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This communication may include “forward-looking statements.” Statements that include words such as “anticipate,” “expect,” “should,” “would,” “intend,” “plan,” “project,” “seek,” “believe,” “will,” and other words of similar meaning in connection with future events or future operating or financial performance are often used to identify forward-looking statements. All statements in this communication, other than those relating to historical information or current conditions, are forward-looking statements. We intend these forward-looking statements to be covered by the safe harbor provisions for forward-looking statements in the Private Securities Litigation Reform Act of 1995. These forward-looking statements are subject to a number of risks and uncertainties, many of which are beyond control of Merck KGaA, Darmstadt, Germany, which could cause actual results to differ materially from such statements.

Risks and uncertainties relating to the proposed transaction with Sigma-Aldrich Corporation (“Sigma-Aldrich”) include, but are not limited to: the risk Sigma-Aldrich’s shareholders do not approve the transaction; uncertainties as to the timing of the transaction; the risk that regulatory or other approvals required for the transaction are not obtained or are obtained subject to conditions that are not anticipated; competitive responses to the transaction; litigation relating to the transaction; uncertainty of the expected financial performance of the combined company following completion of the proposed transaction; the ability of Merck KGaA, Darmstadt, Germany, to achieve the cost-savings and synergies contemplated by the proposed transaction within the expected time frame; the ability of Merck KGaA, Darmstadt, Germany, to promptly and effectively integrate the businesses of Sigma-Aldrich and Merck KGaA, Darmstadt, Germany; the effects of the business combination of Merck KGaA, Darmstadt, Germany, and Sigma-Aldrich, including the combined company’s future financial condition, operating results, strategy and plans; the implications of the proposed transaction on certain employee benefit plans of Merck KGaA, Darmstadt, Germany, and Sigma-Aldrich; and disruption from the proposed transaction making it more difficult to maintain relationships with customers, employees or suppliers.

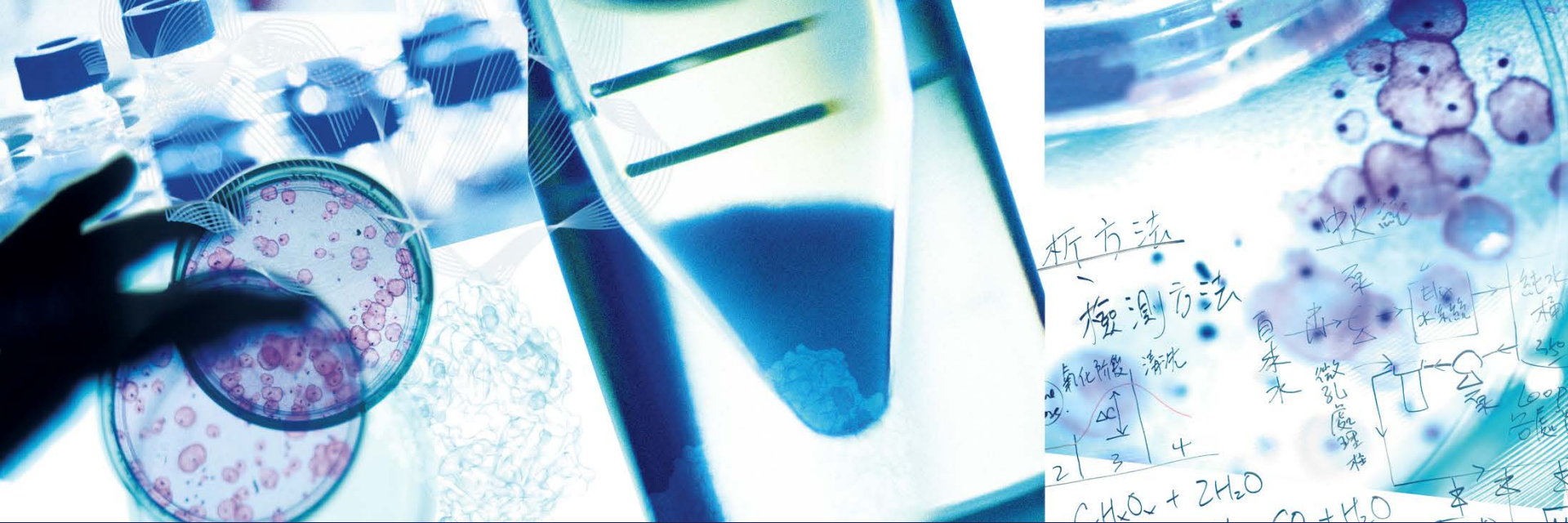
Additional risks and uncertainties include, but are not limited to: the risks of more restrictive regulatory requirements regarding drug pricing, reimbursement and approval; the risk of stricter regulations for the manufacture, testing and marketing of products; the risk of destabilization of political systems and the establishment of trade barriers; the risk of a changing marketing environment for multiple sclerosis products in the European Union; the risk of greater competitive pressure due to biosimilars; the risks of research and development; the risks of discontinuing development projects and regulatory approval of developed medicines; the risk of a temporary ban on products/production facilities or of non-registration of products due to non-compliance with quality standards; the risk of an import ban on products to the United States due to an FDA warning letter; the risks of dependency on suppliers; risks due to product-related crime and espionage; risks in relation to the use of financial instruments; liquidity risks; counterparty risks; market risks; risks of impairment on balance sheet items; risks from pension obligations; risks from product-related and patent law disputes; risks from antitrust law proceedings; risks from drug pricing by the divested Generics Group; risks in human resources; risks from e-crime and cyber attacks; risks due to failure of business-critical information technology applications or to failure of data center capacity; environmental and safety risks; unanticipated contract or regulatory issues; a potential downgrade in the rating of the indebtedness of Merck KGaA, Darmstadt, Germany, or Sigma-Aldrich; downward pressure on the common stock price of Merck KGaA, Darmstadt, Germany, or Sigma-Aldrich and its impact on goodwill impairment evaluations; the impact of future regulatory or legislative actions; and the risks and uncertainties detailed by Sigma-Aldrich with respect to its business as described in its reports and documents filed with the U.S. Securities and Exchange Commission (the “SEC”).

The foregoing review of important factors should not be construed as exhaustive and should be read in conjunction with the other cautionary statements that are included elsewhere, including the Report on Risks and Opportunities Section of the most recent annual report and quarterly report of Merck KGaA, Darmstadt, Germany, and the Risk Factors section of Sigma-Aldrich’s most recent reports on Form 10-K and Form 10-Q. Any forward-looking statements made in this communication are qualified in their entirety by these cautionary statements, and there can be no assurance that the actual results or developments anticipated by us will be realized or, even if substantially realized, that they will have the expected consequences to, or effects on, us or our business or operations. Except to the extent required by applicable law, we undertake no obligation to update publicly or revise any forward-looking statement, whether as a result of new information, future developments or otherwise.

## Important Additional Information

This communication may be deemed to be solicitation material in respect of the proposed acquisition of Sigma-Aldrich by Merck KGaA, Darmstadt, Germany. The proposed acquisition will be submitted to the stockholders of Sigma-Aldrich for their consideration. In connection therewith, on November 3, 2014, Sigma-Aldrich filed a definitive proxy statement with the SEC. Sigma-Aldrich will also begin mailing the definitive proxy statement on November 3, 2014, to its stockholders of record as of the close of business on October 29, 2014. BEFORE MAKING ANY VOTING OR ANY INVESTMENT DECISION, INVESTORS AND STOCKHOLDERS ARE URGED TO READ THE DEFINITIVE PROXY STATEMENT REGARDING THE PROPOSED TRANSACTION AND ANY OTHER RELEVANT DOCUMENTS FILED OR TO BE FILED WITH THE SEC CAREFULLY AND IN THEIR ENTIRETY WHEN THEY BECOME AVAILABLE BECAUSE THEY WILL CONTAIN IMPORTANT INFORMATION ABOUT THE PROPOSED TRANSACTION. Investors and stockholders may obtain free copies of the proxy statement, any amendments or supplements thereto and other documents containing important information about Sigma-Aldrich, once such documents are filed with the SEC, through the website maintained by the SEC at [www.sec.gov](http://www.sec.gov). Copies of the documents filed with the SEC by Sigma-Aldrich will be available free of charge on Sigma-Aldrich’s website at <http://investor.sigmaaldrich.com> under the heading “Financial Information—SEC Filings”. Stockholders of Sigma-Aldrich may also obtain a free copy of the definitive proxy statement by contacting Sigma-Aldrich’s Investor Relations Department at (314) 898-4643.

Sigma-Aldrich and certain of its directors, executive officers and other members of management and employees may be deemed to be participants in the solicitation of proxies in connection with the proposed transaction. Information about the directors and executive officers of Sigma-Aldrich is set forth in its proxy statement for its 2014 annual meeting of stockholders, which was filed with the SEC on March 21, 2014, its annual report on Form 10-K for the fiscal year ended December 31, 2013, which was filed with the SEC on February 6, 2014, and in subsequent documents filed with the SEC, each of which can be obtained free of charge from the sources indicated above. Other information regarding the participants in the proxy solicitation of the stockholders of Sigma-Aldrich and a description of their direct and indirect interests, by share holdings or otherwise, is contained in the definitive proxy statement and other relevant materials filed with the SEC.



# Merck KGaA, Darmstadt, Germany – Q1 2015 Roadshow Presentation

Investor Relations

Darmstadt, June 2015

# Agenda

## **Business overview**

Transforming the company

Financial review

Guidance

# Merck KGaA, Darmstadt, Germany:

## Balanced portfolio of three business sectors

Merck KGaA  
Darmstadt · Germany

### The Group

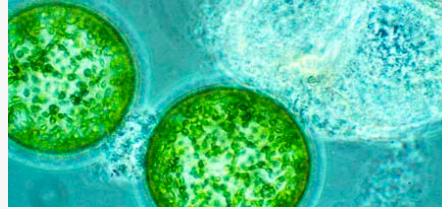
#### Healthcare



Leading in certain specialty pharma markets

- Life cycle management
- Biologics
- Emerging markets
- Over-the-counter medicine

#### Life Science



Top 3 in life science tools

- Global presence
- Innovation
- End-to-end solutions for pharma industry

#### Performance Materials

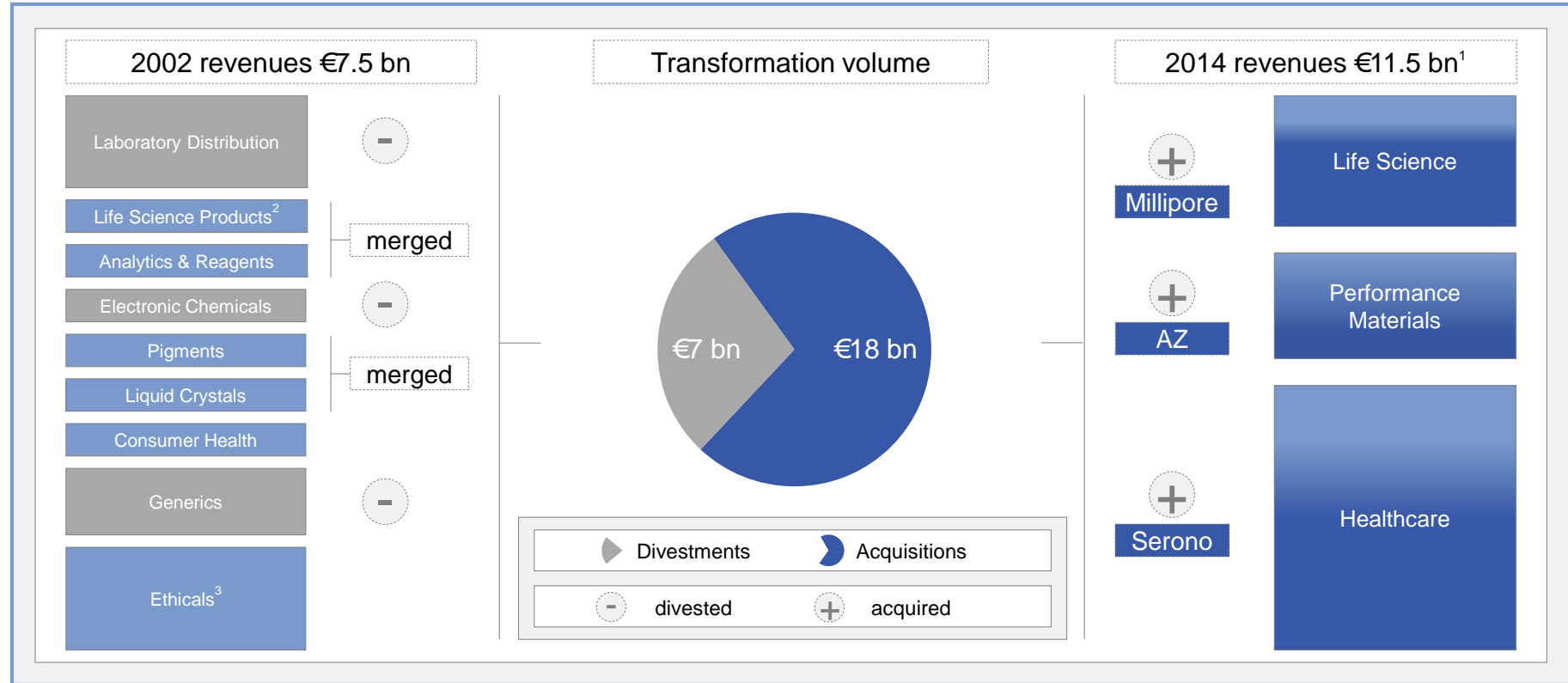


No. 1 in display materials

- Customer intimacy
- Innovation power
- Cost and technology leadership

# Merck KGaA, Darmstadt, Germany has added scale while strengthening the attractiveness of its portfolio

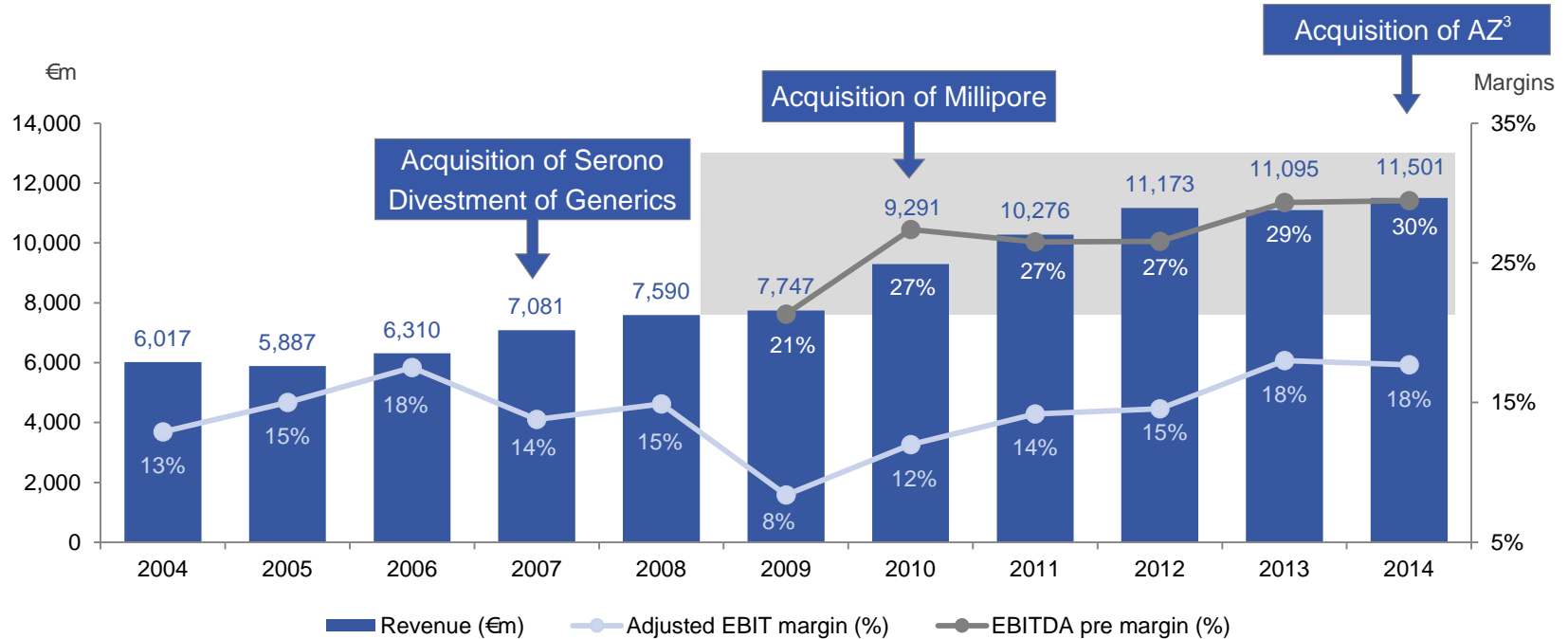
Merck KGaA  
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<sup>1</sup>Including sales contribution from AZ Electronic Materials acquired as of 2 May 2014, <sup>2</sup>Excluding "Crop Bioscience", which was divested; <sup>3</sup>Excluding "Theramex", which was divested

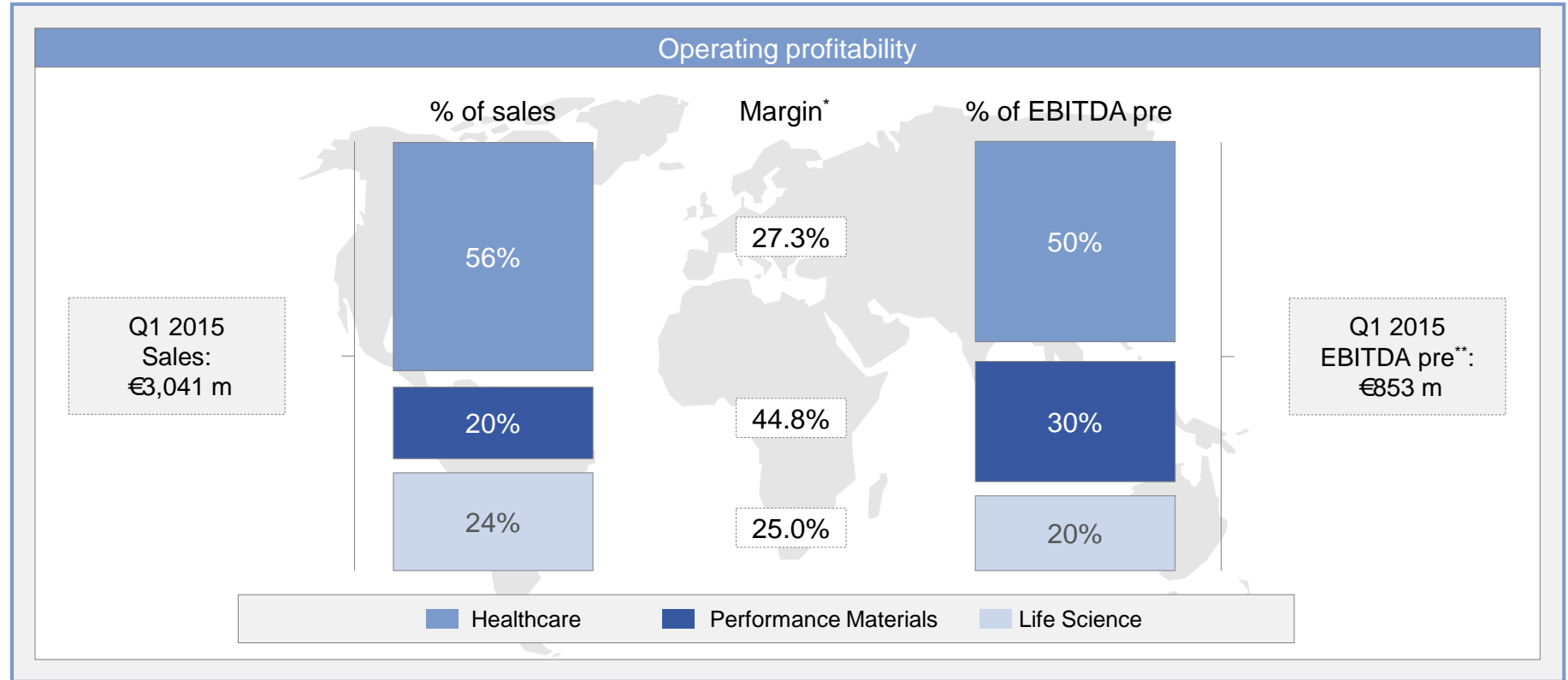
# Growth initiatives have fundamentally improved profitability

Merck KGaA, Darmstadt, Germany total revenues and adjusted EBIT and EBITDA pre margins<sup>1</sup> 2004-2014



<sup>1</sup> adjusted EBIT<sup>2</sup> and EBITDA pre divided by total revenues; <sup>2</sup> adjusted EBIT is EBIT less exceptional items (e.g. impairments, integration costs, restructuring costs); <sup>3</sup> included since May 2, 2014

# Strong businesses with attractive margins



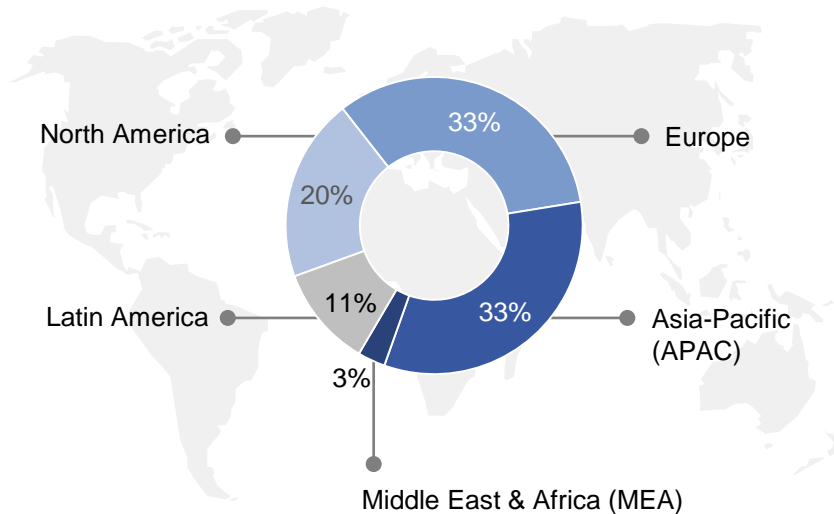
\*EBITDA pre margin in % of sales

\*\*Including Corporate/Others (-€69 m)

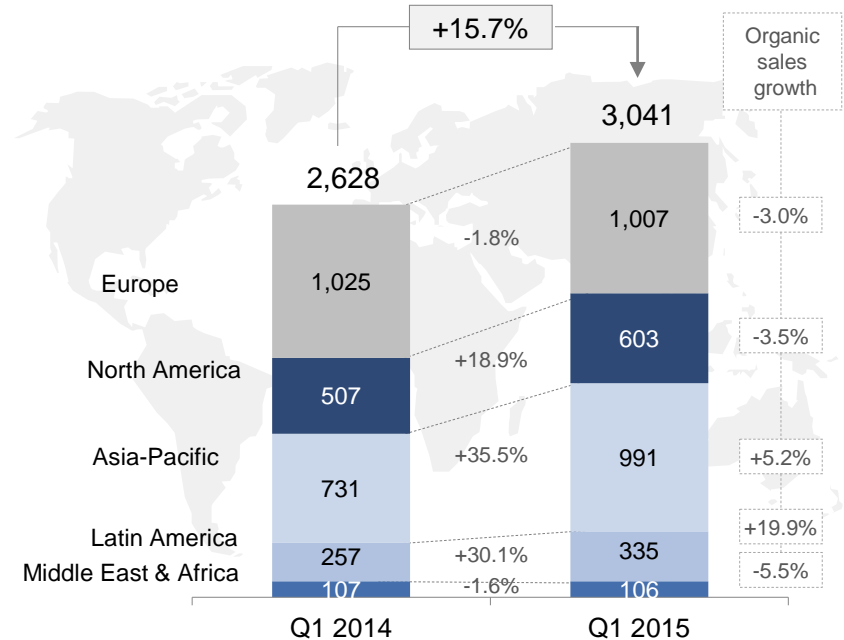


# APAC and Latin America drive organic growth

Group Q1 2015 sales by region



Regional development of sales [€ m]



Totals may not add up due to rounding

# Agenda

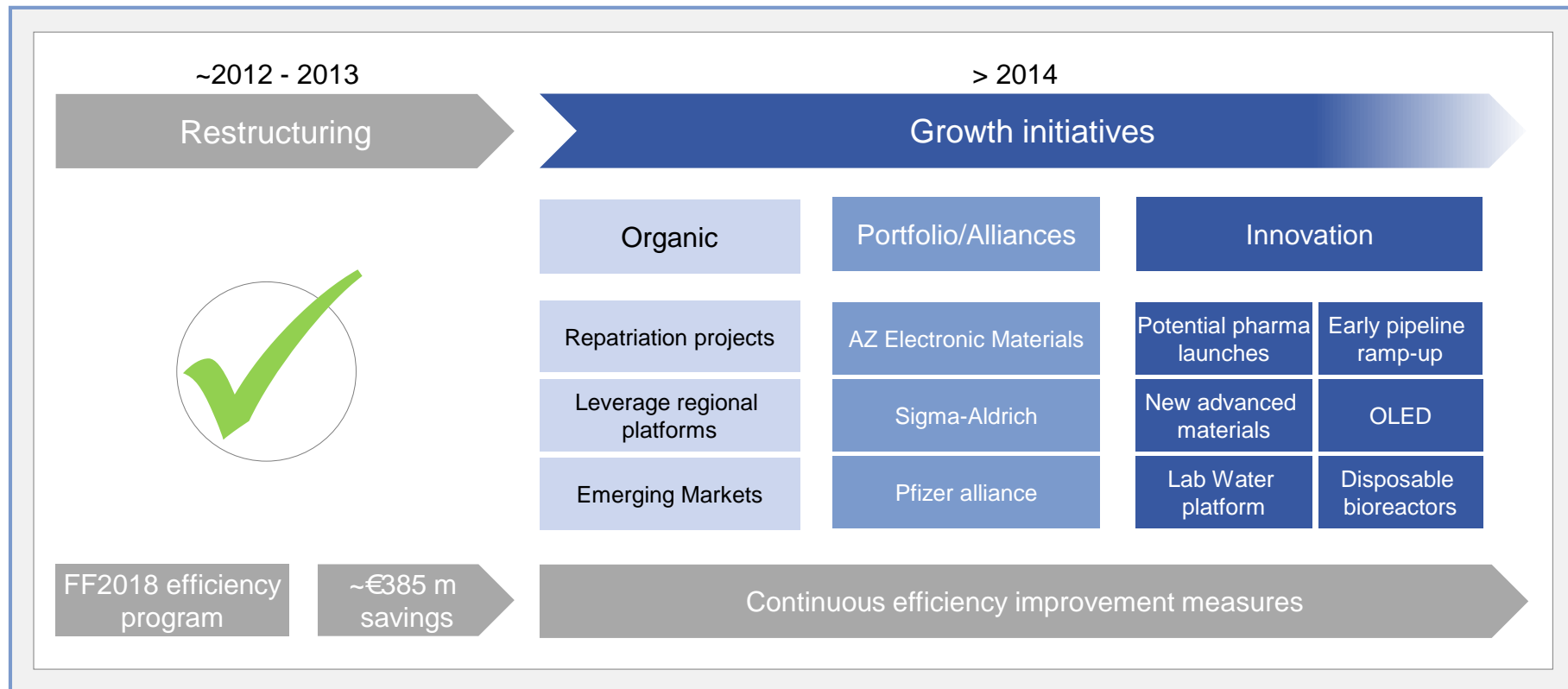
Business overview

**Transforming the company**

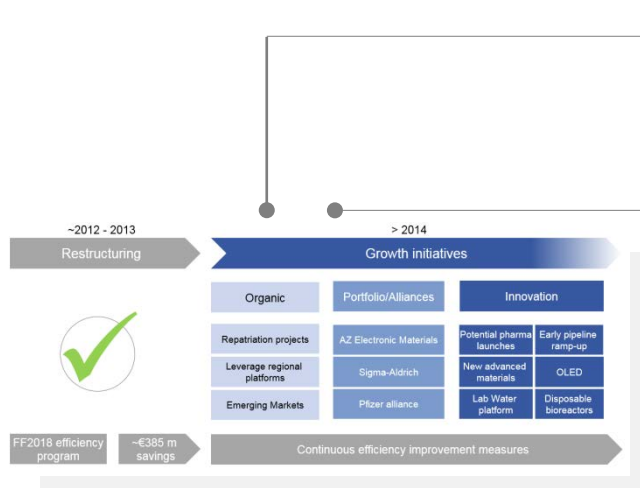
Financial review

Guidance

# Strategic agenda 2018 – milestones achieved



# Strategic agenda 2018 – milestones achieved



## ▪ Repatriation projects:

- Glucophage and Euthyrox from Takeda in Russia
- Co-promotion agreement with BMS<sup>1</sup> for Glucophage in China
- Transfer of full promotional responsibilities for Erbitux in Japan

## ▪ Leverage regional platforms:

- Transfer of Neurobion & Floratil to Consumer Health
- Strategic partnership with Lupin to broaden GM<sup>2</sup> portfolio

## ▪ Emerging Markets:

- Healthcare focus on strategic markets such as China & Brazil
- Investments in regional sites (Nantong – China)

## ▪ Portfolio and alliances:

- AZ closed and integrated in 2014
- Proposed Sigma acquisition expected to close mid 2015
- Strategic alliance with Pfizer in immuno-oncology

## ▪ Innovation:

- Launch of UB-FFS as well as progress in OLED
- New innovation center in corporate HQ

<sup>1</sup>Bristol-Myers Squibb; <sup>2</sup>General Medicine

# AZ – Complementing Performance Materials, expanding innovation leadership in niche markets

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Darmstadt · Germany

Healthcare

Life Science

Performance Materials

Merck KGaA,  
Darmstadt, Germany



ELECTRONIC MATERIALS

## Ongoing development in Liquid Crystals



- Launch of new UB-FFS\* mode - enhancing light transmission and reducing energy consumption
- Further advancing future technologies e.g. liquid crystal windows

## Research in advanced technologies



EPSON®

- Collaboration with EPSON on OLED progressing well
- Development of new proprietary OLED materials and LED phosphors - launch of a vivid green

## R&D projects from AZ



- Si-tech materials for OLED encapsulant
- Graphene-based materials in Separators, Anodes and Cathodes

Successful integration of AZ completed in 2014

\*Ultra brightness fringe field switching

# Sigma-Aldrich – Next step to enhance Life Science business sector

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Healthcare

Life Science

Performance Materials

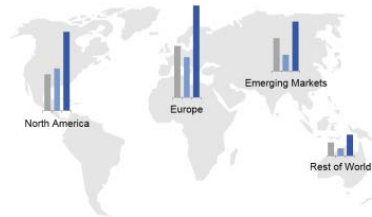
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Broad and complementary  
product fit in attractive segments



Expanding global reach and scale



Leveraging operational excellence  
to deliver superior value to customers



Sigma Aldrich acquisition – A compelling transaction rationale

# Pfizer collaboration – Acceleration and broadening of immuno-oncology pipeline

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Healthcare

Life Science

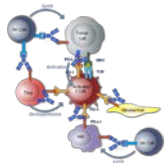
Performance Materials

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&



## Leverage anti-PD-L1 asset



- Avelumab\* with over 700 patients already enrolled in PI/II
- Initiation of several pivotal studies in 2015 e.g.:
  - Lung, bladder, renal, ovarian, gastric

## Tackle combination therapies



- Enlarge pool of potential combinations
- Combination studies in 2015 e.g.:
  - Axitinib (Inlyta) in renal cancer
  - Crizotinib (Xalkori) ALK/ROS in lung cancer

## Build commercialization strength



- Co-commercialization of Xalkori in U.S. and other key markets
- Ramp-up of Oncology infrastructure and capabilities in 2015, especially in U.S.

\*Avelumab = proposed International Non-proprietary Name (INN), formerly referred to as Anti-PD-L1 mAb (MSB0010718C)

# Agenda

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Guidance



# Q1 2015 overview

[€ m]	Q1 2014	Q1 2015	Δ
<b>Net sales</b>	<b>2,628</b>	<b>3,041</b>	<b>15.7%</b>
<b>EBITDA pre</b>	<b>807</b>	<b>853</b>	<b>5.7%</b>
<i>Margin (% of sales)</i>	<i>30.7%</i>	<i>28.0%</i>	
<b>EPS pre [€]</b>	<b>1.15</b>	<b>1.12</b>	<b>-2.6%</b>
<b>Operating cash flow</b>	<b>409</b>	<b>279</b>	<b>-31.8%</b>
[€ m]	Dec 31, 2014	March 31, 2015	Δ
<b>Net financial debt</b>	<b>559</b>	<b>78</b>	<b>-86.0%</b>
<b>Working capital</b>	<b>2,356</b>	<b>2,687</b>	<b>12.3%</b>
<b>Employees</b>	<b>39,639</b>	<b>39,842</b>	<b>0.5%</b>

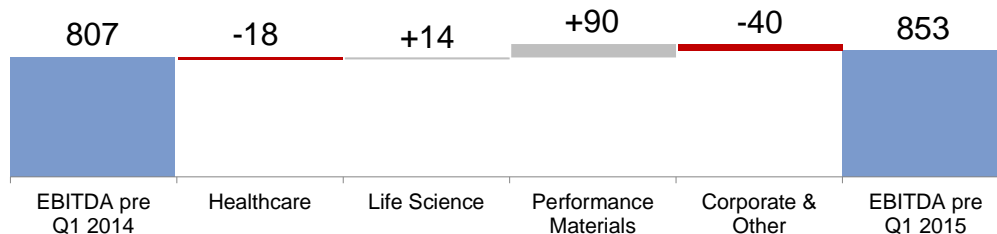
Q1 2015
<ul style="list-style-type: none"> <li>▪ EBITDA pre increases, while margin softens due to royalty loss, Rebif decline, higher R&amp;D and LTIP*</li> <li>▪ EPS pre decrease mainly driven by financial result</li> <li>▪ Operating cash flow burdened by higher tax and interest payments</li> <li>▪ Reduced net financial debt due to operating cash flow and net cash position in USD (FX)</li> <li>▪ Working capital increase mainly attributable to FX</li> </ul>

Totals may not add up due to rounding; \*Long Term Incentive Plan

# Top-line growth supported by FX

Q1 2015 YoY net sales	Organic	Currency	Portfolio	Total
Healthcare	0.3%	7.1%	0.0%	7.4%
Life Science	3.4%	9.8%	-0.8%	12.4%
Performance Materials	1.6%	14.8%	37.0%	53.4%
<b>Group</b>	<b>1.3%</b>	<b>8.9%</b>	<b>5.5%</b>	<b>15.7%</b>

## FY YoY EBITDA pre contributors [€ m]

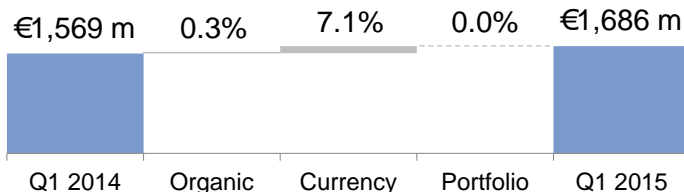


- Healthcare stable; Rebif declines, but offset by growth of other franchises
  - Life Science benefits from ongoing biopharma demand
  - Performance Materials driven by AZ, LC volume growth (incl. UB-FFS) and FX tailwinds
- 
- Healthcare affected by Humira royalty loss, Rebif decline and higher R&D costs
  - Increase in Life Science dampened by significant USD cost base
  - Performance Materials contains AZ and FX benefits
  - Hedging losses reduce Corporate EBITDA pre

# Healthcare: The start of an investment year

[€ m]	Q1 2014	Q1 2015
<b>Net sales</b>	<b>1,569</b>	<b>1,686</b>
Marketing and selling	-609	-660
Admin	-58	-66
R&D	-303	-348
<b>EBIT</b>	<b>273</b>	<b>268</b>
EBITDA	467	449
<b>EBITDA pre</b>	<b>479</b>	<b>461</b>
<i>Margin (% of sales)</i>	<i>30.5%</i>	<i>27.3%</i>

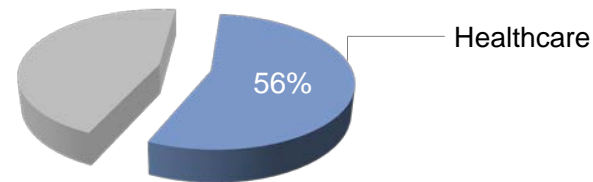
Net sales bridge



Comments

- Expected decline of Rebif driven by volume losses in EU & U.S.
- Erbitux negative, mainly affected by tender phasing and EU pricing
- Fertility and General Medicine portfolio remain growth drivers
- Consumer Health organically strong, driven by new marketing concept and ongoing demand for Neurobion in Latin America
- Higher M&S due to investments in growth markets and FX
- R&D reflects ramp-up of avelumab\* development; first PhIII trial started
- EBITDA pre and margin lower, as loss of Humira royalties, Rebif decline and investments outweigh currency tailwinds

Q1 2015 share of group net sales



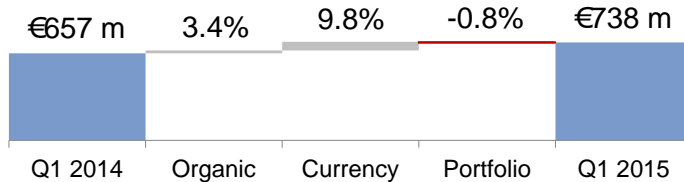
Healthcare includes Biopharmaceuticals, Consumer Health, Biosimilars and Allergopharma;

\*Avelumab = proposed International Non-proprietary Name (INN), formerly referred to as Anti-PD-L1 mAb (MSB0010718C)

# Life Science: A solid quarter

[€ m]	Q1 2014	Q1 2015
<b>Net sales</b>	<b>657</b>	<b>738</b>
Marketing and selling	-210	-233
Admin	-29	-31
R&D	-38	-45
<b>EBIT</b>	<b>87</b>	<b>83</b>
EBITDA	164	164
<b>EBITDA pre</b>	<b>170</b>	<b>184</b>
<i>Margin (% of sales)</i>	<i>25.8%</i>	<i>25.0%</i>

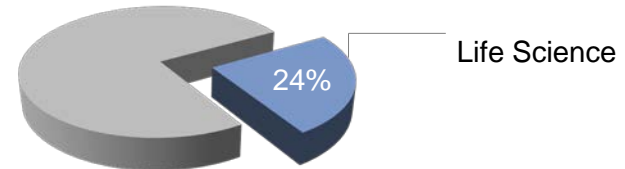
Net sales bridge



Comments

- Process Solutions drives divisional growth mainly due to strong demand from biopharma for single-use and purification products
- Lab Solutions with moderate growth especially in lab water consumables and biomonitoring
- Bioscience flat as good development of protein detection products is offset by low demand for antibodies
- EBIT decline due to double-digit acquisition costs
- EBITDA pre benefits from organic growth and FX tailwinds, partially offset by investments in marketing and selling

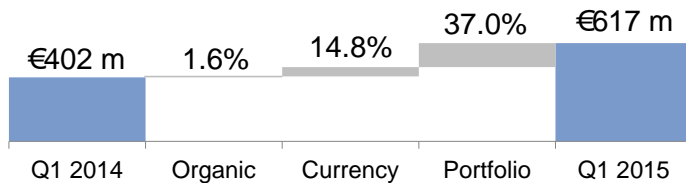
Q1 2015 share of group net sales



# Performance Materials: Healthy market trends amid significant currency tailwinds

[€ m]	Q1 2014	Q1 2015
<b>Net sales</b>	<b>402</b>	<b>617</b>
Marketing and selling	-36	-46
Admin	-8	-18
R&D	-38	-47
<b>EBIT</b>	<b>152</b>	<b>214</b>
EBITDA	179	273
<b>EBITDA pre</b>	<b>186</b>	<b>277</b>
<i>Margin (% of sales)</i>	<i>46.3%</i>	<i>44.8%</i>

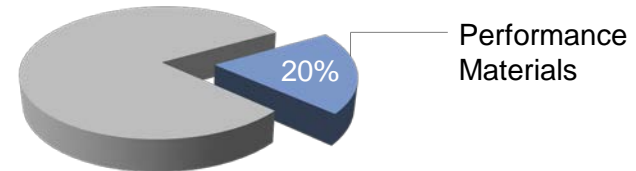
Net sales bridge



Comments

- Strong sales reflect portfolio effect, organic growth and FX tailwinds
- Liquid Crystals volume trends remain largest organic contributor
- New UB-FFS mode main driver in LC; ongoing demand for high-end TVs benefits flagship technologies (PS-VA & IPS)
- Pigments supported by coating industry demand for Xirallic products
- Significant EBITDA pre increase driven by AZ and FX
- EBITDA pre margin reflects mix effect from AZ

Q1 2015 share of group net sales



# Agenda

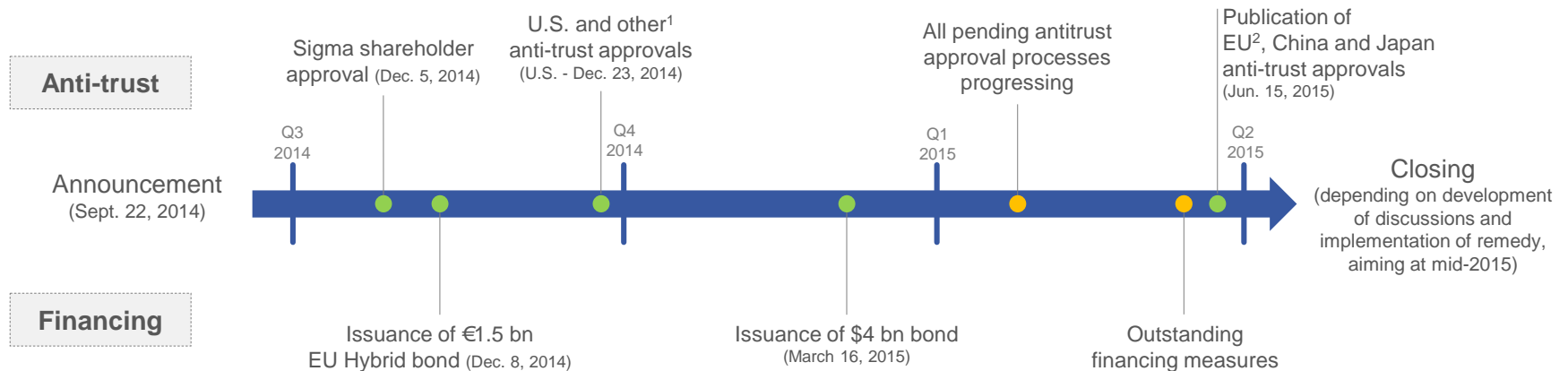
Business overview

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**Guidance**

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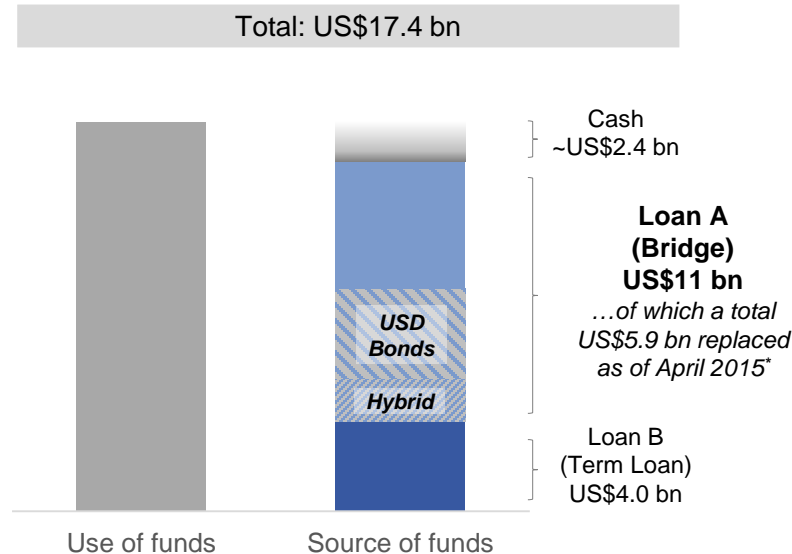


<sup>1</sup>Russia, Serbia, Ukraine, Taiwan and South Africa <sup>2</sup>Subject to conditions and commitments as agreed with the EU

# Solid structure to finance Sigma-Aldrich transaction

Merck KGaA  
Darmstadt · Germany

## Financing structure



## Update on funding structure

- Acquisition 100% cash & debt financed
- Intention to replace the bridge until closing of acquisition through various capital markets transactions
- Accomplished transactions:
  - Dec. 2014: ~\$1.9 bn hybrid bond
  - March 2015 ~\$4 bn USD bond
- Strong combined cash flows available for rapid deleveraging
- Strong investment grade rating maintained
- Expected financing costs below 2%

\*FX rate for hybrid bond EUR/USD 1.30 according to financing concept at signing



# High cost base in strong currencies and hedging losses partially offset FX tailwinds

## Healthcare



### Sales

- Global presence
- ~40% of sales in Europe

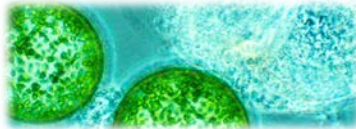
### Costs

- High Swiss franc cost base due to manufacturing sites
- R&D hub and notable sales force in U.S.

### FX impact



## Life Science



### Sales

- Balanced regional sales split between EU, NA and RoW

### Costs

- Extensive manufacturing and research footprint in the U.S.
- Global customer proximity requires broad-based sales force

### FX impact



## Performance Materials



### Sales

- ~80% of sales in Asia-Pacific
- Industry is USD-driven

### Costs

- Main production sites in Germany
- Several R&D and mixing facilities in Asia

### FX impact



# Full year 2015 guidance

## Group guidance\* for 2015, on existing platform



**Net sales:**

**~ €12.3 – 12.5 bn**



**EBITDA pre:**

**~ €3,450 – 3,550 m**



**EPS pre:**

**~ €4.60 – 4.80**



\*Without Sigma-Aldrich contribution

## Healthcare



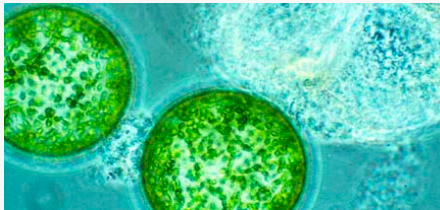
Net sales

Organically stable

EBITDA pre

~ €1.9 – 2.0 bn

## Life Science\*



Net sales

Moderate organic growth

EBITDA pre

~ €730 - 760 m

## Performance Materials



Net sales

Slight organic growth

EBITDA pre

~ €1.05 – 1.1 bn



# Appendix

## **Guidance details**

Sigma acquisition & pharma update

Financial details

# Additional financial guidance 2015

## Further financial details

Group royalty, license and commission income in 2015 ~€300 m

Corporate & Other EBITDA pre ~ -€280 – -330 m

Underlying tax rate ~23% to 25%

Capex on PPE ~€550 m

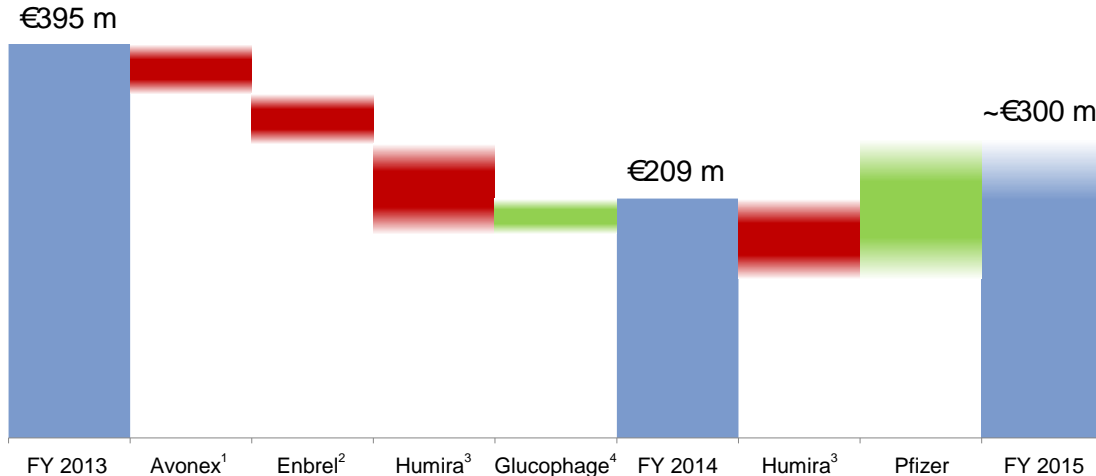
Hedging / USD assumption 2015 & 2016 hedge rate ~30%  
at EUR/USD ~1.24 to 1.26

2015 Ø EUR/USD assumption ~1.10 – 1.15



# Food for thought on royalty, license and commission income

Royalty, license and commission income bridge 2013 - 2015



Details and future changes

- Pfizer deal contains release of upfront and Xalkori accruals
- New reporting starting 2015:
  - Net Sales will include commission and profit share income
  - Royalty & license income will be within Other Operating Income
  - Royalty, license and commission expenses will be allocated to individual functional lines

Illustration; <sup>1</sup>Avonex patent expired in May 2013; <sup>2</sup>Enbrel patent expired in November 2013; <sup>3</sup>Humira royalty income expired June 30, 2014;

<sup>4</sup>Commission income due to co-promotion agreement for Glucophage with BMS in China – shown in net sales in 2015

# Appendix

Guidance details

**Sigma acquisition & pharma update**

Financial details



# Sigma-Aldrich – Next step to enhance Life Science, a leading life sciences company

## Attractive life science industry



- Attractive industry driven by sustainable underlying market trends
- Stable growth pattern, offering additional growth opportunities
- Strong companies with healthy margins

## Taking Merck KGaA's, Darmstadt, Germany life science business to the next level



- Strong track record of delivering profitable growth
- Adding scale with step change acquisition

# Sigma Aldrich acquisition – A compelling transaction rationale

## Strategic and operational fit

- Increasing scale – expanding position in attractive life science industry
- Enhancing value for our customers
  - Broadens product range and ease of doing business for Laboratories & Academia
  - Complements Process Solutions product offering
- Closing the gap in U.S. – adequate presence in all geographies
- Leveraging existing platforms for global innovation rollout

## Financial fit

- Further diversification of revenue stream
- Substantial synergy potential
- Immediately accretive to EPS pre\* and EBITDA margin
- Solid investment grade rating will be maintained

\*EPS pre one-time items and amortization, especially from purchase price allocation (PPA)

# Sigma-Aldrich – A leading life science consumables supplier

Merck KGaA  
Darmstadt · Germany

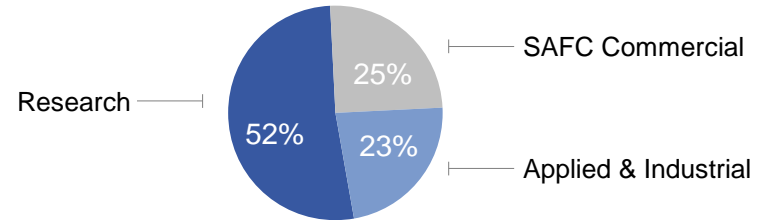
## Business

- Total revenues of \$2.7 billion in 2013
- ~9,000 employees including ~3,000 scientists and engineers
- Headquartered in St. Louis, MO
- Chemical and biochemical products, kits and services provider to laboratories and pharma production
- No. 1 eCommerce platform in the industry; ~1,600 sales people

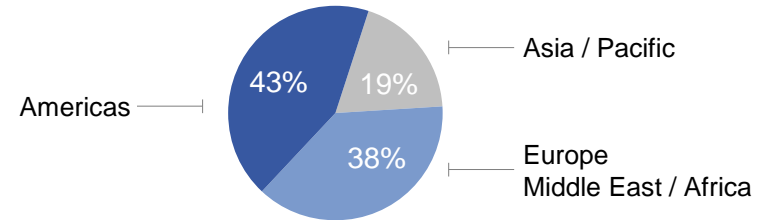
## Footprint

- Balanced regional exposure; strength in North America
- Operations in ~40 countries; products available in ~160 countries

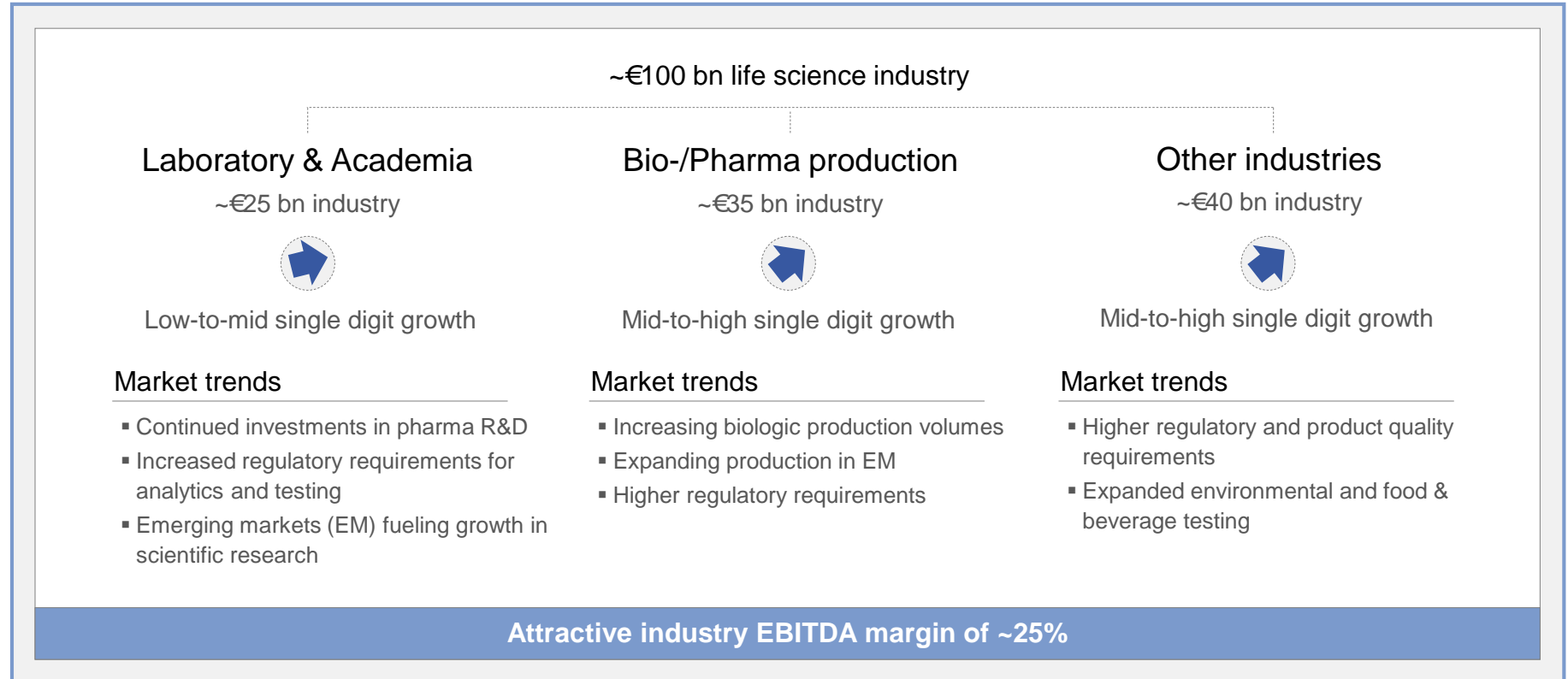
Sales by division FY 2013\*



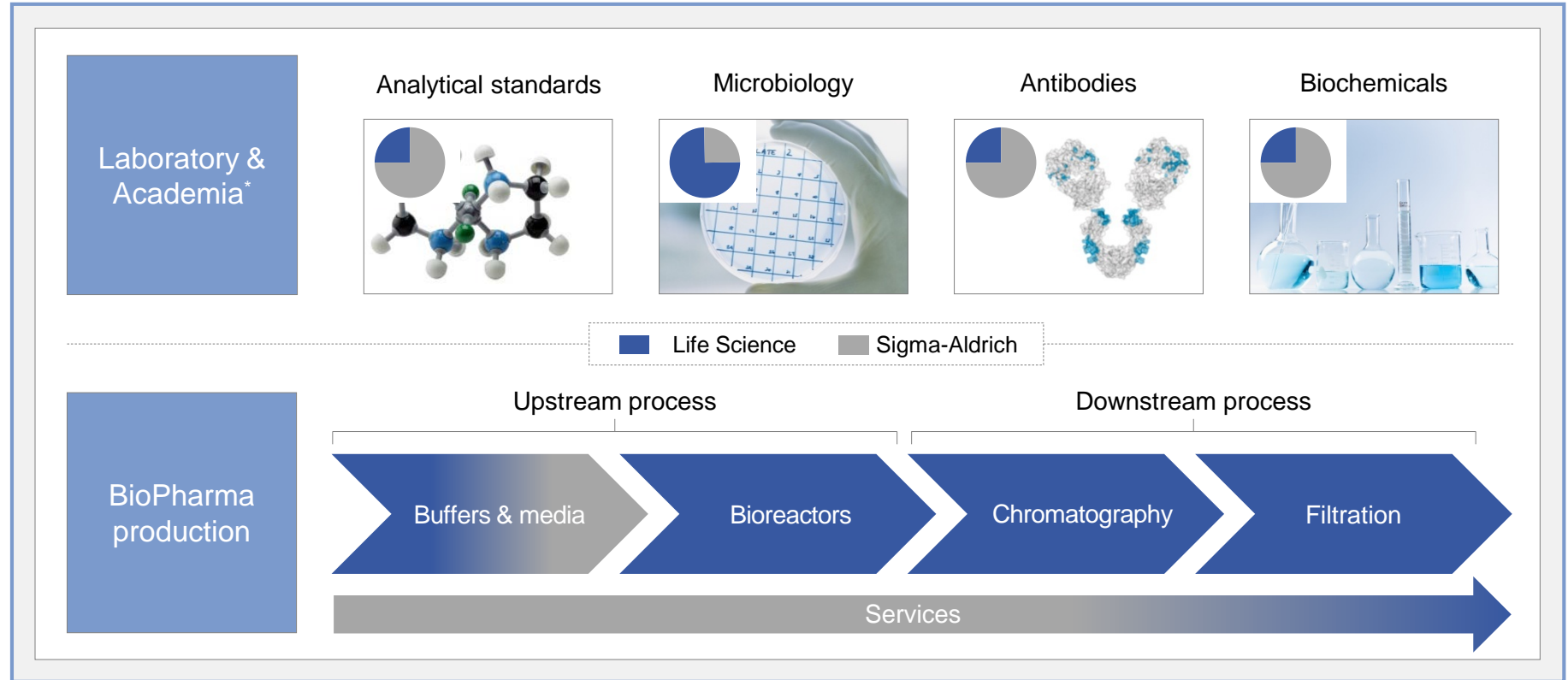
Sales by region FY 2013\*



# Sigma-Aldrich and Merck KGaA, Darmstadt, Germany together serve the attractive €100bn life science industry



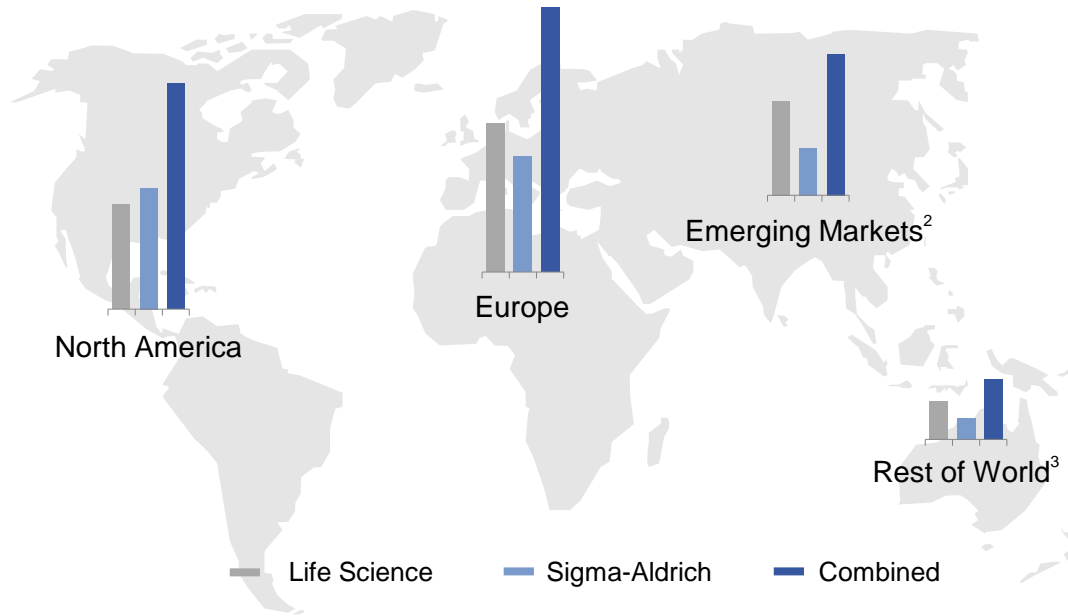
# Broad and complementary product fit in attractive segments



\*Key laboratory and academia areas illustrated

# Expanding global reach and scale

## Global sales<sup>1</sup> footprint of both businesses



### Increased presence in North America

- Benefiting from a leading position in U.S. Laboratory sector
- Increased access to U.S. academia

### Exposure to fast-growing Asia

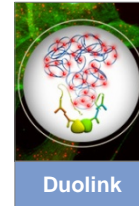
- Accelerating growth momentum
- Opportunity to leverage eCommerce platform

<sup>1</sup>Based on FY 2013 data in €m; <sup>2</sup>Latin America, Asia w/o Japan; <sup>3</sup>Japan, Australia/Oceania, Africa

# Leveraging operational excellence to deliver superior value to customers

## Product innovation

- Delivering innovative workflow solutions to increase customers' efficiency
- Broad technology and platforms
- Recurring winners of renowned innovation awards



## Process innovation

- Efficient supply chain for >300,000 products
- Best in class customer experience; e.g. 24 hour delivery in major markets
- Top-notch customer interface supported by eCommerce platform



Efficient work flow solutions and unique customer experience

# Sigma-Aldrich – Business and transaction financials Merck KGaA Darmstadt · Germany

## Overview of financial data<sup>1</sup>

US\$ m	2012	2013	2014E <sup>4</sup>
Revenue	2,623	2,704	2,796
% YoY at constant FX	+3%	+3%	n.a.
EBITDA (adjusted)	809	821	852
% of sales	31%	30%	30%
D&A	136	138	132
% of sales	5%	5%	5%
Net financial debt (period end)	-41	-357	-466 <sup>5</sup>
No. of shares (diluted, m)	122	121	n.a.

## Proposed transaction details<sup>2</sup>

- Equity value ~US\$17 bn (€13.1 bn)
- Enterprise value (EV) ~€12.7 bn including net cash ~€360 m
- Financing through cash and debt; no equity
- Assumed synergies: ~€260m
- In line with core acquisition criteria
  - Immediately accretive to EPS pre
  - Solid investment grade rating will be maintained

## Implied forward transaction multiples<sup>3</sup>

	2013	2014E <sup>4</sup>
EV/Sales	6.1x	5.9x
EV/EBITDA	20.1x	19.4x
EV/EBITDA pro-forma incl. synergies <sup>3</sup>	14.3x	13.9x

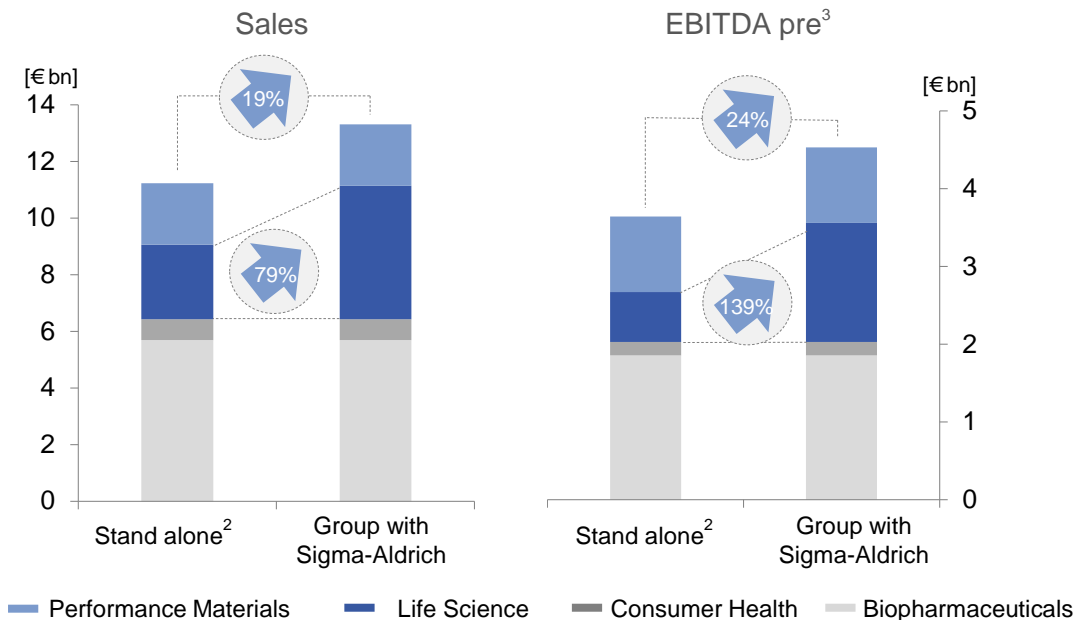
<sup>1</sup>Source: Company reports; <sup>2</sup>FX conversion: EUR/USD 1.30; <sup>3</sup>"Pro-forma" calculation based on 100% expected synergies;

<sup>4</sup>Median consensus estimates from latest broker reports; <sup>5</sup>Last reported as per H1 2014 report (June 30, 2014)



# Transaction enhances Merck KGaA's, Darmstadt, Germany financial profile

## Merck KGaA, Darmstadt, Germany - Pro-forma 2013<sup>1</sup>



## Pro-forma financial impacts

- Group sales<sup>1</sup> increase by ~19%
- Group EBITDA pre<sup>3</sup> rises by ~24% with margin<sup>4</sup> expansion from ~30% to ~33%
- Synergies: ~€260m p.a. fully implemented in 3<sup>rd</sup> full year after closing
- Expected PPA impact: Mid triple-digit €m p.a.
- Immediately EPS pre accretive

<sup>1</sup>Pro-forma calculation based on published sales for FY 2013 for Merck KGaA, Darmstadt, Germany (including pro-forma AZ Electronic Materials) and Sigma-Aldrich; <sup>2</sup>Pro-forma calculation based on published sales for FY 2013 for Merck KGaA, Darmstadt, Germany (including pro-forma AZ Electronic Materials); <sup>3</sup>Pro-forma calculation based on 100% expected synergies; excluding Corporate & Other; <sup>4</sup>Including Corporate & Other

# Support from meaningful synergies

Merck KGaA, Darmstadt,  
Germany experience



- Significant restructuring and integration experience
- Deep knowledge and understanding of the life science industry



Source of synergies



- Consolidate manufacturing footprint
- Increase conversion to eCommerce channels
- Optimize sales & marketing
- Streamline admin functions and infrastructure
- Save U.S. public company costs
- Optimize R&D portfolio

Planned delivery

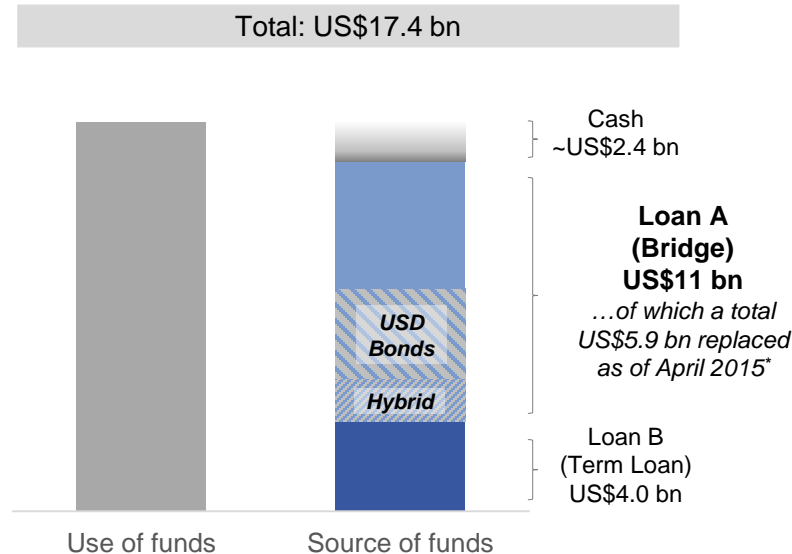


- Synergies: ~€260 m, i.e. ~12% of Sigma-Aldrich sales
- Fully implemented in third full year after closing
- Expected integration costs: ~€400 m; spread over 2015-2018

# Solid structure to finance Sigma-Aldrich transaction

Merck KGaA  
Darmstadt · Germany

## Financing structure



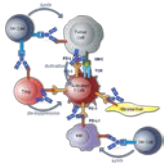
## Update on funding structure

- Acquisition 100% cash & debt financed
- Intention to replace the bridge until closing of acquisition through various capital markets transactions
- Accomplished transactions:
  - Dec. 2014: ~\$1.9 bn hybrid bond
  - March 2015 ~\$4 bn USD bond
- Strong combined cash flows available for rapid deleveraging
- Strong investment grade rating maintained
- Expected financing costs below 2%

\*FX rate for hybrid bond EUR/USD 1.30 according to financing concept at signing

# Merck KGaA, Darmstadt, Germany and Pfizer – Three strategic drivers for collaboration

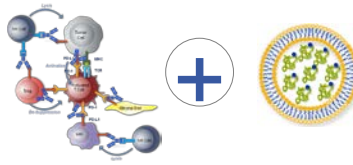
## Leverage Anti PD-L 1 asset



- Combine Biopharmaceuticals's R&D and Pfizer's commercialization capabilities
- Speed up overall development process through joint R&D efforts
- Combine financial resources of two global pharma players
- Share development risk



## Tackle combination therapies



- Enlarge pool of potential combinations through use of Pfizer's pipeline assets and existing products of Pfizer
- Leverage scientific expertise through joint research efforts
- Increase momentum to bring combinations to the market



## Build new commercialization strength



- Co-commercialization of Xalkori in major markets
- Build up Oncology infrastructure and capabilities, especially in North America
- Broaden experience and knowledge base in advance of potential Avelumab launch
- Additional income stream to drive R&D activities



# Financial implications of the deal with Pfizer

- ▶ \$850 m upfront cash payment, accrual to be released over several years
- ▶ ~50:50 R&D Cost split for drug development
- ▶ Milestone payments of up to \$2.0 bn based on filing/approval and commercialization of the compound across various indications & markets
- ▶ Co-commercialization of Xalkori – 2015 reimbursement for ramping up infrastructure and capabilities; followed by profit sharing agreement
- ▶ Following regulatory approval, first potential sales of Anti PD-L1 compound

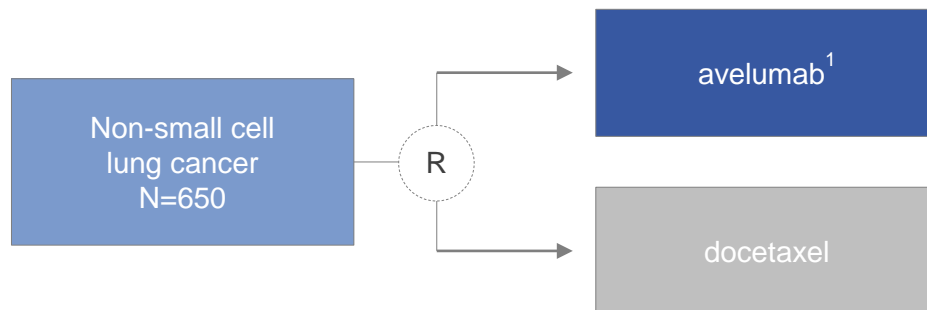


# First avelumab Phase III initiated

## Phase III (avelumab<sup>1</sup> NSCLC<sup>2</sup>) – Study design

### JAVELIN Lung 200 avelumab<sup>1</sup> in non-small cell lung cancer

Open-label, multicenter trial in subjects with NSCLC that has progressed after a platinum-containing doublet



### Study setup:

- Primary endpoint: Overall survival in patients with PD-L1+ stage IIIb/IV NSCLC
- Secondary endpoints include: Overall survival, progression-free survival, overall response rate and will be assessed across the entire study population irrespective of PD-L1 status
- Study recruitment across 290 sites in over 30 countries

### Strategic rationale:

- High unmet medical need with a low 5-year patient survival rate
- Extensive market potential despite competitive environment
- Potential for future combinations

<sup>1</sup>Avelumab = proposed International Non-proprietary Name (INN), formerly referred to as Anti-PD-L1 mAb (MSB0010718C); <sup>2</sup>Non Small Cell Lung Cancer

## Avelumab\*

### ▪ Ovarian cancer

- Avelumab\*, an anti-PD-L1 antibody, in patients with previously treated, recurrent or refractory ovarian cancer: a phase Ib, open-label expansion trial

### ▪ Lung cancer

- Avelumab\*, an anti-PD-L1 antibody, in advanced NSCLC patients: a phase 1b, open-label expansion trial in patients progressing after platinum-based chemotherapy

### ▪ Gastric cancer

- A phase I dose expansion trial of avelumab\* (MSB0010718C), an anti-PD-L1 antibody, in Japanese patients with advanced gastric cancer

### ▪ Metastatic Merkel cell carcinoma

- A phase II, open-label, multicenter trial to investigate the clinical activity and safety of avelumab\* (MSB0010718C) in patients with metastatic Merkel cell carcinoma

### ▪ Safety and efficacy update

- Phase I expansion cohort trial to investigate the safety and clinical activity of avelumab\* (MSB0010718C) in patients with metastatic or locally advanced solid tumors



\*Avelumab = proposed International Non-proprietary Name (INN), formerly referred to as Anti-PD-L1 mAb (MSB0010718C)

# Biopharmaceuticals has three different business models with specific strengths and requirements

1. Raise focus, scale and flexibility
2. Improve customer proximity
3. Develop into attractive growth platforms
4. Tailor innovation models to specific needs

## Biologicals

- Rebif
- Fertility
- Endocrinology
- Biosimilars<sup>2</sup>
- Allergopharma

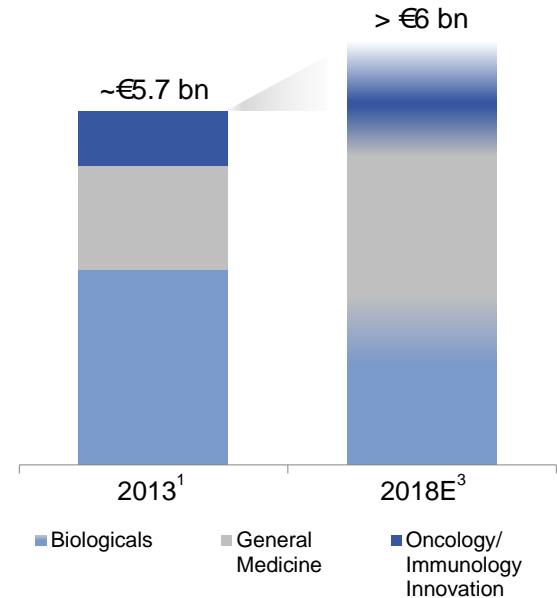
## General Medicine

- GM/CMC
- Thyroids

## Oncology/Immunology Innovation

- Erbitux
- Other Oncology

Biopharmaceuticals proforma sales<sup>1</sup>



<sup>1</sup>Source: Proforma re-calculation based on 2013 data for Biopharmaceuticals; excluding Consumer Health; <sup>2</sup>Gradual sales ramp-up expected from 2017 onwards

<sup>3</sup>Excluding contributions from R&D pipeline



# The road to maximizing Biopharmaceuticals' existing franchises is clear



Continue to drive front-line mCRC share by increasing patient testing and expanding head and neck coverage



Capitalize on strong efficacy and new smart devices to maximize differentiation and defend franchise



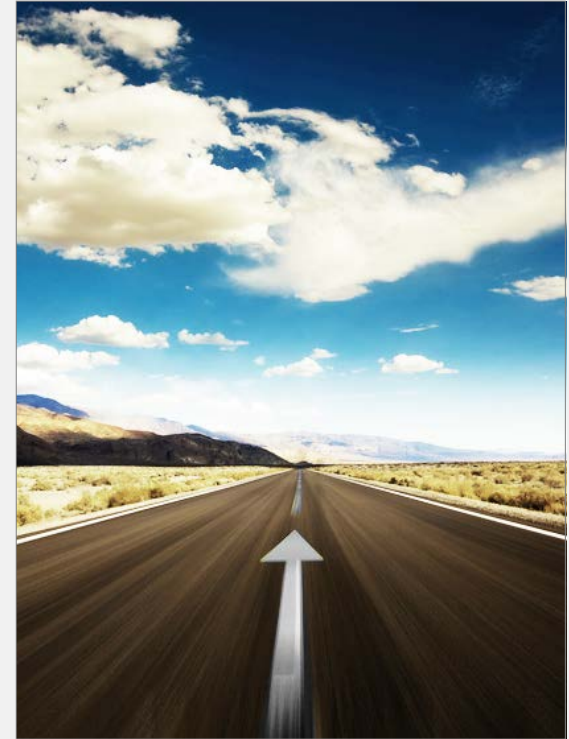
Build on No.1 position and ART<sup>1</sup> channel access with embryo diagnostics and other innovative technologies



Harness strengths of existing business and build a new focus area driven by innovative devices and services for patients



Build on existing track record in Emerging Markets, drive brand and life-cycle management and expand business including asset repatriation



<sup>1</sup>ART = Assisted Reproductive Technology

# Portfolio management: Differentiating across diverse business models

## General Medicine portfolio



- Limited risk with high cash generation
- Sustainable steady growth fueled by Emerging Markets



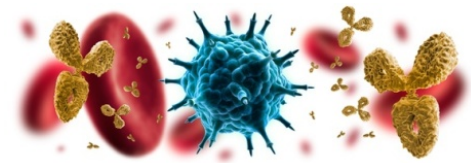
## Biologicals portfolio



- Moderate risk and reward profile
- Economies of scale due to state-of-the-art production capabilities
- Emerging Markets gain importance



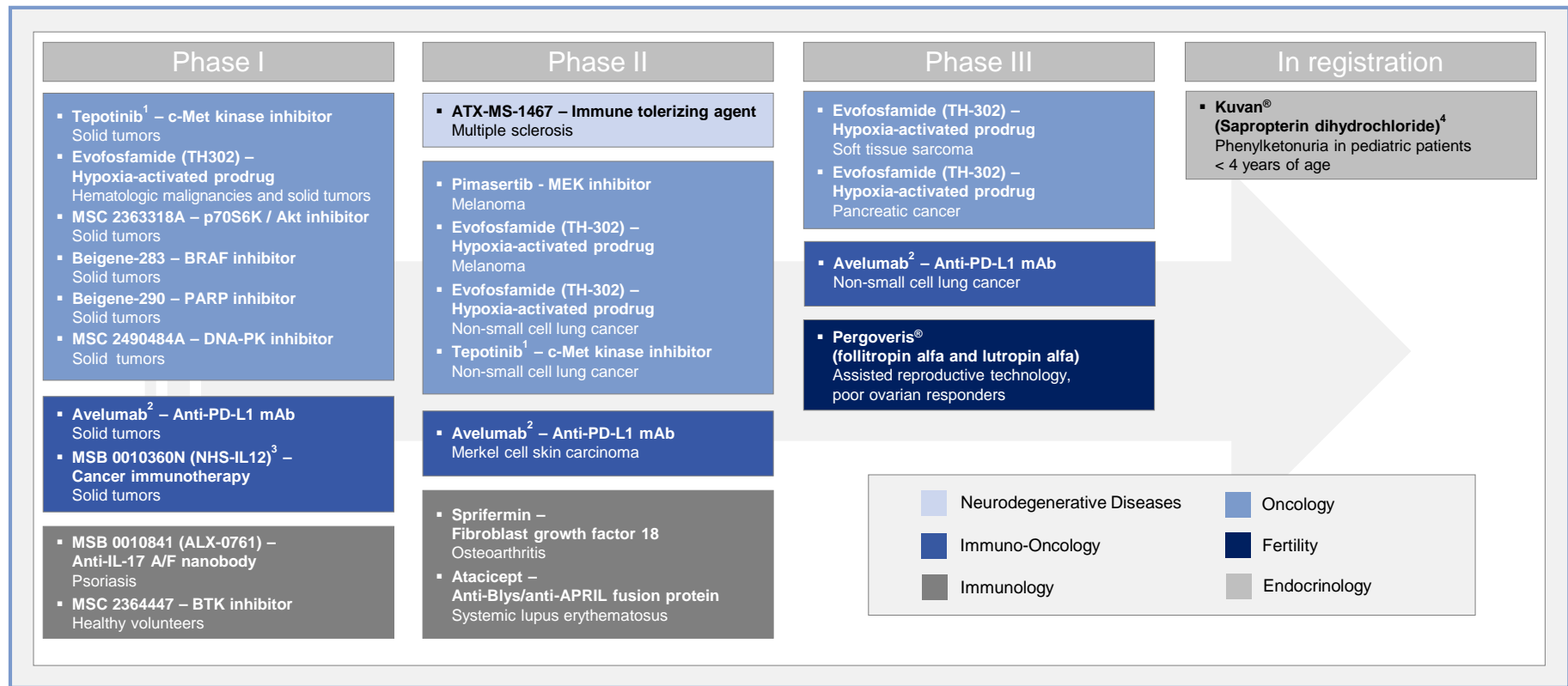
## Oncology & Immunology innovation portfolio



- High reward at high risk
- Innovation key success factor – high R&D spend
- Promising pipeline projects



Mid-term, all parts of the portfolio need to earn their cost of capital



Pipeline as of 30 April, 2015; <sup>1</sup>Tepotinib is the proposed International Nonproprietary Name (INN) for the c-Met kinase inhibitor (MSC 2156119J); <sup>2</sup>Avelumab = proposed International Non-proprietary Name (INN), formerly referred to as Anti-PD-L1 mAb (MSB0010718C); <sup>3</sup>Sponsored by the National Cancer Institute (USA); <sup>4</sup>Post-approval request by the European Medicines Agency

# Appendix

Guidance details

Sigma acquisition & pharma update

**Financial details**

# Reported EPS reflects Sigma financing costs

[€ m]	Q1 2014	Q1 2015	Δ
<b>EBIT</b>	<b>468</b>	<b>480</b>	<b>2.5%</b>
Financial result	-35	-101	>100%
<b>Profit before tax</b>	<b>434</b>	<b>379</b>	<b>-12.5%</b>
Income tax	-106	-94	-11.4%
<i>Tax rate (%)</i>	<i>24.5%</i>	<i>24.8%</i>	
<b>Net income</b>	<b>325</b>	<b>282</b>	<b>-13.4%</b>
<b>EPS (€)</b>	<b>0.75</b>	<b>0.65</b>	<b>-13.3%</b>

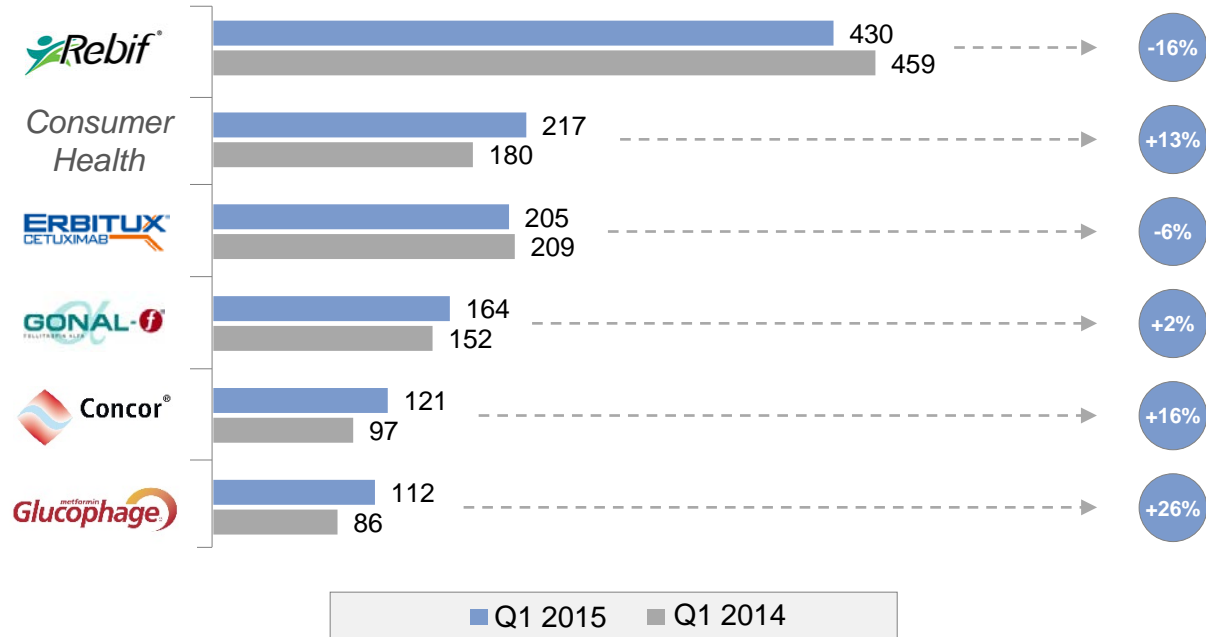
## Reported results

- EBIT reflects D&A from AZ and costs for acquisitions
- Financial result impacted by higher interest expenses (hybrid & USD bond) and LTIP\*
- Tax rate in line with guidance range of 23-25%

Totals may not add up due to rounding; \*Long Term Incentive Plan

# Healthcare organic growth by franchise/product

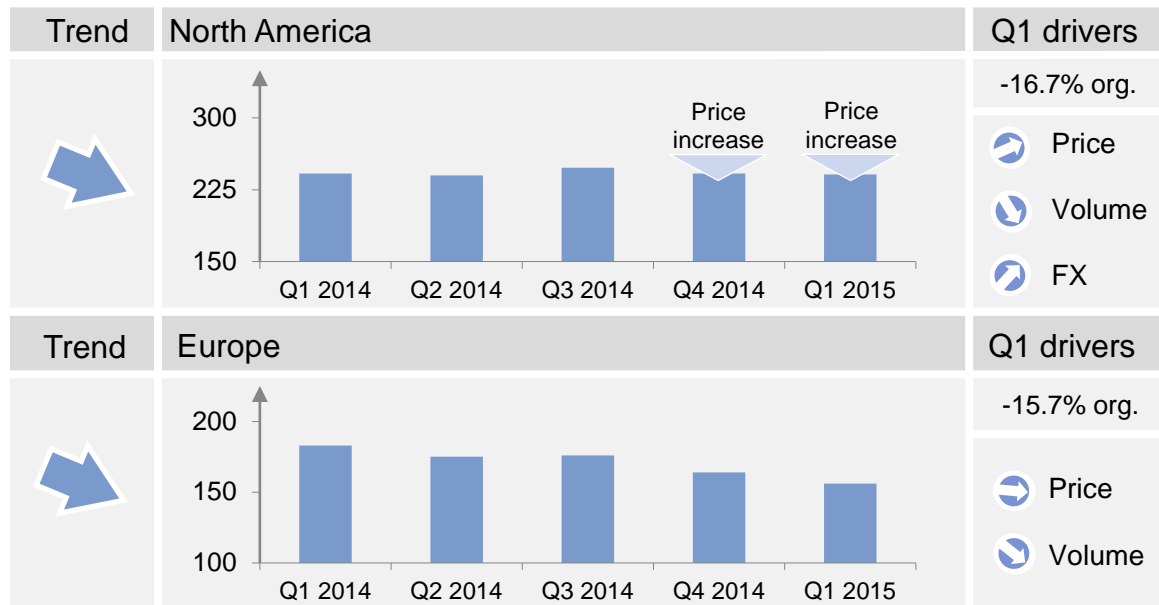
Q1 2015 organic sales growth [%] by key products [€ m]



# Rebif: Defending the franchise – competitive pressure in the U.S. and Europe



- Regional sales evolution [€ m]

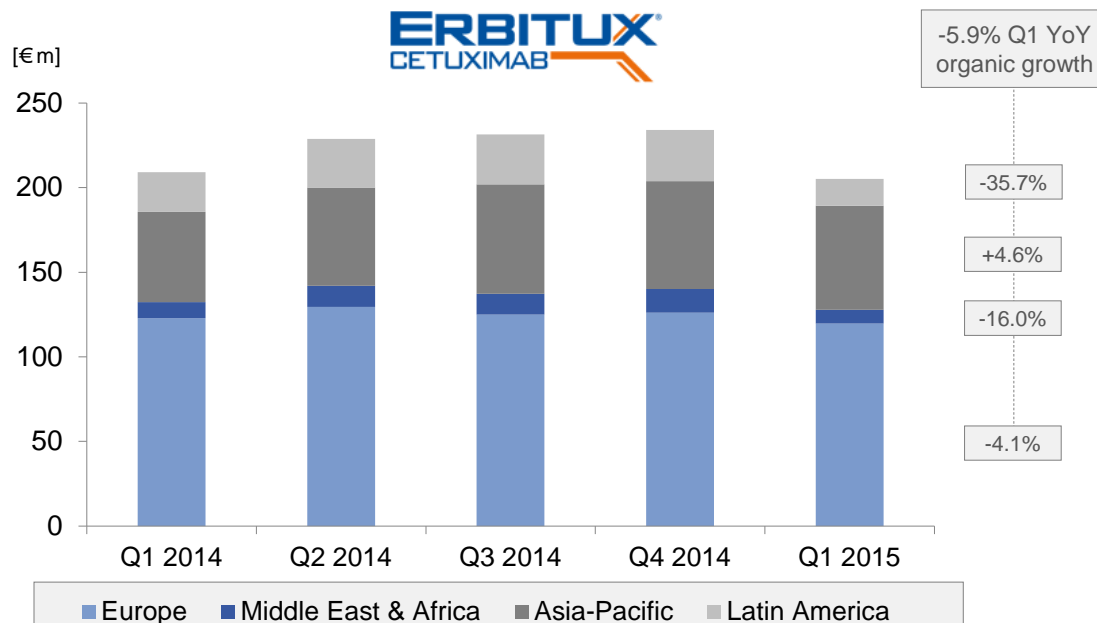


## Rebif performance

- Rebif sales of €430 m in Q1
- Organic decline of -15.9% is driven by lower volumes slightly mitigated by U.S. pricing
- U.S. influenced by some destocking; last year included positive wholesaler restocking effect in U.S.
- Competition from orals main factor of U.S. and European volume decline
- Recent price increases support the U.S.

# Erbitux: A challenging quarter

Erbitux sales by region



Erbitux performance

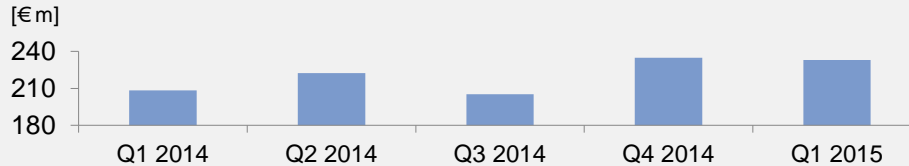
- Sales decrease to €205 m as FX is more than offset by organic decline
- Europe facing tough environment with price declines in some countries
- Phasing of tender business in several strategic markets burdens organic growth
- Growth in China due to successful listing in further provinces drives Asia-Pacific



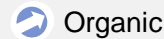
# Strong growth in General Medicine, Fertility and Endocrinology

## Sales evolution

### Fertility

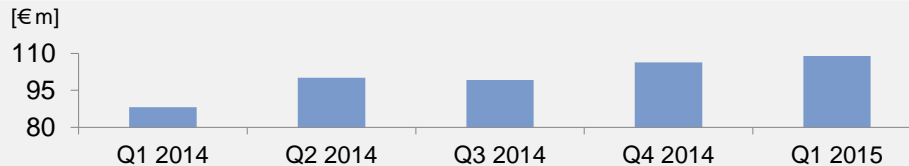


### Q1 drivers



Organic

### Endocrinology

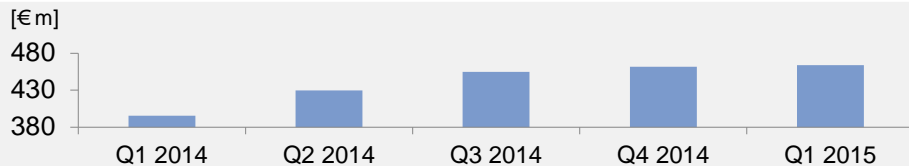


### Q1 drivers

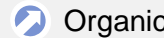


Organic

### General Medicine<sup>1</sup>



### Q1 drivers



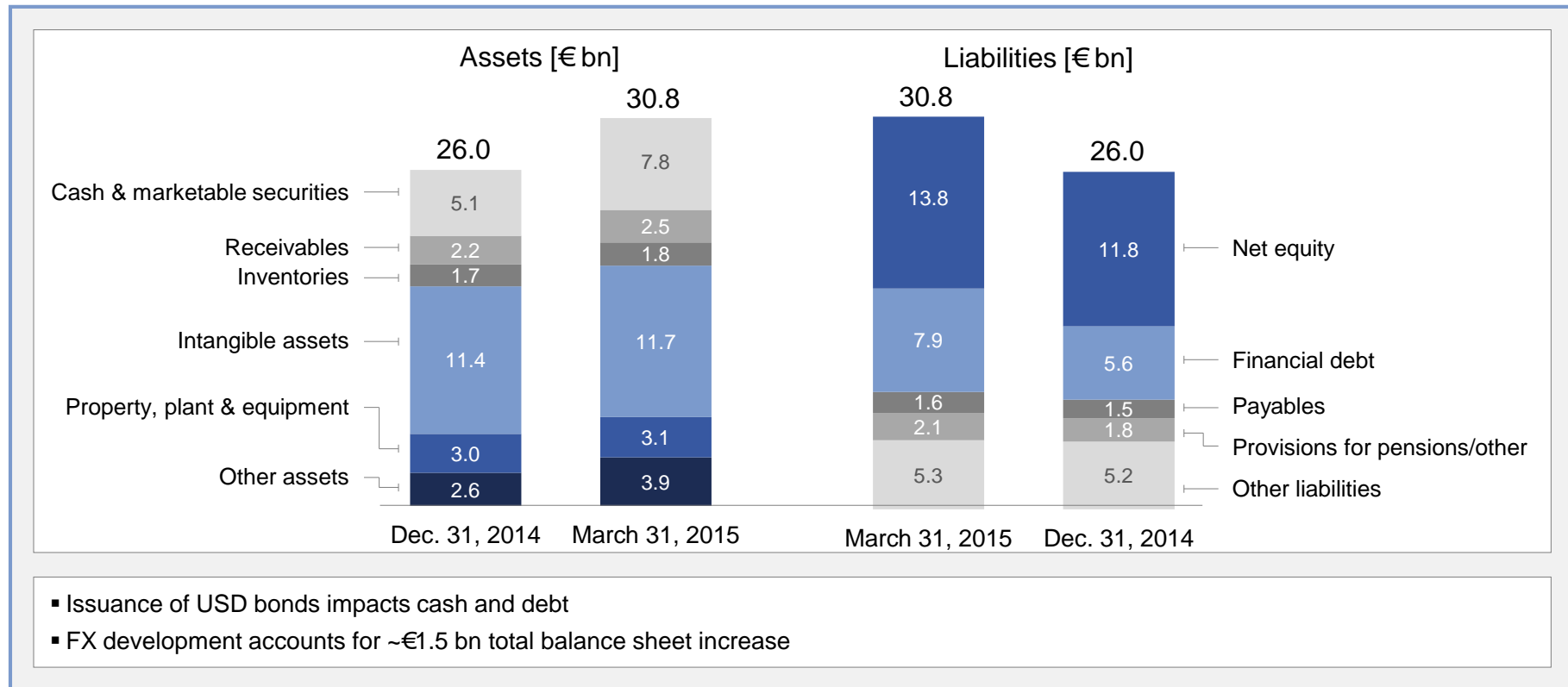
Organic

## Q1 drivers

- Fertility franchise with 5.8% organic growth mainly driven by high demand from fast-growing Chinese market
- Solid volumes in Europe support solid organic growth in Endocrinology
- Concor and Thyroid products see ongoing good demand from LatAm<sup>2</sup>, driving growth of General Medicine<sup>1</sup>
- Glucophage growing organically especially in LatAm<sup>2</sup>, supported by low base due supply chain issues LY
- Successful repatriation in Russia – Glucophage and Euthyrox picking up

<sup>1</sup>includes "Cardiometabolic Care & General Medicine and Others"; <sup>2</sup>Latin America

# Balance sheet reflects Sigma financing measures



Totals may not add up due to rounding

# Operating cash flow burdened by one-time tax payment relating to Pfizer upfront

[€ m]	Q1 2014	Q1 2015	Δ
<b>Profit after tax</b>	<b>327</b>	<b>285</b>	<b>-42</b>
D&A	302	325	23
Changes in provisions	-47	90	137
Changes in other assets/liabilities	-32	-231	-199
Other operating activities	5	-20	-25
Changes in working capital	-147	-172	-25
<b>Operating cash flow</b>	<b>409</b>	<b>279</b>	<b>-130</b>
<b>Investing cash flow</b>	<b>1,100</b>	<b>392</b>	<b>-708</b>
thereof Capex on PPE	-57	-75	-18
<b>Financing cash flow</b>	<b>7</b>	<b>2,288</b>	<b>2,281</b>

## Cash flow drivers

- D&A increase attributable to AZ
- Higher LTIP\* and currency adjustments in litigation provisions drive increase in changes in provisions
- Changes in other assets & liabilities reflect higher tax and interest payments
- LY's investing cash flow contains sale of current financial assets for AZ
- Financing cash flow reflects USD bond issuance and repayment of eurobond

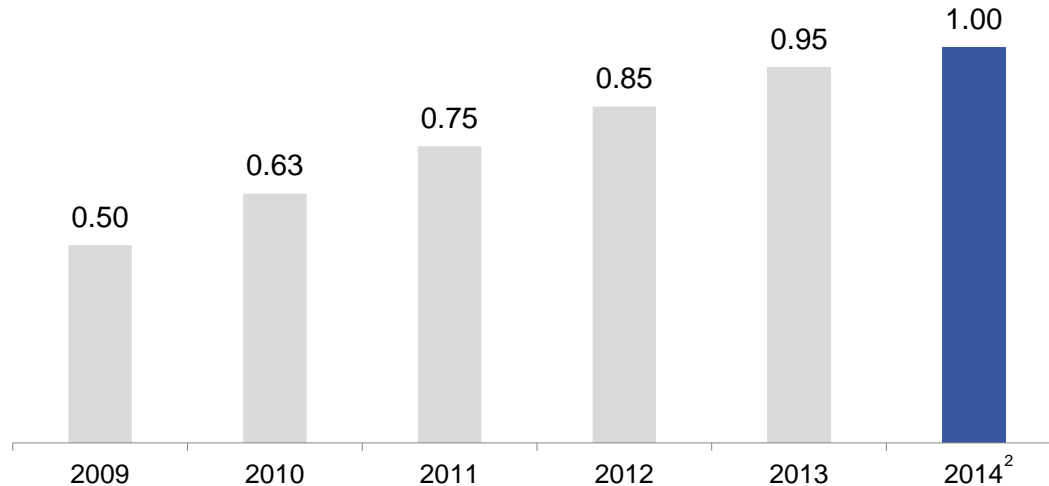
Totals may not add up due to rounding; \*Long Term Incentive Plan

# Exceptional items in Q1 2015

Exceptional items in EBIT				
[€ m]	Q1 2014		Q1 2015	
	Exceptional items	thereof D&A	Exceptional items	thereof D&A
Healthcare	13	1	12	0
Life Science	6	0	20	0
Performance Materials	8	0	4	0
Corporate & Other	11	0	12	0
Total	38	1	48	0

Totals may not add up due to rounding

Dividend<sup>1</sup> development 2009-2014<sup>2</sup>



2014 dividend and policy

- Dividend of €1 per share proposed<sup>1</sup> for 2014
- Dividend increase in line with earnings progression – 2014: +5.3% yoy
- Last years' dividend constitutes the minimum level<sup>3</sup>
- Aiming at corridor of 20-25% of EPS pre

<sup>1</sup>Adjusted for share split, which has been effective since June 30, 2014; <sup>2</sup>Proposal; final decision subject to Annual General Meeting approval; <sup>3</sup>Assuming a stable economic environment

# New allocation of royalty, license and commission income and expenses

## 2014 P&L structure

### Sales

Royalty, license and commission income

Commission income

Royalty & license income

### Revenues

Cost of Sales

Gross profit

Marketing & selling expenses

Royalty, license and commission expenses

Commission expenses

Royalty & license expenses

Administration expenses

Other operating expenses/income

Research & development expenses

EBIT

## New 2015 P&L structure

### Net sales

~~Royalty, license and commission income~~

~~Commission income~~

~~Royalty & license income~~

### Revenues

Cost of Sales

Gross profit

Marketing & selling expenses

~~Royalty, license and commission expenses~~

~~Commission expenses~~

~~Royalty & license expenses~~

Administration expenses

Other operating expenses/income

Research & development expenses

EBIT

Date	Event
August 06, 2015	Q2 2015 Earnings release
November 12, 2015	Q3 2015 Earnings release
March 08, 2016	Q4 2015 Earnings release
April 29, 2016	Annual General Meeting



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