Science For A Better Life

Investor Handout Bayer Pharmaceuticals

42nd Annual Health Care Conference

May 2017

Cautionary Statements Regarding Forward-Looking Information

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’s operations into those of 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 the refinancing of the loans taken out for the transaction, 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 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 and Monsanto assume 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.

Disclaimer

Vision

Become a leading specialty-focused innovative pharmaceutical company addressing significant unmet medical need.

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

Accelerate pipeline and maximize pipeline potential

Bayer Pharmaceuticals

Accomplishments

- New focused commercial operating model
  - Enhanced capabilities, effectiveness and efficiency
- Focused and re-invested into R&D to revitalize late stage pipeline
- Established fully integrated Oncology business unit

Impact

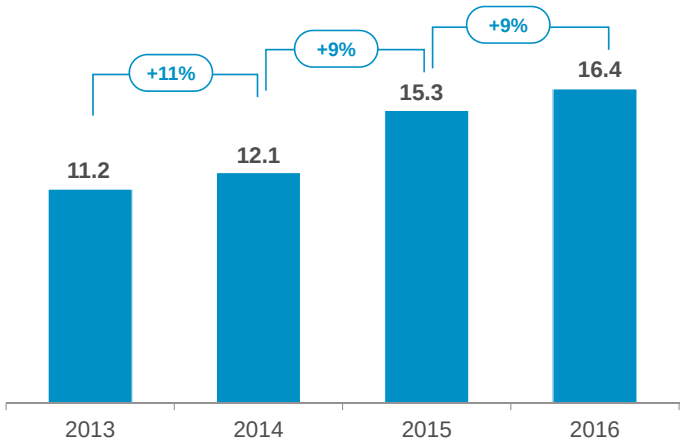
- Fast growing Pharma business
  - Key growth products[1] with significant potential in combined peak sales estimate of >€10bn
- Margin expansion
- Promising Pipeline
  - >50 projects in clinical development
  - Combined peak sales potential of selected assets[2] of ≥ €6bn

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

Fast-Growing Pharma Business

Sales

€ billion; Δ% yoy Fx & portfolio adj.



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

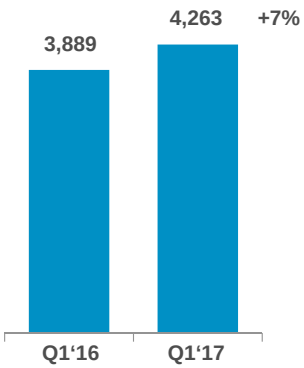
Successful launch of 5 products

- 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® — Multi-kinase inhibitor for cancer treatment

Q1 2017 – Continued Successful Business Development at Pharmaceuticals

Sales

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



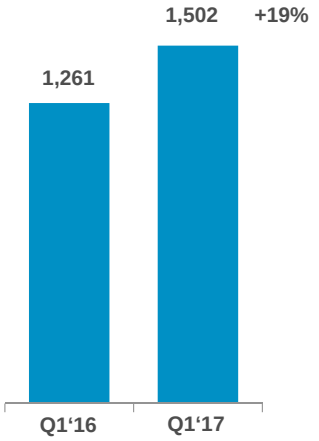
Key Growth Products

Q1'17 sales in € million, Δ% yoy, Fx adj.

Xarelto	751	+20%
EYLEA	446	+19%
Xofigo	100	+31%
Stivarga	75	+9%
Adempas	73	+28%
Sum	1,445	+20%

EBITDA

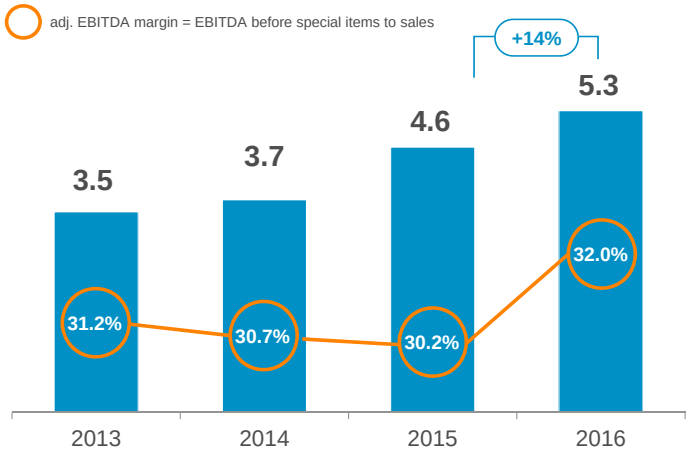
before special items, in € million; Δ% yoy



Improved Profitability at Pharma

EBITDA

before special items, in € million; Δ% yoy



As reported; 2015 figures restated

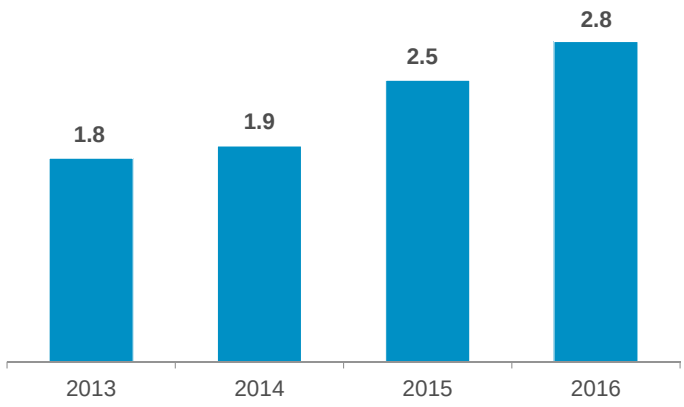
Driven by

- Topline growth
- Rigorous expense management

R&D Spending at Pharma

R&D Spending

€ billion



as reported

Measures for Success

- Focused on segments within areas of existing or evolving strength (cardiovascular, oncology, women's health)
- Focus on first-in class or best-in-class
- Capitalize on experience in cardiovascular research
- Set up Oncology business unit to enhance future development
- R&D investment guided by disciplined proof-of-concept principle including commercial evaluation

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Outlook

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 Fx rates as of March 31, 2017; Outlook depends on specific planning assumptions as detailed in the Annual Report;
*key growth products include Xarelto, Eylea, Stivarga, Xofigo, Adempas

Pharma – Key Growth Drivers Going Forward

- Near-term driven by current momentum, RLE and market expansion
- Mid-term aspirations 2018 reflect further growth and margin potential
- Execution of a comprehensive life-cycle management program, e.g. potentially adding 5 new indications and uses to expand the usability of Xarelto
- Key growth products[1] with significant potential reflected in combined peak sales estimate of > €10bn
- Long-term, Pipeline holds significant promise with a combined peak sales potential of selected assets[2] of ≥ €6bn
- Augmenting pipeline via 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
RLE: real life evidence

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

Maximize Pipeline Potential

Combined* Peak Sales Potential ≥€6bn

≥€0.5bn	≥€2bn	≥€1bn	≥€1bn	≥€1bn	~€0.5bn
Copanlisib	**Anetumab-Ravtansine**	**ODM-201**	**Finerenone**	**Vilaprisan**	**Vericiguat**
Lymphoma	Various cancer types	nmCRPC mHSPC	Diabetic kidney disease	Uterine fibroids	WCHF
2018	2019	2019	2021	2021	2021

first expected launches in first countries

*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

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

*selection of pipeline projects as of April, 2017

Pharma Mid-Term Aspirations 2018

As presented on Sept. 20, 2016

	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

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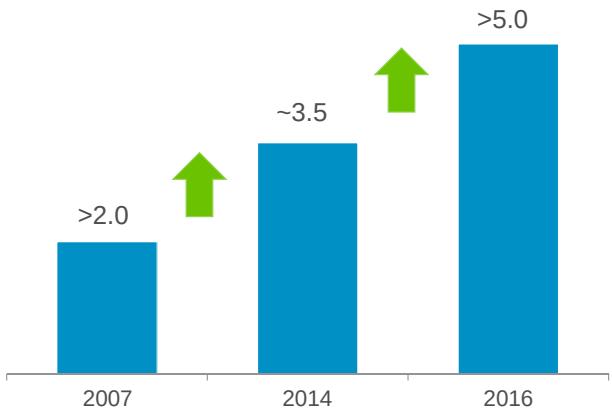
Cardiovascular Portfolio

Xarelto – Peak Sales Potential Estimates Raised – Again

Peak Sales Estimates

€ billion

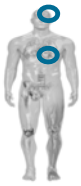


- Continued excellent performance – Xarelto now a TOP 10 global Pharma brand*
- >28 million patients treated since launch**
- Further growth potential driven by:
  - Under-served patient populations in launched indications
  - Demographics
  - Shift from warfarin
  - New indications targeting patients currently not treated with anticoagulants

*according to IMS; **calculation based on IMS Health MIDAS database

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

Stroke Prevention



- **Patients with Atrial Fibrillation**
  ROCKET AF · PIONEER AF-PCI · X-VERT · XARENO
- **Patients without Atrial Fibrillation**
  NAVIGATE ESUS · GALILEO

Arterial Thromboembolism

- **Patients with acute CAD/PAD**
  ATLAS ACS TIMI 51 · VOYAGER PAD
- **Patients with chronic CAD/PAD**
  COMMANDER HF · COMPASS

Venous Thromboembolism

- **Patients with venous thromboembolism**
  EINSTEIN PE · EINSTEIN DVT · EINSTEIN EXT · EINSTEIN CHOICE · EINSTEIN JUNIOR
- **Patients in need for VTE prevention**
  MARINER · CALLISTO · CASSINI · COSIMO

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

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

Rivaroxaban Demonstrated Superior Efficacy *vs.* Aspirin in EINSTEIN-CHOICE Study*

- Phase III **EINSTEIN-CHOICE** study performed in patients with objectively confirmed PE or symptomatic DVT who had previously completed 6 to 12 months of anticoagulation therapy
- Both rivaroxaban regimens (20 or 10 mg once daily) were seen to be superior to aspirin for the primary and other efficacy outcomes and were associated with similar rates of bleeding
- Compared with aspirin, numbers needed to treat with rivaroxaban 20 or 10 mg for one year to prevent one VTE without an increase in bleeding were 33 and 30, respectively
- Data of EINSTEIN-CHOICE have been filed with the European Medicines Agency (EMA) - submission to other Health Authorities worldwide planned during the first half of 2017.

*Data presented at ACC, March 2017; press release March 18, 2017

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

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*

*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

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

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Oncology

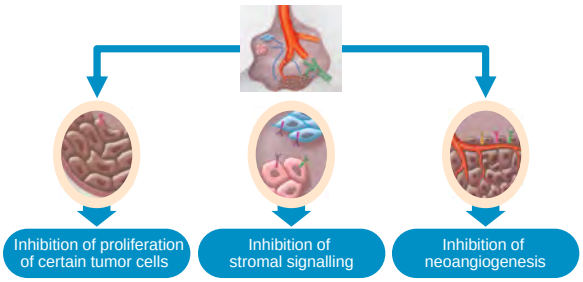
Establish Focused Leadership Positions in Oncology

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. mesoth. → 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; mesoth. Mesothelioma

Stivarga – Oral Multikinase Inhibitor with Distinct Profile

Distinct Profile



Distinct Profile targeting

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

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

Areas of use / potential future uses*

- Current areas of use:
  - Gastrointestinal stromal tumors (GIST)
  - Colorectal Cancer (CRC)
  - Hepatocellular carcinoma (2L)
- Potential future indications*:
  - Adjuvant Colorectal cancer

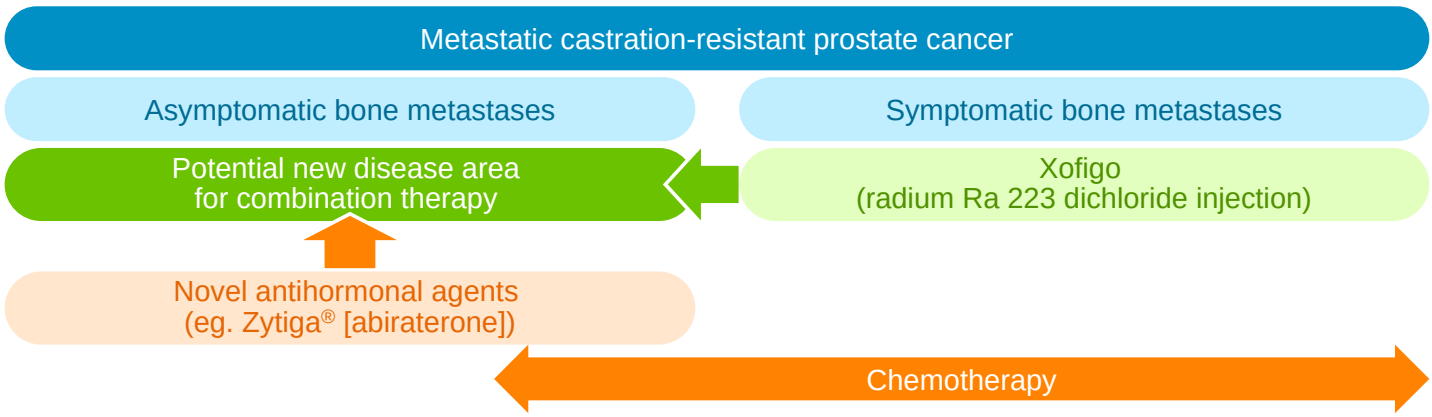
*pending successful development and approval

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

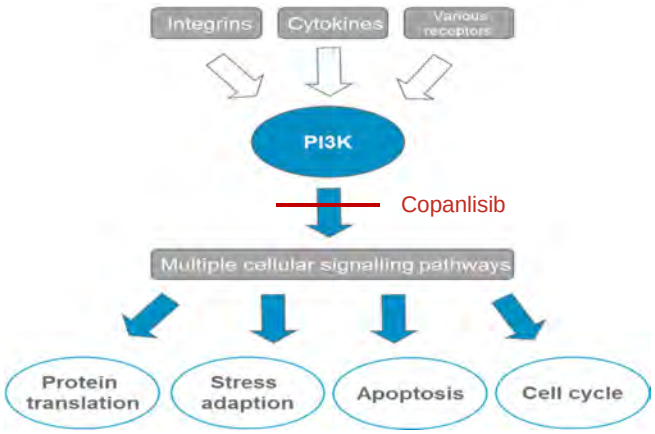


- Combination therapy with abiraterone, an inhibitor of testosterone synthesis
- Expansion to earlier disease stages enhances accessible patient population

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

Copanlisib – A Differentiated PI3K-Inhibitor

Phosphatidylinositol-3 kinases (PI3K) play a central role in cellular signal transduction processes



- In most tumor cells, the PI3K-signaling cascade is activated and provides important tumor growth and survival signals
- Copanlisib is a pan class I PI3K-inhibitor with predominant α/δ activity
- Copanlisib is administered intravenously
- Phase II in Non-Hodgkin's lymphoma met endpoint – phase III ongoing
- FDA granted fast track designation for 3rd line follicular lymphoma (FL) – a form of NHL
- Filing in 3rd line FL underway in US

Phase II CHRONOS-1 Copanlisib Data Show Durable Tumor Response in iNHL*

- **Phase II CHRONOS-1** met primary endpoint - copanlisib demonstrated promising anti-tumor efficacy in a heavily pretreated patient population with indolent B-cell lymphoma
  - Overall response rate (ORR) was 59% (complete response rate 12%)
  - ORR was 59% with 14% CR in patients with Follicular Lymphoma (FL) (median DoR 12.2 months, median PFS 11.2 months)
  - The safety and tolerability were consistent with previously published data on copanlisib
- Filing underway in the US in 3rd line FL where copanlisib has been granted fast track designation
  - Confident for a first launch in 2018
- Current phase III studies investigate the combination with rituximab (NCT02367040) and R-CHOP/RB (NCT02626455)

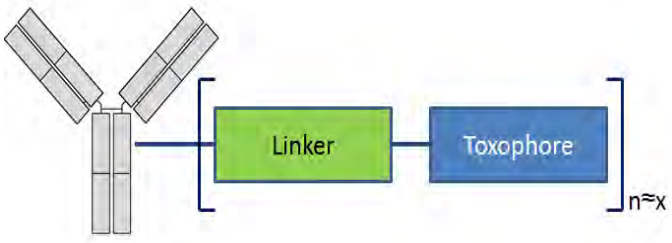
Dreyling et al. AACR 2017; iNHL: indioolent Non-Hodgkin's Lymphoma; CR: complete response ; DoR: duration of response, PFS: progression-free survival

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
  - Active against 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)

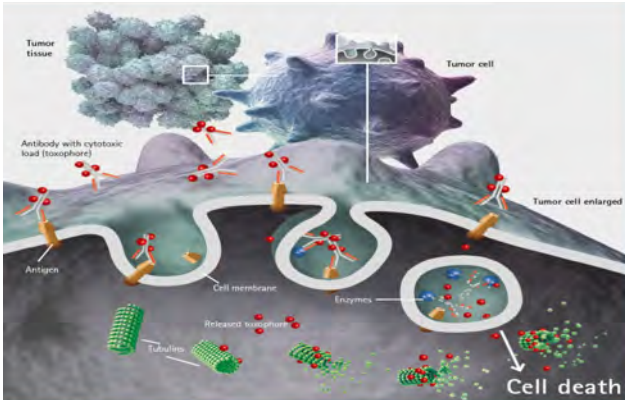
AR: androgen receptor; CRPC: castration-resistant prostate cancer; PSA: prostate-specific antigen

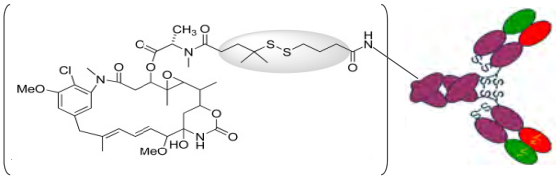
Oncology R&D Differentiates Through Novel Toxophor ADCs



- Advanced and broad ADC program established
- Synergies between Thorium- and ADC platforms with respect to antigens, antibodies, linker technologies, etc.
- Address optimal antibody specificity, affinity, linker technology and potent toxophores

Anetumab Ravtansine Program Advancing





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

Mode of action:

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

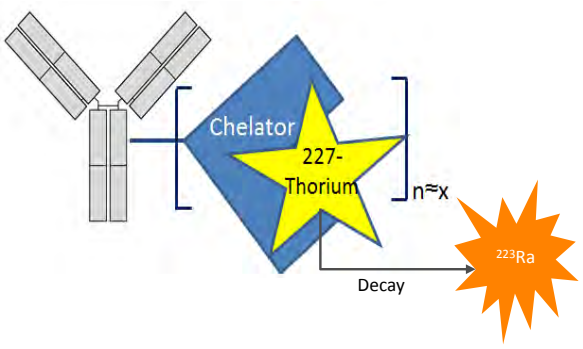
Potential spectrum of indications determined by mesothelin expression pattern:

- 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

Targeted Thorium Conjugates – Expanding the Alpha-Pharmaceuticals Platform



- 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
- 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

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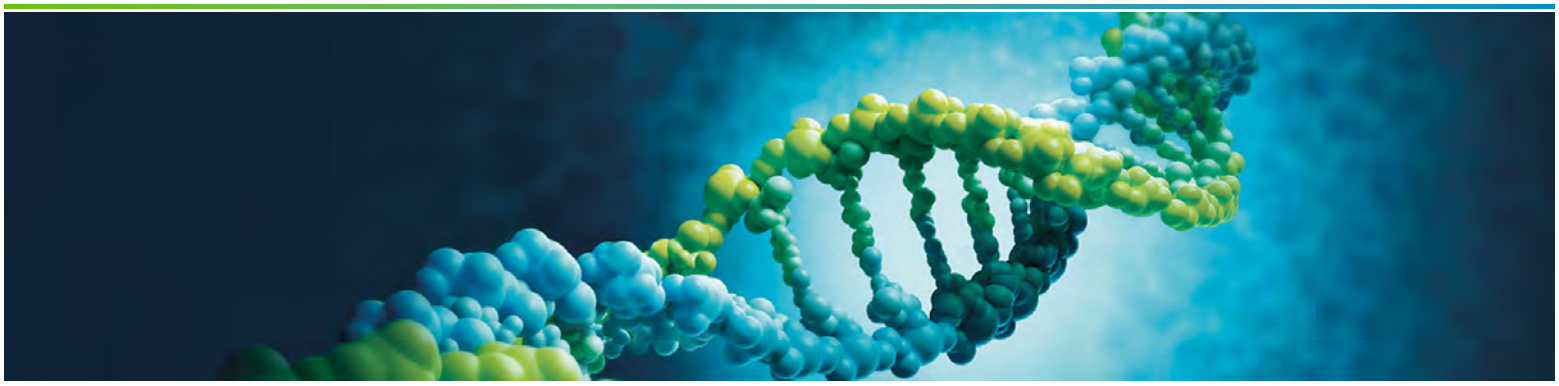

Summary

Summary

- Clear vision and focused leadership strategy
- Successful implementation of strategy driving results
- 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
- Expanding successful cardiovascular business
- Focusing Oncology portfolio, building leading segment positions

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

Expected Pipeline Newsflow 2017

Life Cycle Management Programs

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

Mid-/Late Stage Pipeline Programs

Asset	Indication	Newsflow	Timing
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

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

Date	Event	Publication
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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