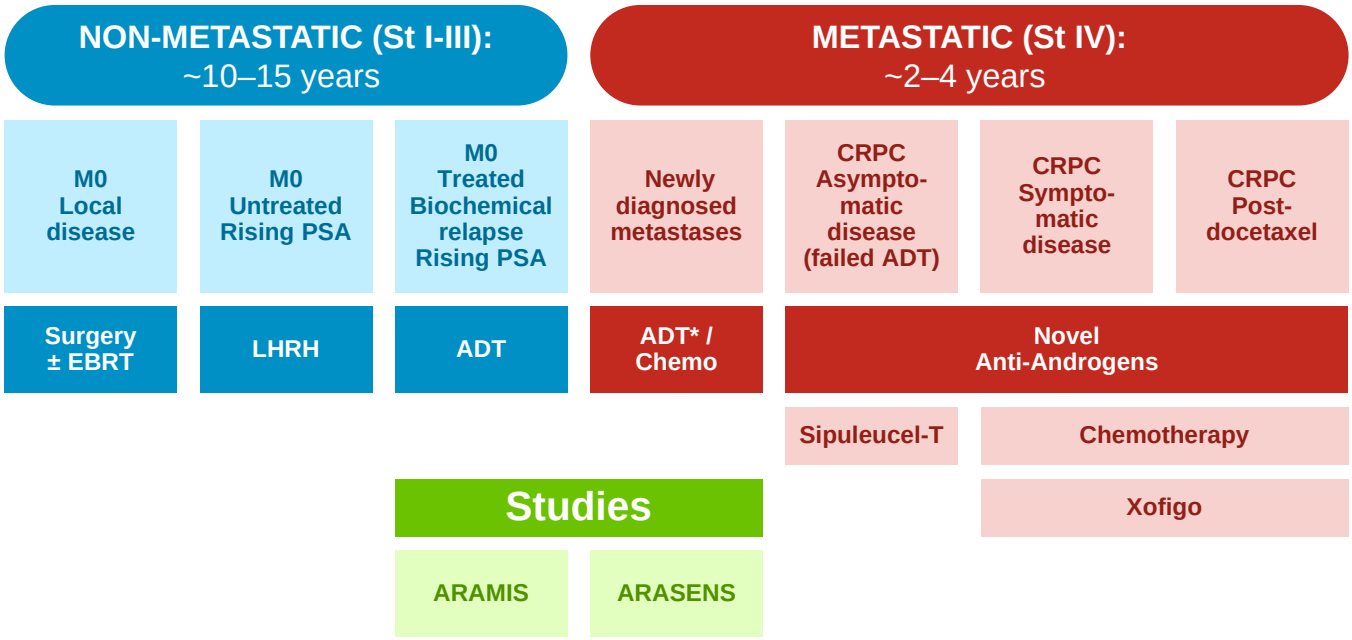
- Biomarker sampling on all patients at pre-screening; mesothelin expression levels need to exceed a predetermined threshold value

Darolutamide (ODM-201) – A Novel Nonsteroidal AR Antagonist

- Darolutamide is a potent and full AR antagonist – **differentiated** from other AR-targeted therapies
- **Darolutamide showed a promising profile** in preclinical and phase I/II studies in mCRPC:
  - Significantly decreased PSA levels in patients with progressive CRPC
  - Sustained PSA reduction observed at higher dose levels
  - Demonstrated a favorable safety profile
  - Showed negligible brain penetrance in preclinical studies
  - Antagonized mutant ARs linked to resistance to other AR antagonists (i.e. bicalutamide, enzalutamide) in preclinical studies
- **Phase III program ongoing** addressing
  i. hormone sensitive metastatic prostate cancer (ARASENS)
  ii. non-metastatic CRPC (ARAMIS)

AR: androgen receptor; CRPC: castration-resistant prostate cancer; PSA: prostate-specific antigen

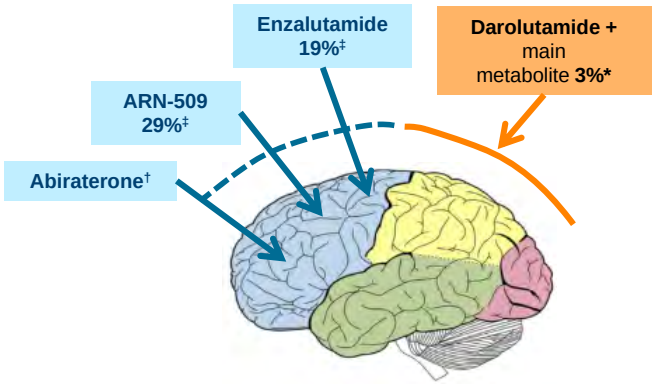
Expanding Positioning in Prostate Cancer

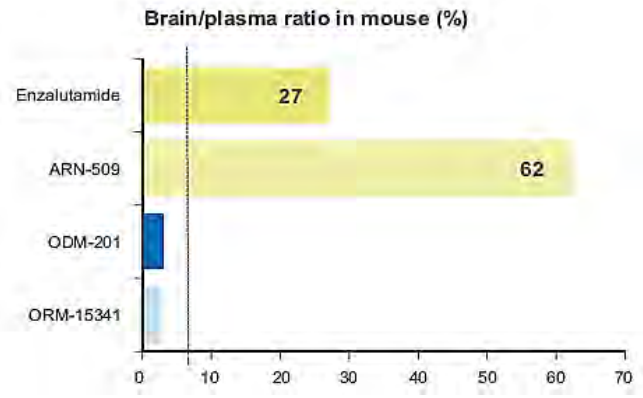


AR: androgen receptor; CRPC: castration-resistant prostate cancer; PSA: prostate-specific antigen; EBRT: external beam radiation therapy; ADT: androgen deprivation therapy; LHRH: luteinizing hormone-releasing hormone

Darolutamide (ODM-201) May Differentiate Through Low Blood-Brain Barrier Penetration

- Darolutamide demonstrates negligible blood-brain barrier penetration in preclinical studies[1-3]
- Darolutamide has a low brain/plasma ratio in murine models[3]*
- Reduced brain exposure may confer a lower risk of seizure with Darolutamide treatment than ARN-509 or enzalutamide[1-3]





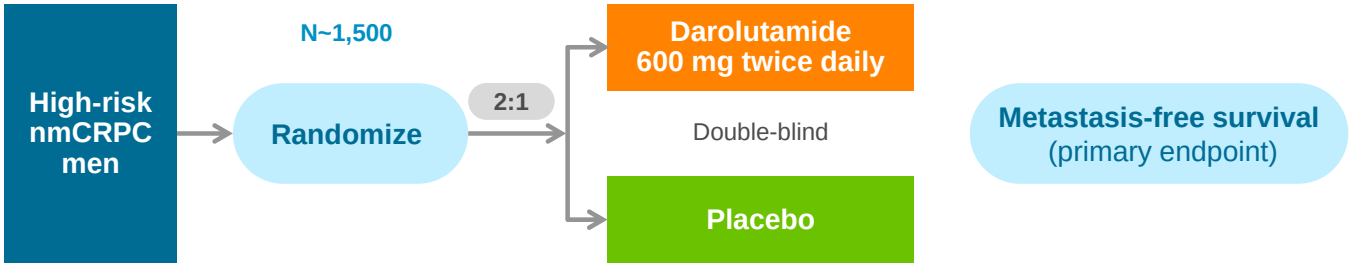
* Rat autoradiography (QWBA) confirms brain/plasma ratio of ^{14}C-ODM-201 related radioactivity was 0.04–0.06, indicating negligible penetration to the brain; † ^{14}C-Abiraterone concentration measured in brain was 5–9 times higher than its concentration in blood and has been measured in cerebellum, cerebrum, medulla, and spinal cord [4] ‡ Clegg et al, *Cancer Research*. 2012;72:1494-1503; Foster, et al. *The Prostate*. 2011;71:480-488

[1] Fizazi, et al. *Lancet Oncol.* 2014;15:975-985; [2] Moilanen, et al. *Eur J Cancer.* 2013;49(suppl 2);abst. 2869.; [3] Moilanen, et al. *Sci Rep.* 2015;5:12007. DOI: 10.1038/rep12007.; [4] European Medicines Agency Assessment Report for Zytiga
Available at: http://www.ema.europa.eu/docs/en_GB/document_library/EPAR_-_Public_assessment_report/human/002321/WC500112860.pdf

ARAMIS
Phase III of Darolutamide in nmCRPC

- Preventing the development of metastases in men with nmCRPC is a major unmet medical need, and preclinical and early-stage clinical studies suggest that Darolutamide is an effective and generally well-tolerated therapy
- **ARAMIS** (**A**ndrogen **R**eceptor inhibiting **A**gent for **M**etastat**I**c-free **S**urvival) is a phase 3 clinical trial examining the safety and efficacy of Darolutamide in men with nmCRPC at high risk for metastasis to determine if Darolutamide delays time to metastasis

Study Design



Stratification:
PSADT (≤6 mo vs. >6 mo)
Use of osteoclast-targeted therapy at time of enrollment: yes vs. no

nmCRPC: non-metastatic castration-resistant prostate cancer; PSA=prostate-specific antigen; MFS: metastasis free survival

ARASENS
Phase III of Darolutamide (ODM-201) in mHSPC

- ADT and docetaxel have recently demonstrated significant survival benefits with tolerable toxicities and is anticipated to become a new standard for subjects with mCSPC
- The aim of the proposed study is to demonstrate that the addition of Darolutamide as second generation AR inhibitor to ADT and docetaxel chemotherapy significantly prolongs OS over placebo in mCSPC subjects

Key Eligibility Criteria:
- Metastatic prostate cancer
- ADT started <12 weeks before randomization (but no longer)
- Candidates for ADT and docetaxel
- ECOG 0-1

N=1,300

1:1 randomization

- Darolutamide 600mg bid w/ ADT + docetaxel
- Placebo w/ ADT + docetaxel

Primary endpoint: OS

Stratification:

Extent of disease
- Non-regional lymph node metastasis only
- Bone metastasis with or without lymph node metastasis
- Visceral metastasis with or without lymph node or with or without bone metastasis

Alkaline phosphatase
- < ULN
- ≥ ULN

mHSPC: metastatic hormone sensitive prostate cancer; AR: androgen receptor; ADT: androgen deprevation therapy; OS: overall survival; mCSPC: metastatic castration sensitive prostate cancer; ULN: upper limit of normal

Pharma Pipeline* With Attractive Assets in Areas of High Unmet Medical Need

Phase I (17)	Phase II (14)	Phase III (18)
Cancer / BAY 1163877 (Pan-FGFR Inhibitor)	Cancer / Regorafenib	CRPC / ODM-201
Cancer / BAY 1161909 (MPS1-Inhibitor)	Bone Mets Breast Cancer / Radium-223 Dichloride	Hormone-sensitive Prostate Cancer / ODM-201
Cancer / BAY 1129980 (C4.4a-ADC)	Cancer, various studies / Radium-223 Dichloride	Adjuvant CRC / Regorafenib
Cancer / BAY 1217389 (MPS1-Inhibitor)	Cancer / Anetumab ravtansine (Mesoth.-ADC)	Comb. Study CRPC / Radium-223-Dichloride
Cancer / BAY1862864 (anti-CD-22 – Thorium-conjugate)	NHL / DLBCL / Copanlisib (PI3K Inhibitor)	NHL / Copanlisib (PI3K Inhibitor)
Cancer / BAY 1251152 (PTEFb-Inhibitor)	ACS sec. prevention / Rivaroxaban	ESUS / Rivaroxaban
Cancer / BAY1436032 (mIDH1-Inh)	Thrombosis / BAY 2306001 (IONIS-FXI Antisense)	PAD / Rivaroxaban
Chronic Kidney Disease / BAY1101042 (sGC Activator)	Renal anemia / Molidustat	Major Adv.Car.Events Prevent. / Rivaroxaban
Heart Failure / BAY 1753011 (Vasopressin Rec. Ant.)	Heart Failure / BAY 1067197 (Neladonoson Bialanate)	CHF and CAD / Rivaroxaban
Thrombosis / BAY 1213790 (anti-FXIa Antibody)	Heart Failure / BAY 1142524 (Chymase Inhibitor)	Medically ill / Rivaroxaban
PAD / BAY 1193397 (AR alpha 2c Rec Ant.)	Wet AMD/ DME / Nesvacumab (Ang-2-Antibody)+Aflibercept	Long-term VTE prevention / Rivaroxaban
Hypertension / BAY 1636183 (sGC Stimulator)	Cycstic fibrosis / Riociguat (sGC-Stim.)	Diabetic Kidney Disease / Finerenone
Pulmonary Hypertension / BAY 1237592 (sGC Activator)	Diff. syst. Sclerosis / Riociguat (sGC-Stim.)	Worsening chronic HF / Vericiguat (sGC-Stim.)
Hemophilia / BAY 1093884 (anti-TFPI-Antibody)	Endometriosis / Vilaprisan (S-PRM)	Hemophilia / Damoctocog alfa pegol
Endometriosis / BAY 1128688 (AKR1C3 Inh.)		Non-CF Bronchiectasis / Cipro DPI
Endometriosis / BAY 1158061 (PRLR Ant.)		Lung Infections / Tedizolid
Endometriosis / BAY 1817080 (P2X3 FR)		Gram-neg. Pneumonia / Amikacin inhale
		Sympt. Uterine Fibroids / Vilaprisan (S-PRM)*

Oncology
Cardiovascular and Nephrology Diseases
Women's Healthcare
Hematology
Others

* Decision taken to proceed to phase III

*selection of pipeline projects as of February, 2017

Science For A Better Life

Investor Handout – Consumer Health

Meet Management in London – March 15, 2017

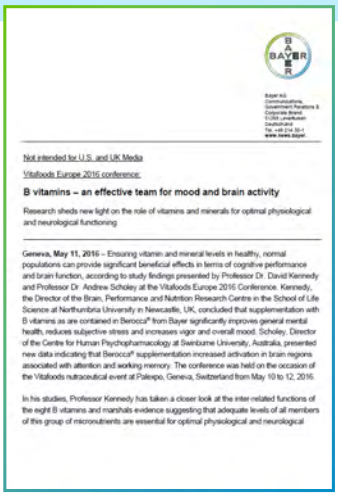
Significant Pace of Change in the Self Care Market

- Aging & more educated population
- Consumer desire for healthcare empowerment and self care
- Expanding access via new geographies and channels
- Government / private sector desire to lower healthcare costs
- Rx-to-OTC switches

Consumer Health Advocating Self Care

Education

- Publications
- Clinical Research
- Conferences



Not intended for U.S. and UK Media

Vitafoods Europe 2016 conference:

B vitamins – an effective team for mood and brain activity

Research sheds new light on the role of vitamins and minerals for optimal physiological and neurological functioning

Geneva, May 11, 2016 – Ensuring vitamin and mineral levels in healthy, normal populations can provide significant beneficial effects in terms of cognitive performance and brain function, according to study findings presented by Professor Dr. David Kennedy and Professor Dr. Andrew Scholey at the Vitafoods Europe 2016 Conference. Kennedy, the Director of the Brain, Performance and Nutrition Research Centre in the School of Life Science at Northumbria University in Newcastle, UK, concluded that supplementation with B vitamins as are contained in Berocca® from Bayer significantly improves general mental health, reduces subjective stress and increases vigor and overall mood. Scholey, Director of the Centre for Human Psychopharmacology at Swinburne University, Australia, presented new data indicating that Berocca® supplementation increased activation in brain regions associated with attention and working memory. The conference was held on the occasion of the Vitafoods nutraceutical event at Palexpo, Geneva, Switzerland from May 10 to 12, 2016.

In his studies, Professor Kennedy has taken a closer look at the inter-related functions of the eight B vitamins and marshals evidence suggesting that adequate levels of all members of this group of micronutrients are essential for optimal physiological and neurological

Alliances

- Advocacy groups
- Organizations
- Jointly establish self care recommendations

News Release

Bayer and White Ribbon Alliance Announce Self-Care Policy Recommendations and Programs to Support Maternal, Newborn and Child Health

Bayer, White Ribbon Alliance launch programme in Zimbabwe, Bangladesh

Risk Awareness

- Epidemiology
- Clinical picture
- Ways to address

News Release

Prevalence of life-threatening neural tube defects on the rise

History of Building Scale and Scope Organically and through Acquisitions

Roche (2005)

- Europe
- Strengthen Nutritionals, Derm

Sagmel (2008)

- CIS infrastructure

Topsun (2008)

- China infrastructure in retail and production

BRC[1] countries (2012-present)

- Investments in organic growth

	2004	2016
Sales	€1.4bn	€6.1bn
Global Position	#6	#2[6]
Block-buster Brands[5]	3	16

Steigerwald (2013)

- Naturals
- Strengthen GI[2]
- International rollout Iberogast

Dihon (2014)

- China #2 MNC position
- Foothold into TCM[3]

MCC (2014)[4]

- US #1 position
- Enter Allergy (leader), Suncare, Footcare

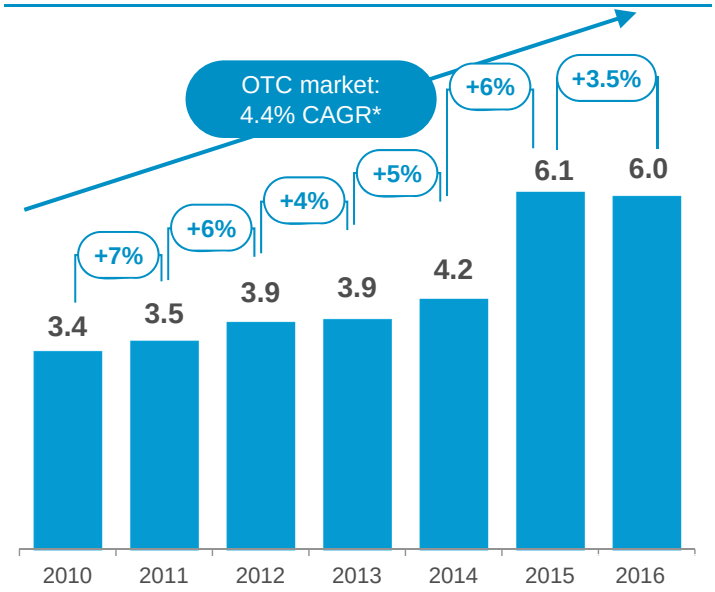
Sources: internal data, Nicholas Hall / IRI

[1] Brazil, Russia, China; [2] Gastrointestinal; [3] Traditional Chinese Medicine; [4] Merck & Co Consumer-Care;
[5] over €100m annual sales; [6] OTC only; Nicholas Hall DB6 MAT Q3 16. CIS: commonwealth of independent states; MNC: multinational companies

Successfully Executed Growth Strategy

Consumer Health Sales

€ billion; Δ% Fx & portfolio adjusted



*Source: Nicholas Hall MAT Q3 16

- Outperformed market growth on average between 2010 - 2016
- 2016 sales growth impacted by sales decline in US in 1H, soft seasons and macroeconomic slowdown in key emerging markets
- Acquisition of Merck's Consumer Care business builds scale and scope in key geographies and categories

FY 2017 Consumer Health Guidance Projects Growth in Sales and Earnings

Sales Δ Fx & portfolio adjusted

	2016	2017
Sales	€6.0bn	Low- to mid-single-digit % increase to > €6bn, in line with expected market growth
EBITDA before special items	€1.4bn	Low- to mid-single-digit % increase

Assuming end 2016 Fx rates (USD 1.05); Outlook depends on specific planning assumptions as detailed in the Annual Report

As presented on Sept. 20, 2016

Consumer Health Mid-Term Aspirations 2018

	2015	Aspiration 2018
Sales	+6.1% to €6.1bn	4-5% CAGR (2015-2018)
Adj. EBITDA margin	24.0%	~25%

Sales Δ Fx & portf. adjusted, EBITDA before special items
Outlook depends on specific planning assumptions outlined in the Interim Report Q2 2016

Best Positioned to Sustain Market Share Growth While Improving Profitability

Drive key market growth
- Drive performance in US
- Address slowdown in key emerging markets

Build category leading brands
- Apply proven brand building excellence
- Focus on well recognized brands and attractive categories

Accelerate innovation
- Establish CH as a leader in consumer-centric innovation (e.g. pursue Rx-to-OTC switch)
- Improve efficiency and effectiveness

Enhance capabilities
- Digital / E-commerce
- Customer excellence

US: Focus on Core Brands to Drive Growth

US OTC market

- Size €35.6bn (#1 OTC market globally)*
- ~3.0% 5-year CAGRº
- Recent market growth driven by Rx-to-OTC switches and relaunches

CH performance

- #1 position, 9.4%* market share
- €2.5bn 2016 net sales
- 2.0% 5-year CAGR in-market sales

CH current situation / challenges

- Achieved market leadership with enviable portfolio of leading brands
- Reinvestment in Coppertone and Dr. Scholl‘s
- Soft start to sun season in 2016
- Competitive reentry and activity

CH execution plans

- Extend innovation across broader range of activities, e.g. new channels, adjacencies
- Turn around Coppertone and Dr. Scholl’s
- Build on strong momentum on Claritin, Miralax, One A Day

ºSource: Nicholas Hall, OTC only, MAT Q3 16; *Source: IRI including OTC plus Sun Care and Foot Care

Increase Profitability in Key Emerging Markets

China

- Market size €20.8bn (#2 OTC market)
- CH achieved critical mass in 5 years (€88m in 2011 to €360m in 2016)
- OTC market slowing down to ~6% growth p.a. 2015-20

Russia

- Market size €3.2bn (#7 OTC market)
- Scaled up from zero to €226m within 11 years (organic / inorganic)
- CH MNC market position #2
- OTC market slowing down to ~4% growth p.a. 2015-20

Brazil

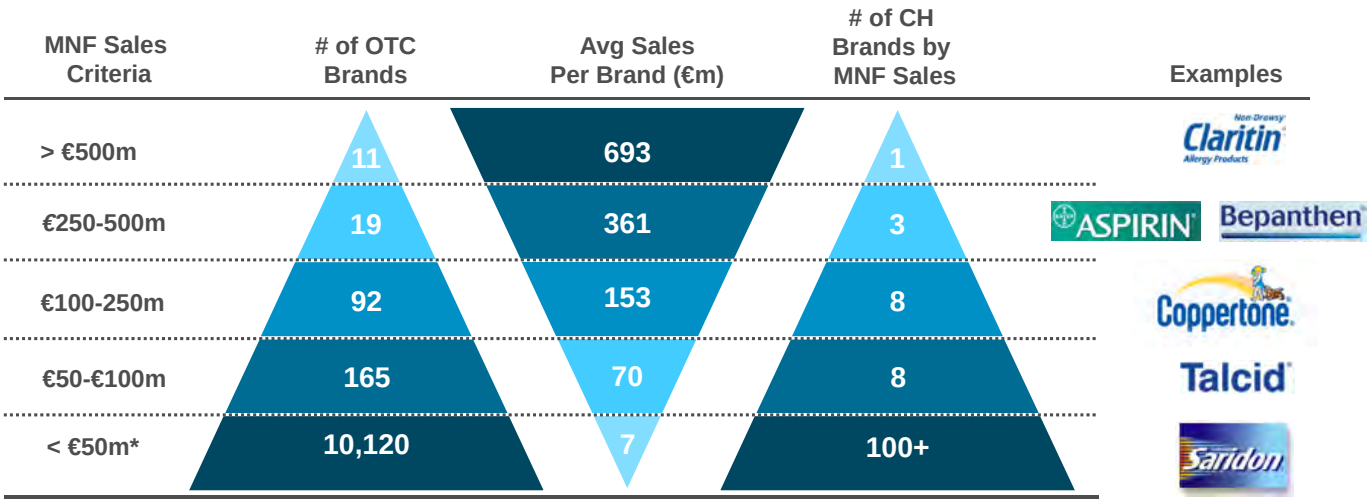
- Market size €2.7bn (#9 OTC market)
- CH MNC market position #4 (up from #10 in 2013)
- OTC market slowing down to ~7% growth p.a. 2015-20

CH execution plans

- Leverage scale to grow more profitably
- Maintain prudent investments to position for future growth

*Source: Nicholas Hall; MAT Q3 16 MNC: multinational companies

Bayer Has a Portfolio of Strong Brands



Source: N. Hall DB6, FY 2015 data
* Includes total "Others" as defined by N. Hall & Co.
Excludes Private Label and Venezuela, MNF: manufacturer

Bayer Has the DNA to Successfully Build Brands

Roche OTC

Total Roche brands growth 2005-2016

- 6% CAGR nominal
- +2% pts above market

Key brand growth 2005-2016

	CAGR*
Aleve	10%
Bepanthen	11%
Berocca	9%
Elevit	19%
Supradyn	0%
Redoxon	7%

*CAGR (2005-2016) nominal

- Geographic expansion
- Efficiencies with scale & distribution
- Consistent brand activation & investment

Sagmel

Total Sagmel brands growth 2009-2016

- 10% CAGR (Fx-adj.)
- 2x market

Key brand growth 2009-2016

	CAGR*
Theraflex	13%
Relief	17%
Calcemin	11%

*CAGR (2009-2016) currency-adjusted

- Strong brand-building efforts with differentiated marketing tools
- Enhanced distribution coverage

Steigerwald

Total Steigerwald brands growth 2013-2016

- 15% CAGR nominal (vs Pro Forma 2013)

Key brand growth 2013-2016

	CAGR*
Iberogast	22%

*CAGR (2013-2016) nominal vs. Pro Forma 2013

- Scaled up business in Germany
- International expansion

Consistently Growing Allergy Business

Compelling Consumer Activation

1ST Rx brand to broadcast advertise

Rx-to-OTC switch with powerful visual equity

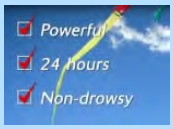
"Live Claritin Clear" campaign

2015 advertising campaign drives growth worldwide

Consumer-Centric Innovation

Antihistamine + decongestant launch

Alternate forms broaden appeal



Steady introduction of new claims

Next generation launch with ClariSpray

Expanding Elevit's Brand Equity Beyond Conception and Pregnancy

Robust Innovation Pipeline Critical for Long-Term Success

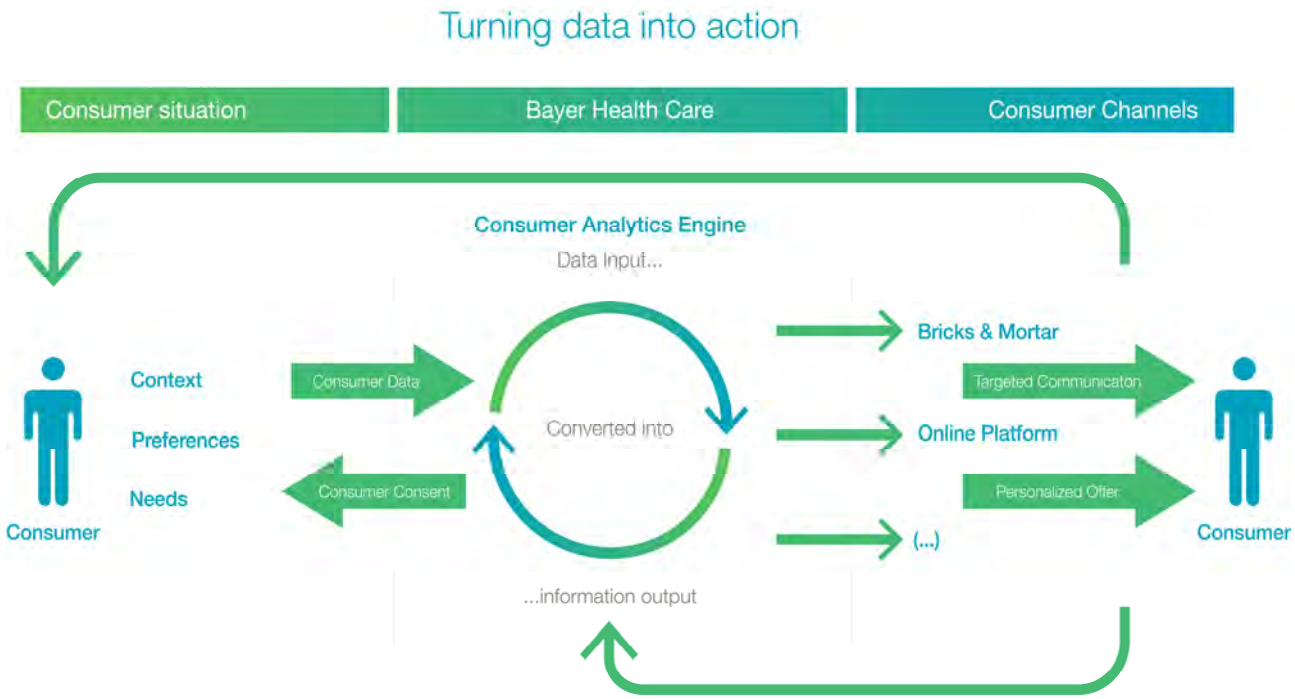
- Tailor development to needs of different product categories, e.g. nutritionals, vs OTCs, vs personal care
- Build Rx-to-OTC switches pipeline
- Provide new benefit areas to consumers

Adding Innovation from Diagnosis to Treatment and Prevention

	Diagnosis	Treatment	Prevention
Bacterial Vaginosis		Canesbalance® **Smartly** treat with a triple benefit	
Vaginal Yeast Infection	Canestest® **Educate and empower** Confidently choose the right treatment	Canesten® Gyn **Leading & proven** effective innovative treatments	Canesflor® **Protect against** future infections with probiotics
Irritation and discomfort		Canescool® Canesfresh® **Soothing** and **calming** sensation	

ENABLING WOMEN to confidently manage their intimate health holistically.

Enhancing Digital Capabilities



Summary

Leverage leadership position to actively drive change in self care industry

Address current headwinds

Grow mid-term by:

- Driving key market (US, BRC) growth
- Building category-leading brands
- Accelerating innovation
- Increasing productivity / enhancing capabilities

BRC: Brazil, Russia, China

Sales of Top 10 Brands 2016

Brands	Years Old	2016 Sales €m	YOY change[1]
Claritin	~30	605	-3%
ASPIRIN	~115	463[2]	+2%
ALEVE	~20	416	+2%
Bepanthen	~70	362	+9%
Canesten	~40	269	+13%
Alka-Seltzer	~80	253	+2%
Dr Scholl's	~110	235	-7%
ONE A DAY	~70	222	+5%
Coppertone	~60	219	+1%
elevit	~30	182	+17%
Top 10 Brands		**3,226**	**+3%**

[1] Fx adjusted [2] incl. CH Cardio, excl. PH Cardio

Science For A Better Life

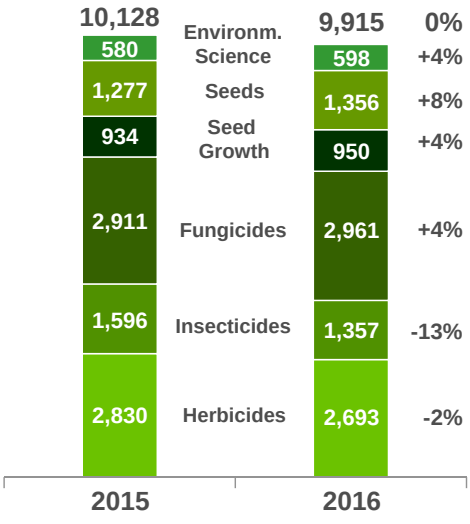
Investor Handout – Crop Science

Meet Management in London – March 15, 2017

FY 2016 – Crop Science Successful in a Difficult Market Environment

Sales

in € million; Δ% yoy, Fx & portfolio adj.



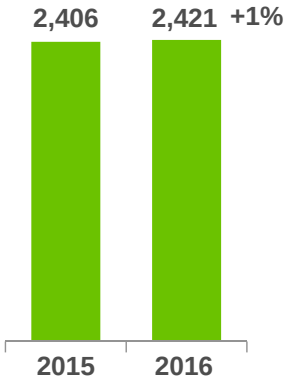
Regions

2016 sales in € million, Δ% yoy, Fx adj.

Europe / Middle East / Africa	3,290	+2%
North America	2,616	+4%
Asia / Pacific	1,548	+3%
Latin America	2,461	-7%

EBITDA

before special items, in € million; Δ% yoy



2015 figures restated

FY 2017 Crop Science Guidance

Sales Δ Fx & portfolio adjusted

	2016	2017
Sales	€9.9bn	Low-single-digit % increase to >€10bn
EBITDA before special items	€2.4bn	At prior-year level

Assuming end 2016 Fx rates (USD 1.05); Outlook depends on specific planning assumptions as detailed in the Annual Report

Mid-Term Aspirations

As presented on Sept. 20, 2016

	2015	Aspiration (incl. Monsanto)*
Sales	+1.7% to €10.1bn	Above market growth
Adj. EBITDA margin	23.8%	>30% after year 3 post closing

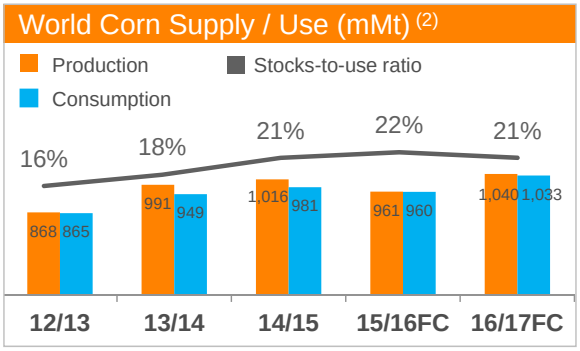
Sales Δ Fx & portf. adjusted, EBITDA before special items; 2015 figures restated
Outlook depends on specific planning assumptions outlined in the Interim Report Q2 2016
* Not including any potential divestments

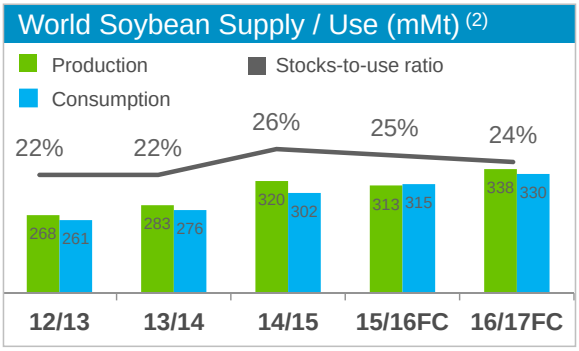
Current Ag Market Downturn Driven by Supply – Demand Steadily Growing

- Demand is steadily growing as long-term drivers are intact
- Several strong harvests in a row hiked global stocks of key commodities
- Stocks-to-use ratios for corn and soybean expected to stabilize
- CBOT(1) futures for corn and soybean trending upwards

➔ Early indicators suggest that bottom of the ag cycle has been reached

➔ Ag market recovery expected to start in late 2017, depending on harvests over the year





(1) CBOT: Chicago Board of Trade (Corn futures chain; c1 Soybean front month continuation), as of Feb 22, 2017
(2) Source: USDA WASDE, as of Feb 9, 2017

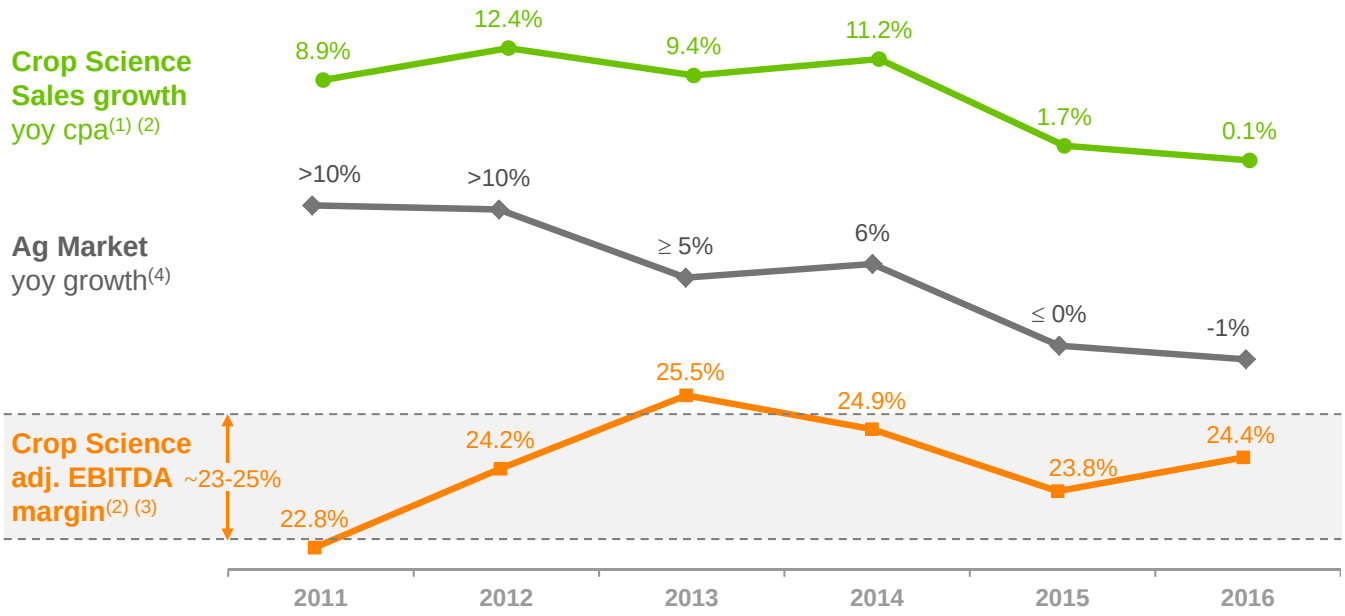
Ag Market Expected to Stabilize Over 2017

- 2017 Seed and crop protection market growth projection: +1%
  - Recovery in Latin America foreseen to a certain extent (farmer economics are favorable, larger planting acres anticipated for corn and soybean)
  - Continued soybean demand from China
  - Further growth from Eastern Europe and the Asia/Pacific region
  - North America still challenged by tight grower economics; also in Western Europe the pace of growth will presumably lag behind global development
- Stabilizing stocks-to-use ratios(1) and CBOT(2) futures for corn and soybean suggest that trough of the cycle has been reached
- Investments in SeedGrowth seen as additional early indicator for improvement in farmer sentiment

Slow return to growth anticipated to start end of this year, depending on quality of 2017 harvests

(1) Source: USDA WASDE, as of Feb 9, 2017
(2) CBOT: Chicago Board of Trade (Corn futures chain; c1 Soybean front month continuation), as of Feb 22, 2017

Crop Science Delivers Growth and Robust Margins Over the Ag Cycle



(1) currency and portfolio adjusted (2) 2015 data restated (3) before special items
(4) Seeds, traits and crop protection market; source 2011: internal estimation, source 2012-2016: Bayer Annual Reports

Highly Attractive Agriculture Industry Benefiting from Macro Trends

~10 billion
United Nations 2015
People on the planet by 2050

-17%
Nelson(1) / FAO(2)
Biophysical effect of climate change shocks on yields by 2050

-17%
From 0.218 ha/capita in 2015 to 0.181 ha/capita in 2050(2)
Declining hectares of farmland per capita by 2050

+60%
FAO(2)
Productivity increase required to feed the planet by 2050

€120 billion
from ~€85bn in 2015(3)
Estimated agriculture inputs market size by 2025

(1) Nelson et. al. (2014) (2) FAO 2016 "Climate change and food security" (3) Seeds, traits and crop protection market

Delivering Enhanced Solutions for Next Generation of Farming

Increase Efficiency	• Overcome increasing gap of demand and availability of skilled labor
Optimize Yield	• Raise yield given the environmental conditions by taking right decisions on genetics, agronomic practices and input factors
Ensure Sustainability	• Optimize input factors to protect natural resources
Manage Volatility	• Manage agronomic volatility and better mitigate risks, e.g. weather and commodity prices

Integrated Solutions

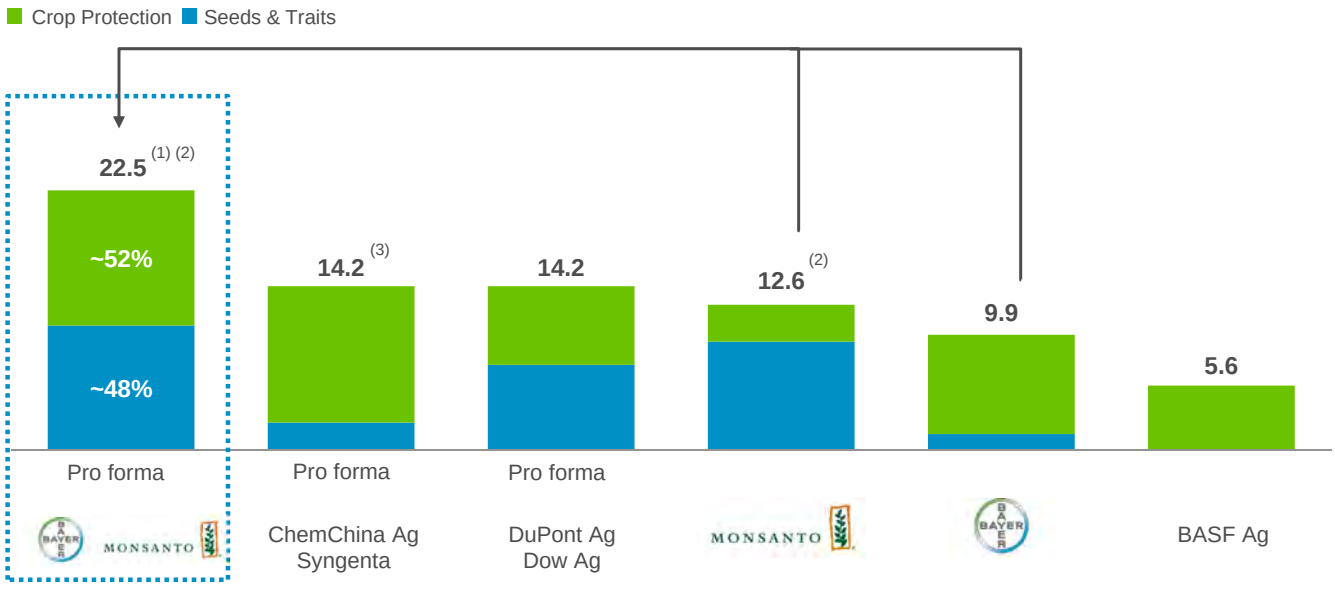
- Smart combination and optimized usage of products
- Based on agronomic advice and digital farming solutions

Valuable New Technologies

- Excellence in chemistry and biology
- High-tech breeding capabilities
- Targeted genome optimization
- Computational Life Science

Creating a Global Leader in Agriculture

2016 Pro Forma Sales (in € bn)



Based on company information and internal calculations (at avg. 2016 Fx rate USD/EUR=1.11)
(1) Pro forma figures without impact of potential divestments (2) Monsanto calendarized to Nov 2016
(3) Excludes non-consolidated Chinese Ag business of ChemChina

Targeting Above-Market Growth and Industry Leading Profitability

Broad Product Portfolio

Truly Global Footprint

Integrated Solutions

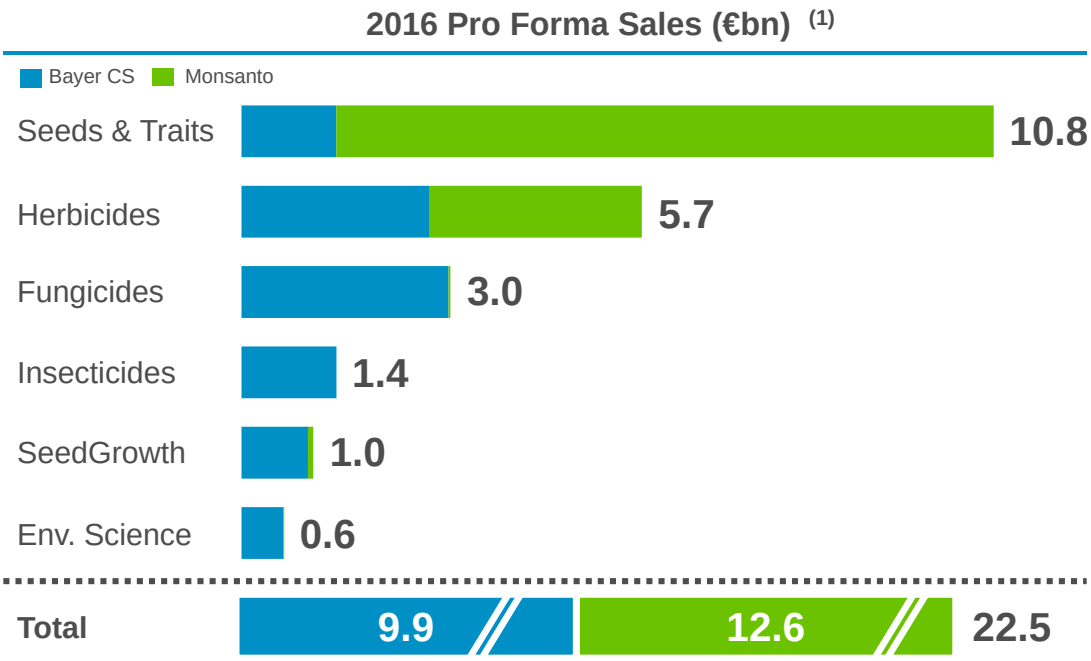
Innovation Engine

Substantial Synergy Potential

Combined company expected to deliver above market growth and underlying EBITDA margin of >30% after year 3 post closing(1)

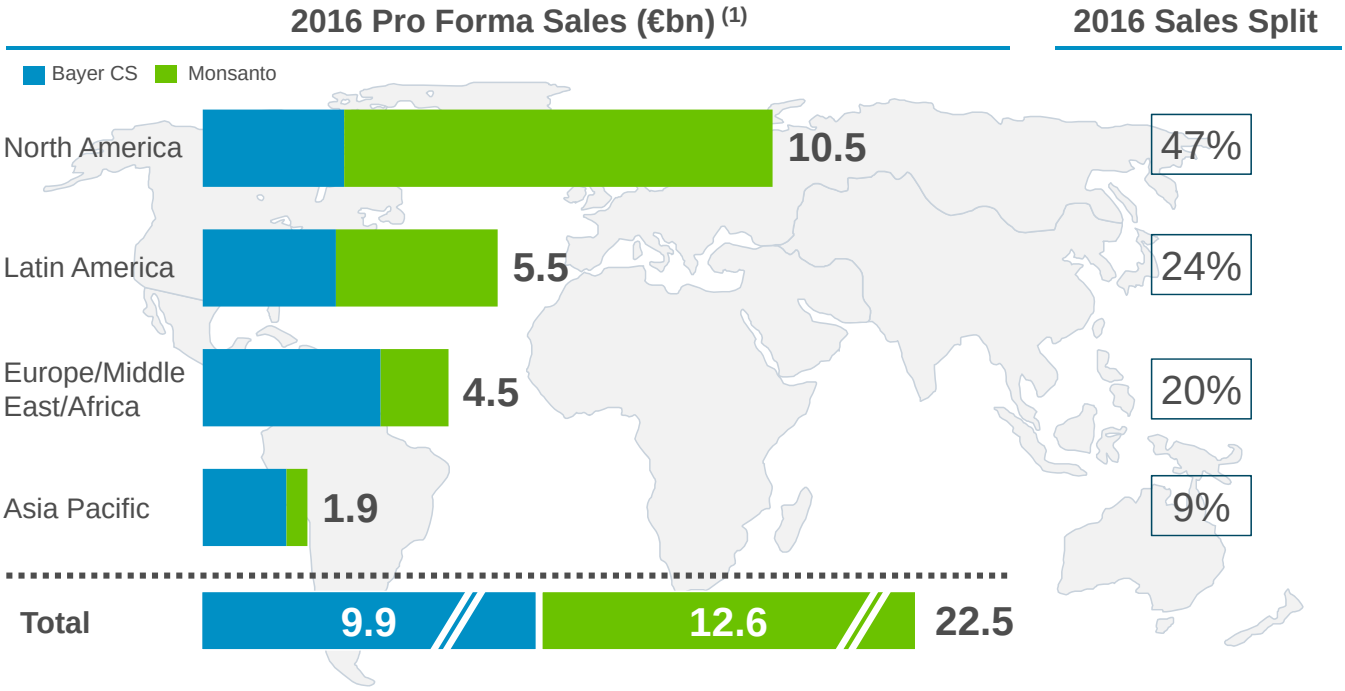
(1) Not including any potential divestments

Attractive Offering Across All Relevant Product Segments



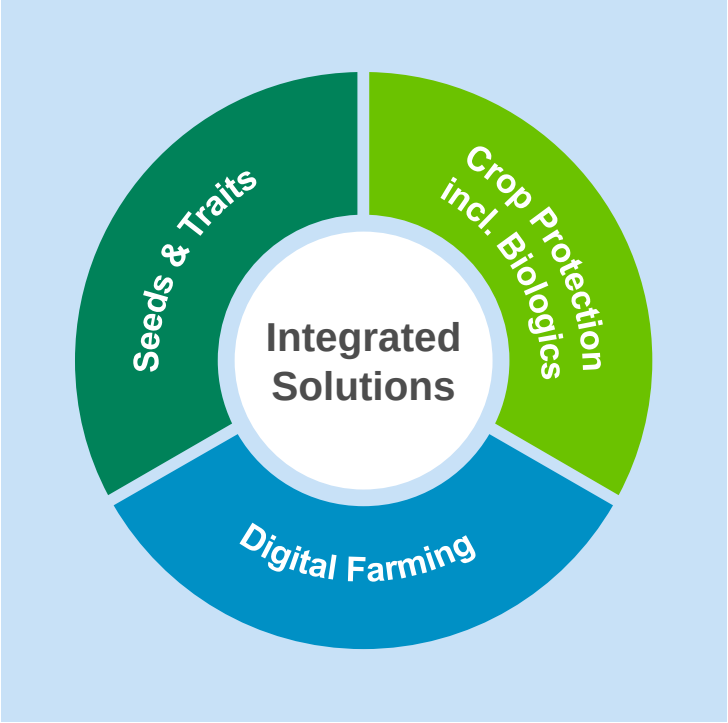
(1) Based on company information and internal calculations (at avg. 2016 Fx rate USD/EUR=1.11)
Pro forma figures without impact of potential divestments; Monsanto calendarized to Nov 2016

A Truly Global Footprint of the Combined Business



(1) Based on company information and internal calculations (at avg. 2016 Fx rate USD/EUR=1.11)
Pro forma figures without impact of potential divestments; Monsanto calendarized to Nov 2016

Successful Integrated Solutions Need Best-in-Class Technology



Seeds & Traits

- Superior germplasm
- Strong genetics and breeding capabilities

Crop Protection incl. Biologics

- Innovative chemistry for weed, pest and disease control
- Strong Biologics portfolio

Digital Farming

- Extensive data collection and computation
- Predictive analytics

Advancing from Combined Offering to Integrated Solutions

From short-term to long-term

Combined Offering

- Ability to **offer a broad variety** of seed and chemical products
- Combining sales forces and infrastructure across geographies

Integrated Solutions

- **Smart combination** and optimized usage of products
- Based on agronomic advice and **Digital Farming**
- **Innovation of differentiated systems** based on technologies optimally designed to work together

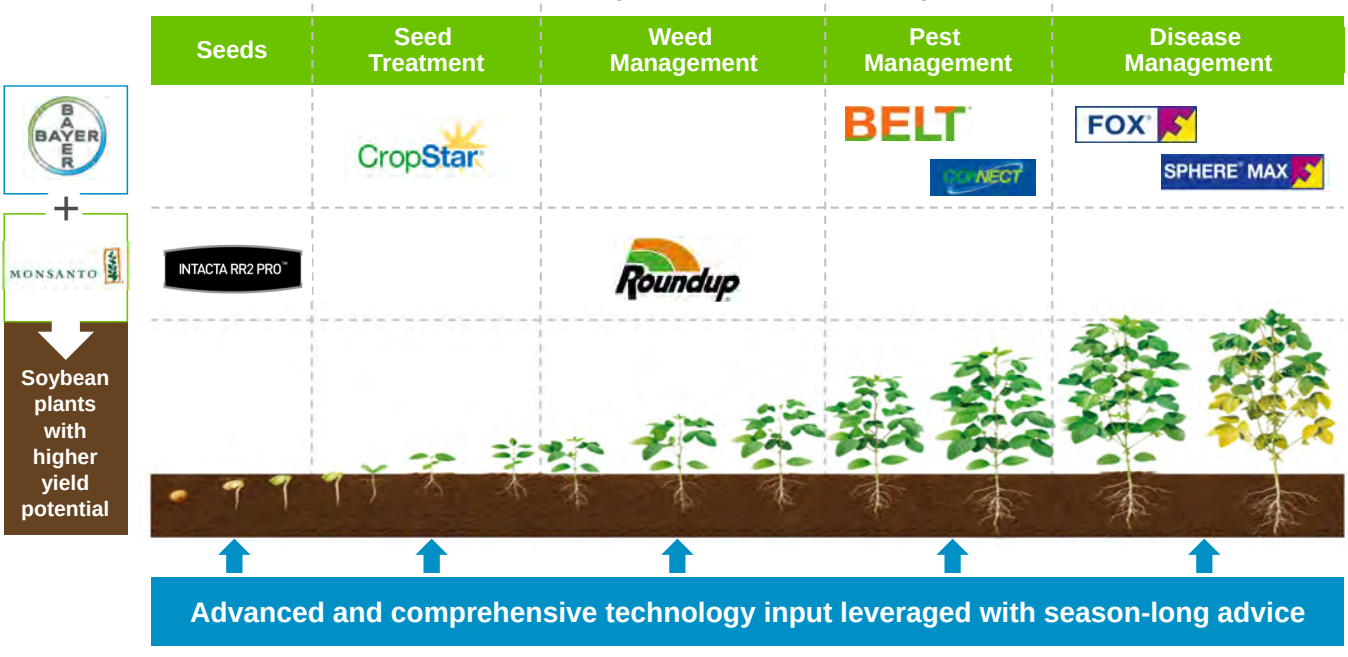
Benefit to the Farmer

- More convenience
- Improved sourcing

- Improved yield
- Optimized inputs
- Sustainable farming

Combined Offering to Fully Address Farmers' Needs

The Soybean Brazil Example(1)



(1) Pro forma combined portfolio

Combined Technologies Enable Customized Solutions – Corn and Soy Example

Market

- Broad-acre crops corn and soy account for ~40% of global ag market value[1]
- Key growing regions are North/Latin America (~40% of corn and ~80% of soy global planted acres)[2], thereof > 85% of corn and soy acres is biotech seed[3]

Combined Portfolio[4]

Bayer | Monsanto | Bayer & Monsanto

	SEEDS	BIOTECH TRAITS			CROP PROTECTION[5]				DIGITAL FARMING
		Yield & Stress	Pest Control	Weed Control	Yield & Stress	Pest Control	Weed Control	Disease Control	
Corn	Monsanto	Monsanto	Monsanto	Monsanto	Monsanto	Bayer	Bayer & Monsanto	Bayer	Bayer & Monsanto
Soybean	Bayer & Monsanto	Monsanto	Monsanto	Bayer & Monsanto	Bayer & Monsanto	Bayer	Bayer & Monsanto	Bayer	Bayer & Monsanto

Combined company with strong positions across all technologies offers high value capturing opportunity in corn and soy in key growing regions

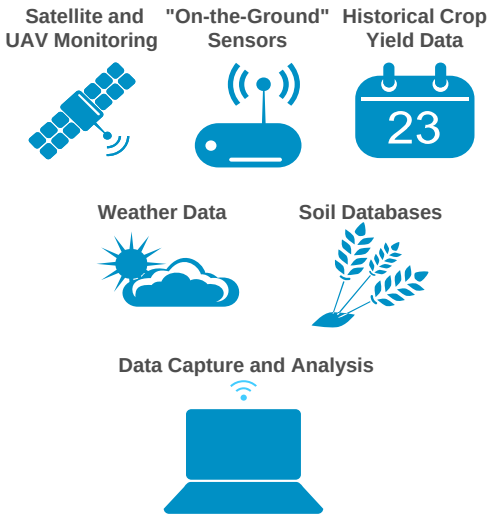
(1) Seeds, traits and crop protection, Bayer internal estimates (2) Source: IHS Global, May 2016
(3) Source: Phillips McDougall Jul 2016 (4) Pro forma (5) Chemical and biological

Digital Farming Provides Data-Based Insights to Optimize Field Specific Decision-Making

40+ Major Decisions to be Taken Through Each Planting Season

- Which seed variety to plant?
- What is the appropriate level of nutrients?
- How to protect the plant?
- When and how to optimize harvest?

Agronomic Decision Engine Captures and Analyzes Data…



… And Makes Recommendations for Each Step of the Way

Deliver timely hyper-local and field-specific information for

- selecting the right varieties and seeding rate
- plant growth protection measures
- recognizing plant stress factors at an early stage

Digital Farming helps to improve on-farm decision-making and execution along the entire planting cycle, helping to maximize yields and improve sustainability

Digital Farming Potential of Combined Portfolio

Combining Advanced Digital Farming Capabilities

Bayer

- Leading pest, weed, disease modelling and analytics – **increasing resource efficiency**
- Hyper-localized decision support tools – **optimizing use of Crop Protection products**

MONSANTO

- Seeds & Planting scripts creator – **improving operations**
- Nitrogen Advisor – **optimized N-fertilizer use**
- Field-level weather information and notification – **managing weather risks**
- **>100 million acres enrolled already today**

CLIMATE FIELD VIEW

Integrated solutions of Seeds & Traits and Crop Protection inputs based on **optimized field-level prescriptions** to improve **on-site decision making and execution**

Long-term Vision:
Outcome-driven value proposition (e.g., “yield guarantee”, “disease-free acre”)

Strong Innovators are Needed to Step-up the Pace in Agriculture R&D

- The Pharma industry spends ~$150bn(1) per year on R&D to enhance health, whilst the Agricultural industry spends only ~$8bn(2) per year on R&D to enhance food security, which is the basis for good health
- United Nations FAO(3) sees need for more sustainable food and agricultural production and calls for innovative systems that protect and enhance the natural resource base, while increasing productivity:
  - More efficient use of land, water and other inputs
  - Climate-smart agriculture: adapting and building resilience to climate change, while capturing potential mitigation co-benefits
  - Greater conservation of biodiversity
  - Achieve a greater quality and quantity of production with shift from "ready-to-use" to "custom-made" production systems

➔ "Adoption and adaptation of sustainable farming systems and practices require technological innovation and investment in R&D"

(1) 2015, source: EvaluatePharma, Aug 2016 (2) Estimation based on Phillips McDougall AgriService data; *2015 R&D expenditure of leading companies in conventional crop protection and agricultural biotechnology*
(3) Source: FAO. 2016. The future of food and agriculture – Trends and challenges. Rome

Accelerating Innovation Through Joint R&D Forces in Combined Entity

- Innovation in agrochemicals, seeds & traits has become more costly and takes longer(1) due to higher regulatory demands
- New unmet needs and challenges (e.g. climate change, resistances) require break-through innovation based on synergistic technology application
- Emerging technologies allow to generate new customized solutions

➔ Increasing need for interdisciplinary approaches to accelerate R&D productivity

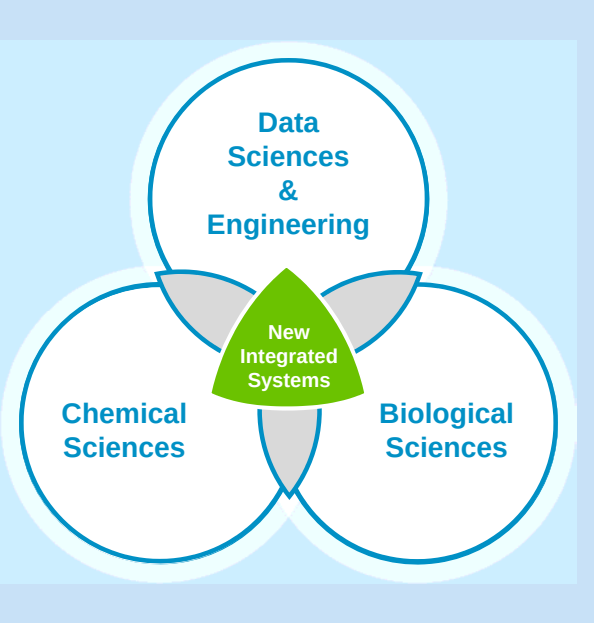
Bayer & Monsanto's Joined R&D Forces(2)

- Strong R&D technology platforms with cross-technology capabilities
- Superior access to innovation resources (including emerging technologies like genome-editing) through alliances and ventures

➔ Strong commitment to innovation with 2016 pro forma R&D investment of €2.5bn

(1) Based on: Phillips McDougall, AgriFutura Apr 2016 and AgriService Nov 2016
(2) 2016 Bayer + Monsanto pro forma; Fx rate USD/EUR=1.11; Monsanto R&D investment calendarized to Nov 2016

Building Integrated Systems Based on Synergistic Technology Application



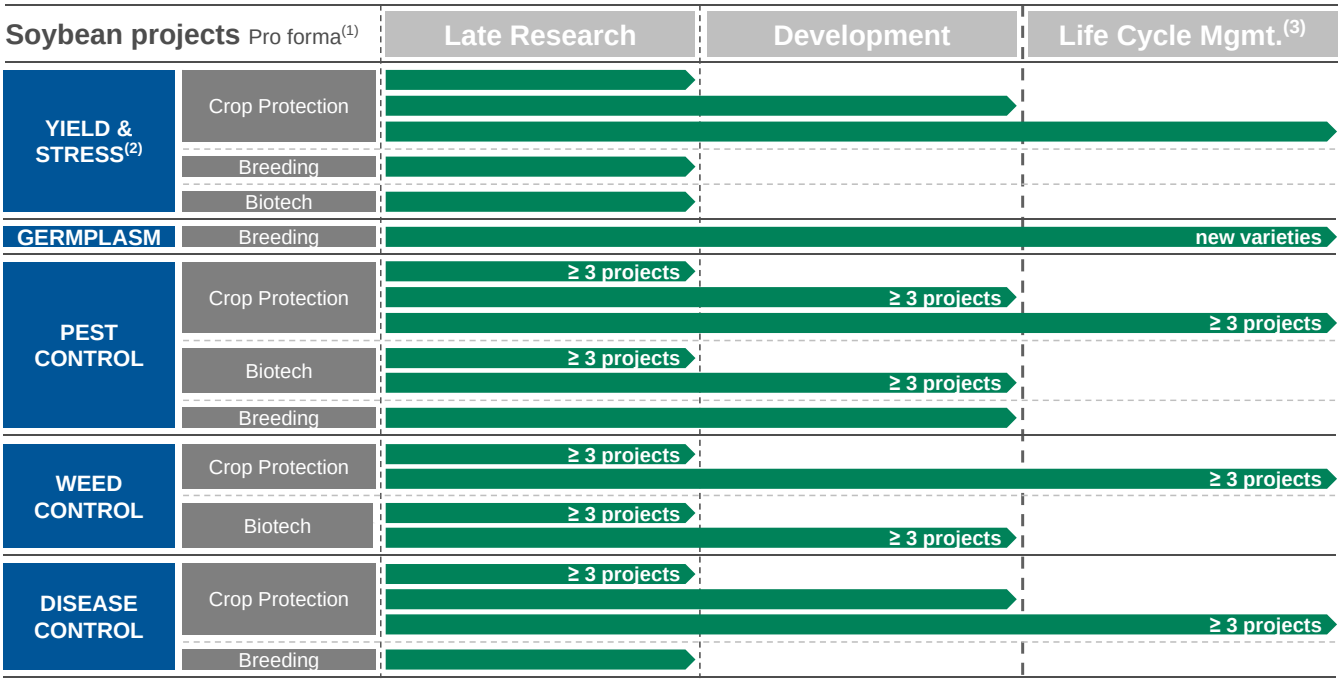
New types of products
- Resistance-breaking herbicide systems based on innovative traits and chemistry
- Novel macromolecules selectively targeting pests (e.g., sprayable RNAi)

Data-based decision support
- Advisory tools for on-farm decisions (e.g., choice of germplasm/seeds)
- Crop Protection applications at ultra-high precision (e.g., down to single-plant level)

Better / safer products
- Beneficials-friendly products based on in-depth understanding of physiology

Potential for faster and more efficient development of customized solutions for farmers

Combined Company Has a Broad Pipeline: Example Soybean



(1) Pro forma core soybean pipeline only, not exhaustive; Monsanto projects as published in R&D Update Jan 5, 2017 (2) Crop Efficiency
(3) Bayer: Top LCM products only; Crop Protection: chemical and biological; Breeding: incl. selective native traits; Biotech: GM traits

Combined Entity Expected to Deliver Synergies of Approx. $1.5bn After Year Three

Synergy Breakdown (Net EBITDA Impact(1))	
Total Cost Synergies	~$1.2bn
Total Sales Synergies	~$0.3bn
Total Synergies	**~$1.5bn**

Synergies are above and beyond Monsanto's announced restructuring program

Cost Synergies Breakdown

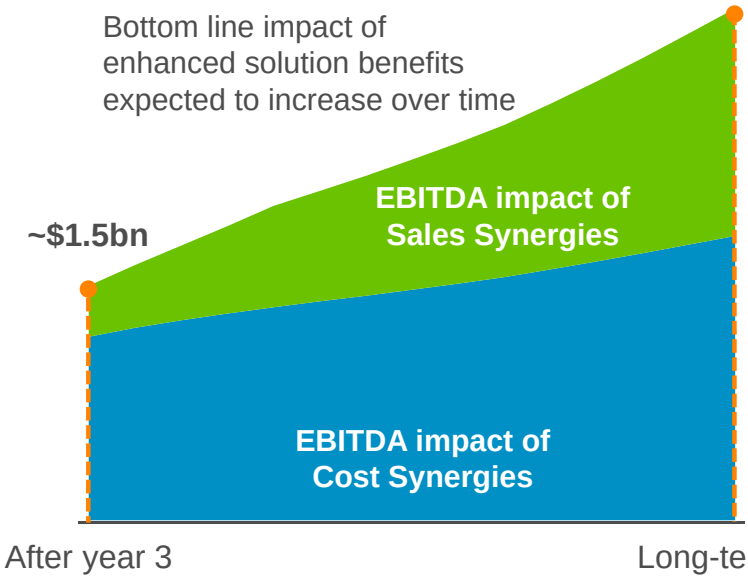
- **~70% stemming from SG&A savings**
  - Integration of country platforms / IT land-scape
  - Public company expenses
  - Overlapping marketing & sales functions while maintaining exceptional global footprint for future growth
- **R&D synergies,** e.g. in trait research
- **COGS synergies,** e.g. from overlap in supply function & procurement spend

~$1.5bn total annual synergies after year three confirmed in due diligence, plus additional synergies from integrated solutions in future years

(1) Net of estimated dissynergies such as termination of selected distribution agreements as well as sales disruptions; based on detailed bottom-up analysis by Bayer; Fx rate: USD/EUR=1.11

Substantial Longer-Term Synergies from Integrated Solutions Anticipated

Net EBITDA Impact of Synergies



Fx rate: USD/EUR=1.11

From Combined Offering to Integrated Solutions

- Creates an enhanced agricultural offering to address broad range of farmer needs
- Initial sales synergies expected mainly from broader product variety materializing already **near-term** (~$0.3bn net EBITDA impact)
- Sales synergies **expected to expand** in the mid to long-term from integrated solutions
  - **Smart combinations**
  - **Innovation of differentiated systems**

Combined Crop Science Company Well Positioned to Deliver Excellent Performance

A Global Leader in Agriculture	Global Leader in Agriculture with broad product portfolio and an integrated agricultural offering
Integrated Solutions	Fully leverage smart combinations and optimized usage of products based on agronomic advice and digital farming
Innovation Engine	Deploy joint innovation capabilities to deliver enhanced solutions for the next generation of farming
Deliver Value Proposition	Deliver above market growth and underlying EBITDA margin of >30% after year 3 post closing(1) Expect to earn cost of capital after year 4 post closing

(1) Not including any potential divestments

Science For A Better Life

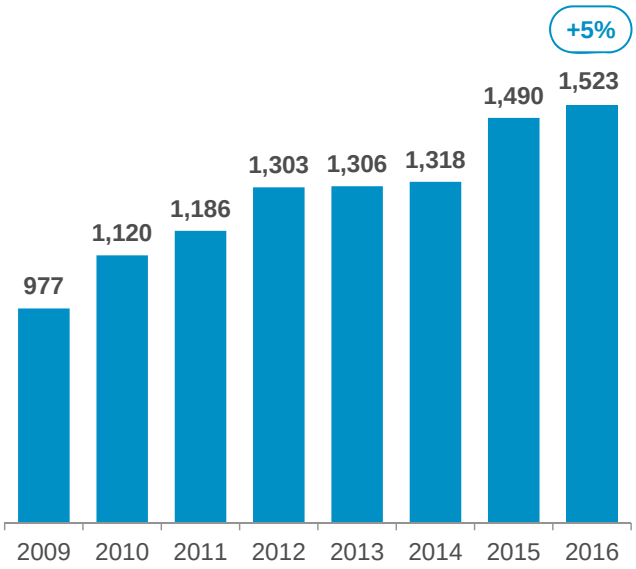
Investor Handout – Animal Health

Meet Management in London – March 15, 2017

Animal Health – A Strong Player in an Attractive Market

Sales

€ million; Δ% yoy Fx & portfolio adjusted



CAP: companion animal products; FAP: farm animal products

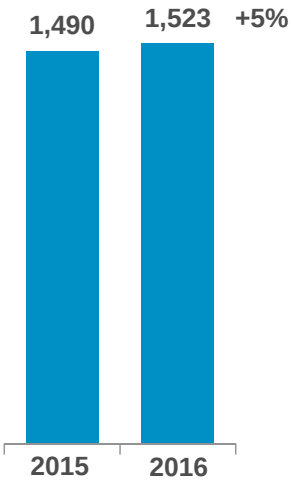
Highlights

- Overall global #**5** and global #**2** in parasiticides
- Ranked #**3** in **CAP** (~60% of sales)
  - Sector driven by:
    - Emotional relationships to pets
    - Infectious and chronic diseases
- Ranked #**6** in **FAP** (~40% of sales)
  - Sector driven by:
    - Increasing customer / consumer awareness
    - Food safety & disease transmission
    - Globalization in farm exports

FY 2016 – Animal Health With Strong Performance of Seresto

Sales

in € million; Δ% yoy, Fx & portfolio adj.



Top Products

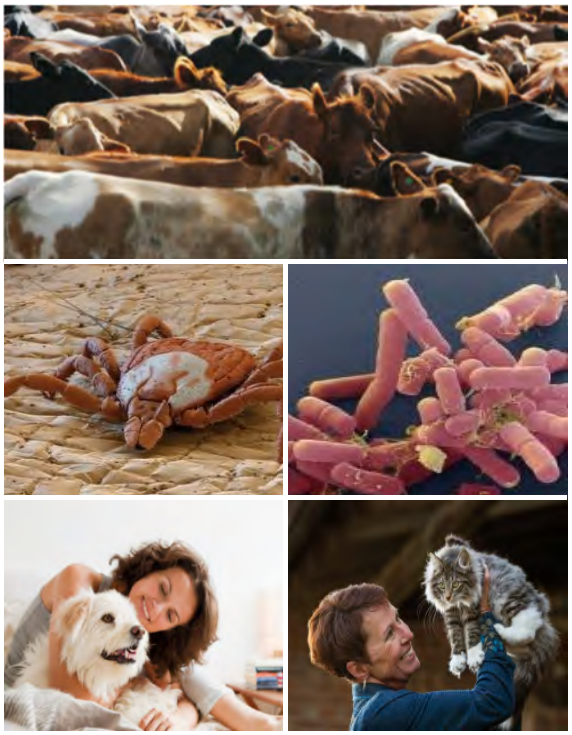
2016 sales in € million, Δ% yoy, Fx adj.

advantage	535	0%
seresto	174	+55%
Drontal	128	+7%
Baytril	113	-5%
Sum	950	+7%

EBITDA

before special items, in € million; Δ% yoy

Animal Health – Global Trends Drive Growth Opportunities



Trends driving needs …

- Pet well-being – “family”- members
- Convenience & Quality of Life
- Resistance breaking parasiticides
- Emerging resistance to antibiotics – alternatives to antibiotics
- Robust prevention and control of infectious diseases
- Improved productivity & cost-benefit ratio
- Safe and sustainable food

FY 2017 Guidance Projects Growth and Profitability Increase

Sales Δ Fx & portfolio adjusted

	2016	2017
Sales	€1.5bn	Low-to mid-single-digit % increase
EBITDA before special items	€349m	High-single-digit % increase

Assuming end 2016 Fx rates (USD 1.05); Outlook depends on specific planning assumptions as detailed in the Annual Report

As presented on Sept. 20, 2016

Mid-Term Aspirations 2018

	2015	Aspiration 2018
Sales	+4.5% to €1.5bn	4-5% CAGR (2015-2018)
Adj. EBITDA margin	23.3%	23-24%

Sales Δ Fx & portf. adjusted, EBITDA before special items
Outlook depends on specific planning assumptions outlined in the Interim Report Q2 2016

Selected R&D Activities

New formulations

Focus to improve:

- Convenience
- Efficacy
- Safety

Parasiticides

- Ecto-parasiticides
- Endo-parasiticides
- Endecto-parasiticides

Antimicrobials

- Dairy Health
- Respiratory Diseases

Immuno-stimulation

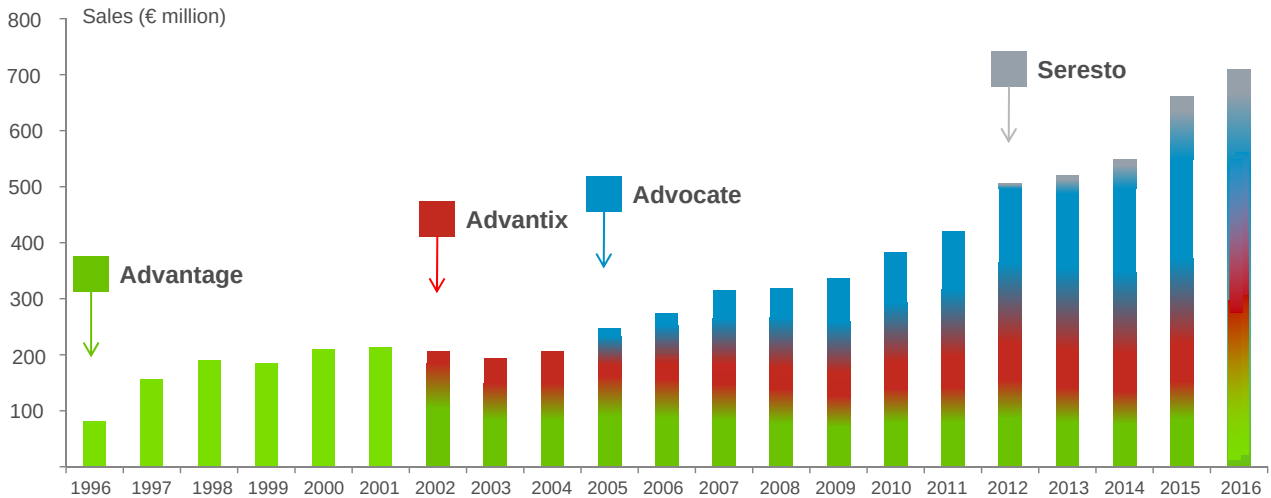
- Metaphylactic strengthening of immune system
- Respiratory Diseases

Pharmaceutical Specialties

- Allergy & Inflammation
- Chronic Kidney Disease

R&D investment approx. 9% of sales

Sustained Life Cycle Management Building on Excellent Brands



Advantage: imidacloprid	**Advantix**: + permethrin	**Advocate**: + moxidectin	**Seresto**: imidacloprid / flum. collar
Spectrum: fleas / lice	Spectrum: + tick / mosquito	Spectrum: + worms	Spectrum: fleas / ticks 8 months duration

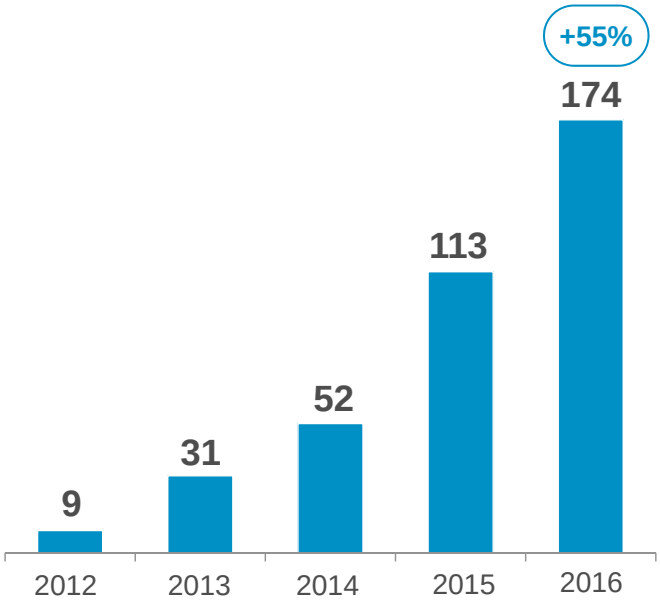
Our Animal Health business demonstrated strength in LCM over the past decades with a number of top selling brands in industry

LCM: life cycle management

Seresto – Achieved Animal Health Blockbuster Status and Continues to Grow

Seresto Sales

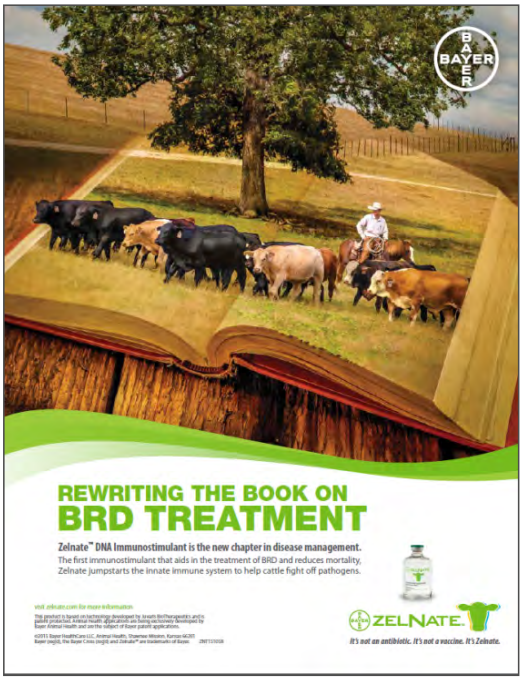
€ million; Δ% yoy Fx adjusted



Highlights

- Seresto showed strong over-performance in all regions since launch
- Life cycle management includes new claim extension and digital add-ons

Introducing Innovation – Non-Antibiotic Bovine Respiratory Disease Treatment Zelnate



Zelnate Facts

- **The first immunostimulant** that effectively aids in the treatment of BRD*
- **Jumpstarts innate immunity** that helps the animal to help themselves
- Complements existing solutions to **reduce mortality** and **potential to reduce need for antibiotic use**
- Launched in North America

* BRD: bovine respiratory disease (due to Manheimia haemolytica)

Date	Event	Publication
Thursday, April 27, 2017	Investor Conference Call	Q1 2017 Interim Report
Friday, April 28, 2017	Annual Stockholders' Meeting	
Thursday, July 27, 2017	Investor Conference Call	Q2 2017 Interim Report
Thursday, October 26, 2017	Investor Conference Call	Q3 2017 Interim Report
Wednesday, February 28, 2018	Investor Conference Call	2017 Annual Report
Thursday, May 03, 2018	Investor Conference Call	Q1 2018 Interim Report
Friday, May 25, 2018	Annual Stockholders' Meeting	

Reporting Events

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