



# Merck KGaA, Darmstadt, Germany – Sound business performance supported by inorganic growth

Berenberg & Goldman Sachs German Corporate Conference

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**Merck KGaA**  
Darmstadt · Germany

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## Cautionary Note Regarding Forward-Looking Statements

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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 is being made in respect of the proposed merger transaction involving Sigma-Aldrich and Merck KGaA, Darmstadt, Germany. The proposed merger will be submitted to the stockholders of Sigma-Aldrich for their consideration. In connection therewith, Sigma-Aldrich intends to file relevant materials with the SEC, including a preliminary proxy statement and a definitive proxy statement. The definitive proxy statement will be mailed to the stockholders of Sigma-Aldrich. BEFORE MAKING ANY VOTING OR ANY INVESTMENT DECISION, INVESTORS AND SECURITY HOLDERS 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 security holders 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 [www.sigmaaldrich.com](http://www.sigmaaldrich.com) under the heading “SEC Documents” within the “Investor Info” section in the “Investors” portion of Sigma-Aldrich’s website. Shareholders of Sigma-Aldrich may also obtain a free copy of the definitive proxy statement by contacting Sigma-Aldrich’s Investor Relations Department at +1 (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 security holdings or otherwise, will be contained in the preliminary and definitive proxy statements and other relevant materials to be filed with the SEC when they become available.

# Agenda

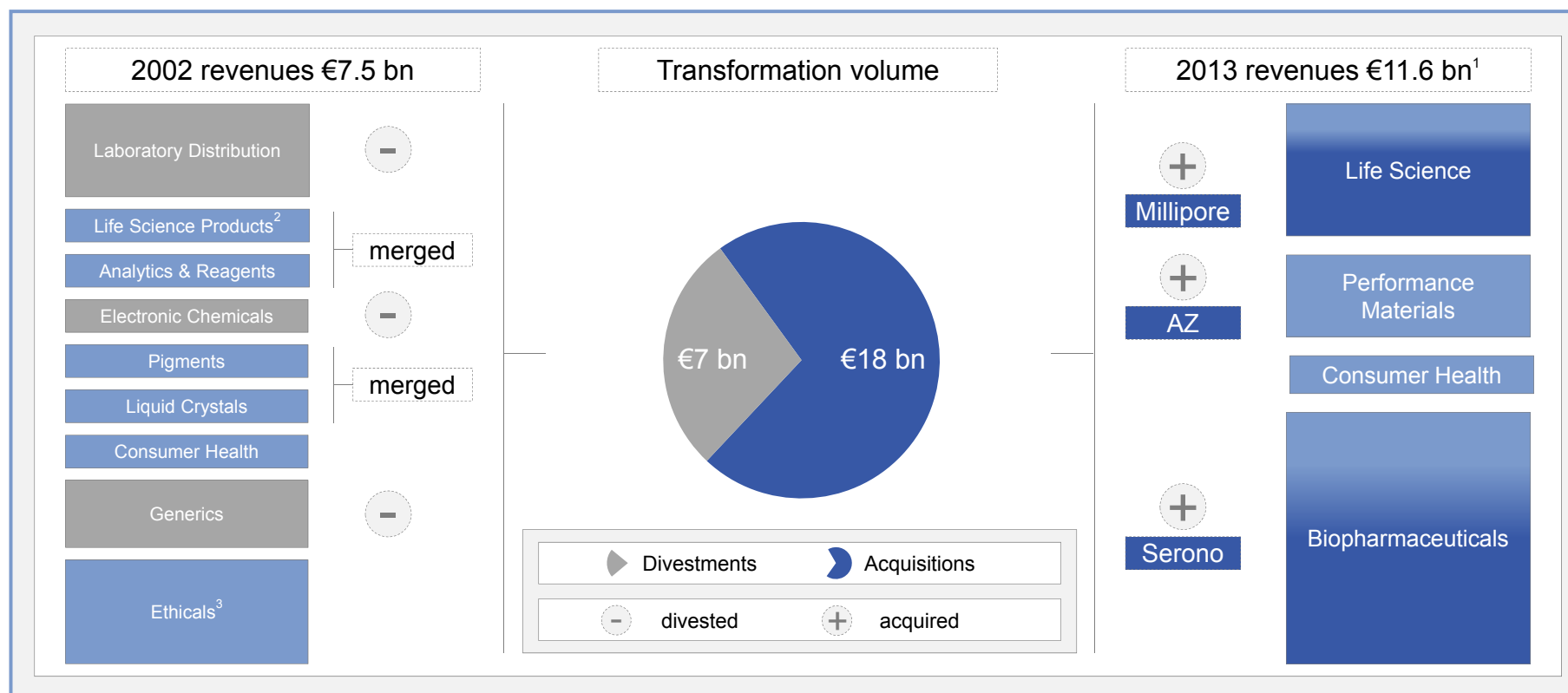
## **Business overview**

Next strategic step: quantum leap in Life Sciences

Update on Biopharmaceuticals

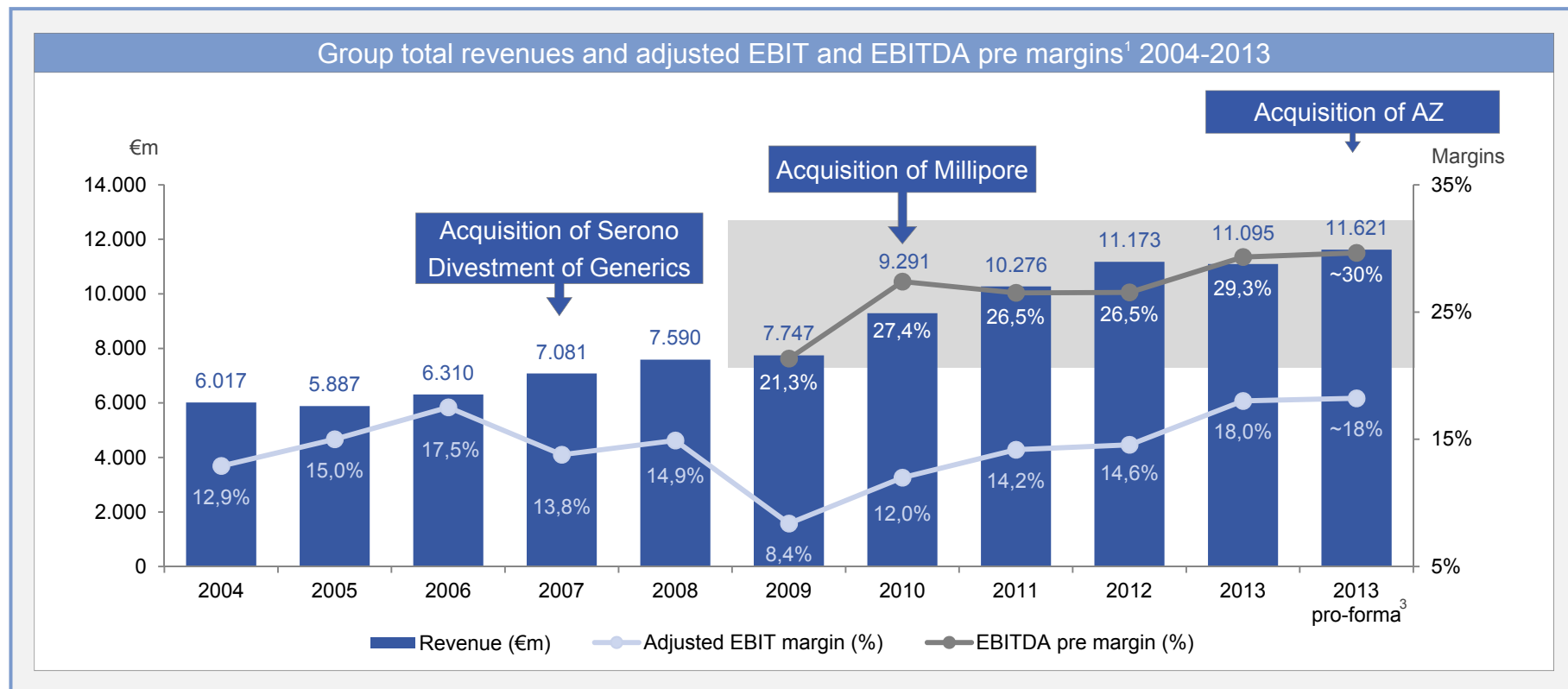
Financial review & guidance

# We have added scale while strengthening the attractiveness of our portfolio



<sup>1</sup>Proforma figure including FY 2013 sales of 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



<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>Pro-forma calculation based on published FY 2013 results for Merck KGaA, Darmstadt, Germany (including pro-forma AZ); based on 100% expected synergies; including Corporate & Other

# A balanced portfolio of four divisions

## Merck KGaA, Darmstadt, Germany

### Biopharmaceuticals



Leading in certain specialty pharma markets

- Life cycle management
- Biologics
- Emerging markets

### Consumer Health



Present in OTC niche markets

- Vitamins
- Supplements
- Strong presence in Latin America and Europe

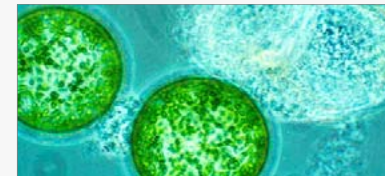
### Performance Materials



No. 1 in display materials

- Customer intimacy
- Innovation power
- Cost and technology leadership

### Life Science

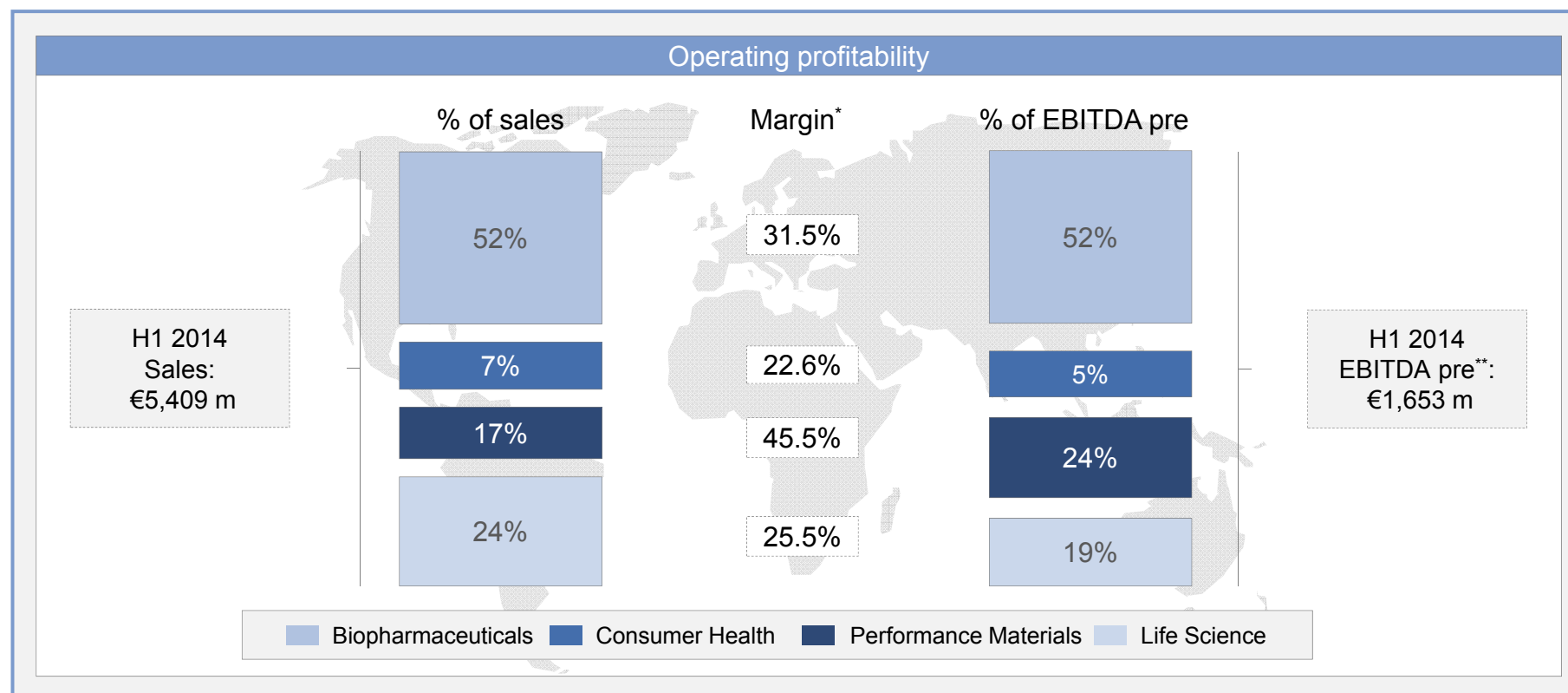


Top 3 in life science tools

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

# Strong businesses with attractive margins

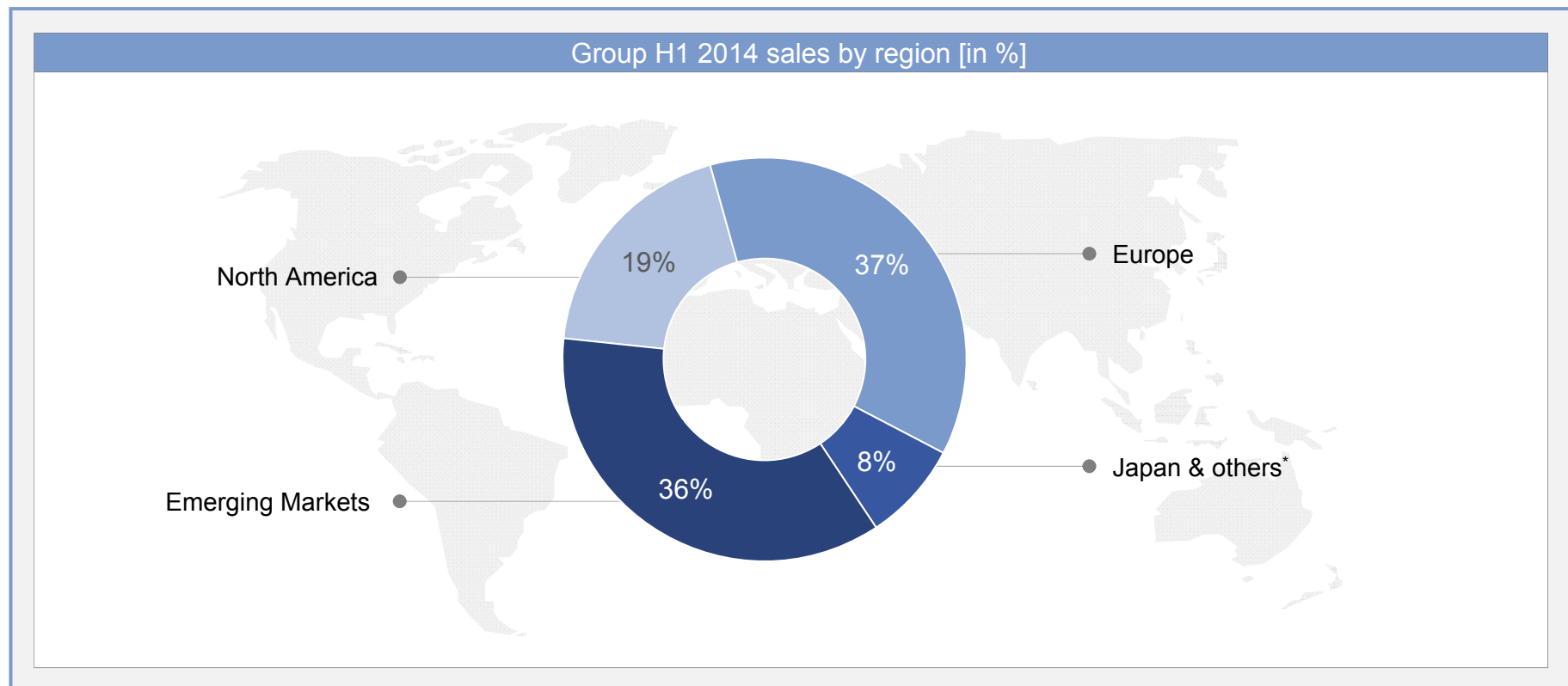
Merck KGaA  
Darmstadt · Germany



\*EBITDA pre margin in % of sales; \*\*Including Corporate/Others (-€68.1 m)  
Totals may not add up due to rounding

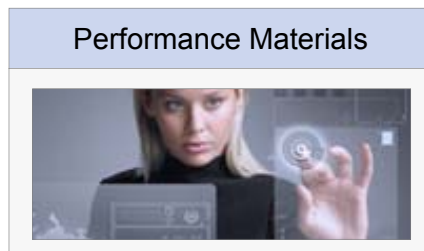


## Emerging Markets with highest share of sales, despite tough FX environment

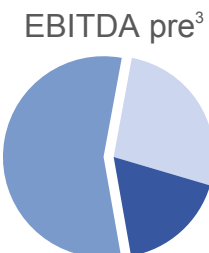
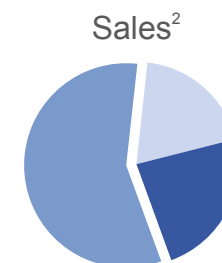


\*Australia/Oceania, Africa

# Our portfolio will remain diversified



- Diversification and risk management
- Attractive markets
- High-margin businesses
- Overlapping core competencies (meeting customer needs, innovation, regulated markets, quality, lifecycle management, handling of portfolio and product complexity)
- Company heritage

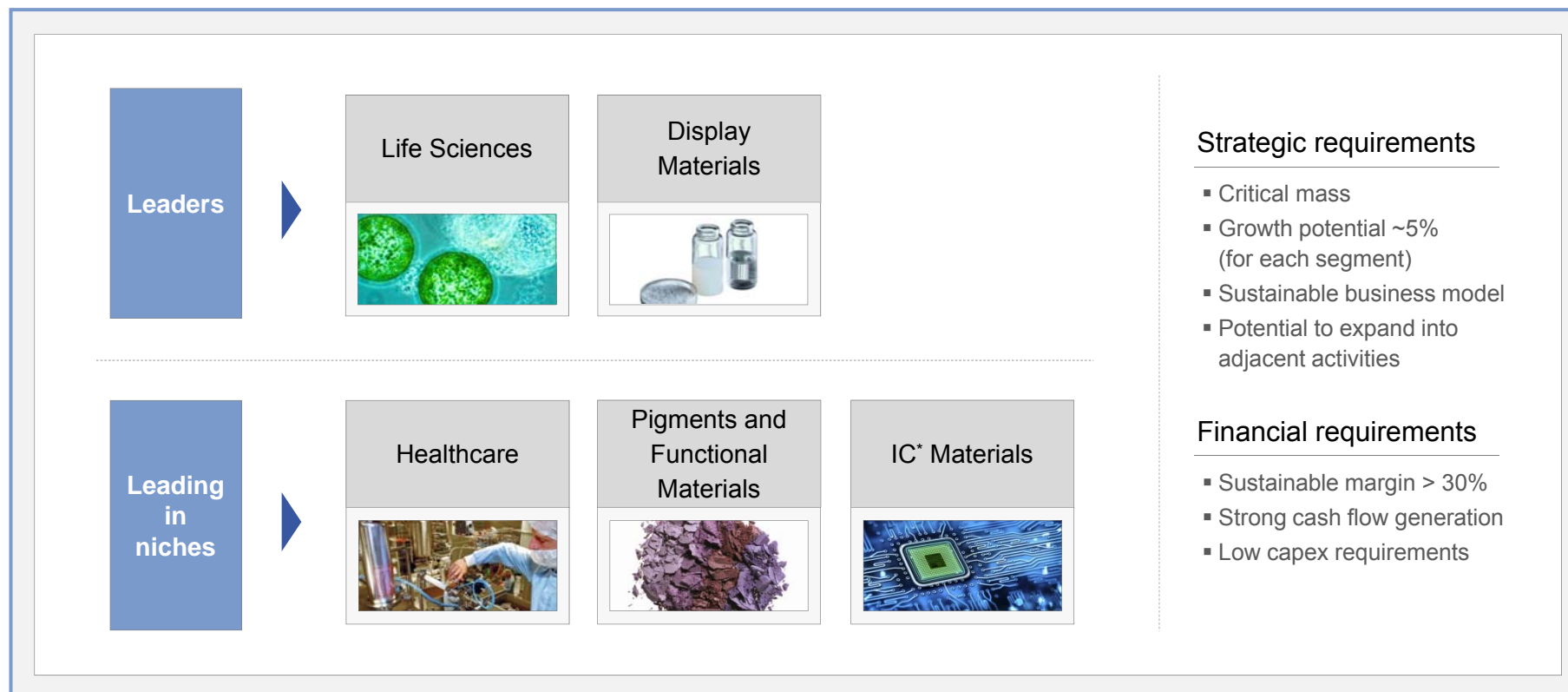


◆ Healthcare  
◆ Performance Materials  
◆ Life Sciences

<sup>1</sup>Healthcare includes Biopharmaceuticals and Consumer Health; <sup>2</sup>Proforma calculation based on published figures for FY 2013 for Merck KGaA, Darmstadt, Germany and AZ Electronic Materials

<sup>3</sup>Proforma calculation including AZ Electronic Materials and 100% expected synergies; excluding Corporate+Other

# All businesses in our portfolio have to meet stringent criteria



\*Integrated Circuit

## Agenda

Business overview

**Next strategic step: quantum leap in Life Sciences**

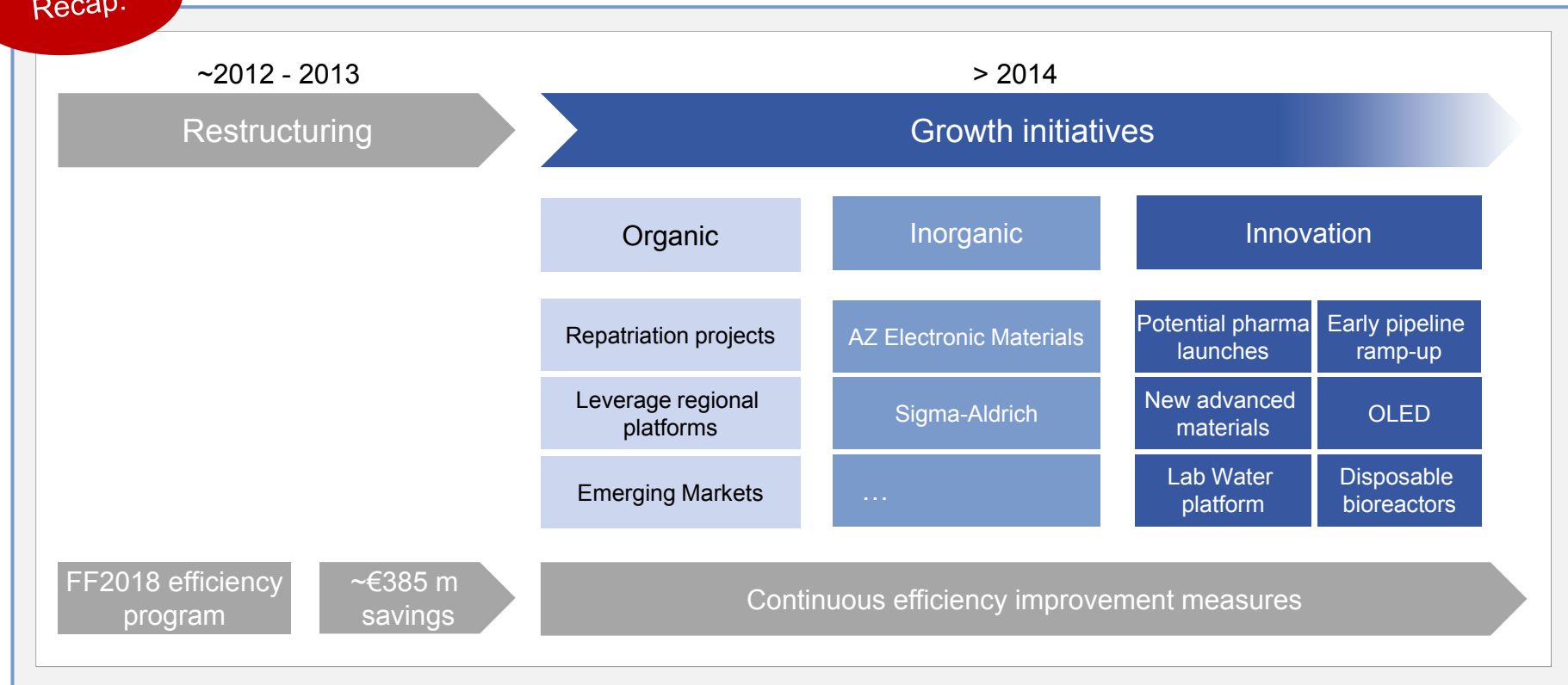
Update on Biopharmaceuticals

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# Strategic agenda beyond 2014 – Focus on growth

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Recap.



## In 2013 the majority of the savings program has been completed

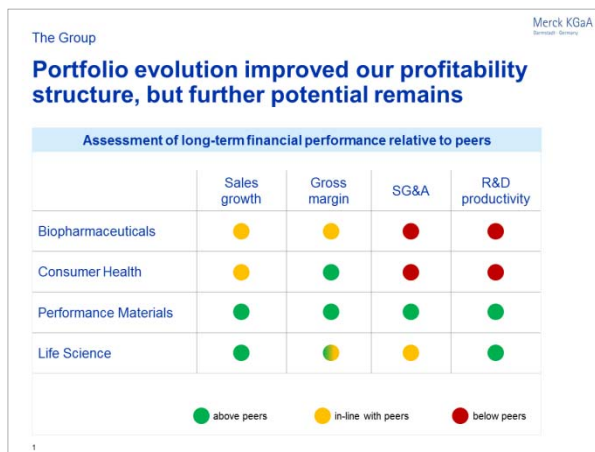
Previous savings 2013			New disclosure 2013		Remaining 2014-2017*
Biopharmaceuticals:	€250 m	 Acceleration	Biopharmaceuticals:	€275 m	€25 m
Consumer Health:	€15 m		Consumer Health:	€20 m	€5 m
Performance Materials:	€10 m		Performance Materials:	€20 m	€0 m
Life Science:	€5 m		Life Science:	€10 m	€30 m
Total:	€280 m		Total:	€325 m	€60 m

Swift implementation of efficiency measures: €325 m of €385 m completed

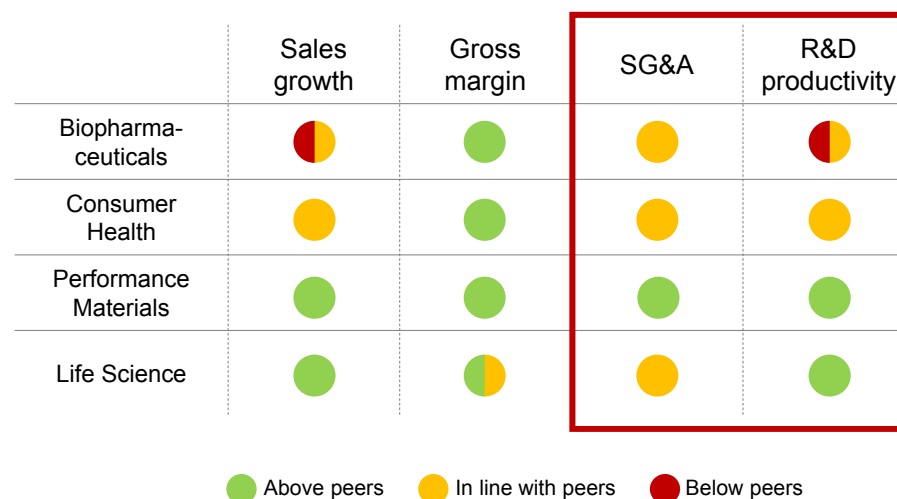
\*Remaining savings expected to lead to costs of ~€100 m

# Strong progress since 2012 but further room for efficiency improvements

May 2012



September 2014



# Ongoing efficiency initiatives to reduce costs and to support our growth strategy

## Structures and processes



- Harmonization of IT systems
- Standardization of processes
- Leverage and upscale shared services



## Costs



- Further reduction of operating leverage
- Additional focus on non-headcount-related costs
- Permanent cost control as part of our DNA



**Scalable business model enabling swift M&A integration and synergy generation**



# Sigma-Aldrich – Next step to enhance Life Science segment

Merck KGaA  
Darmstadt · Germany

## 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 our life science business to the next level



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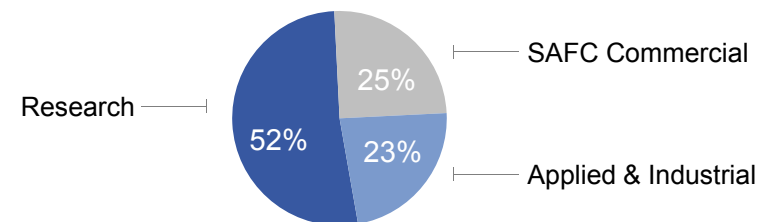
## Business

- 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

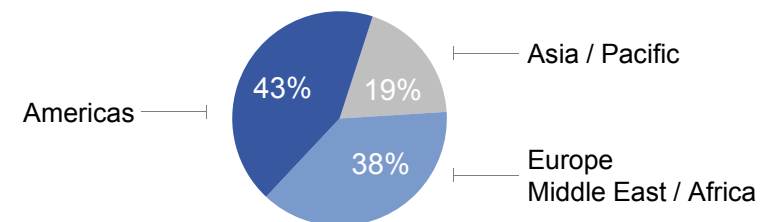
## Footprint

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

Sales by division FY 2013\*



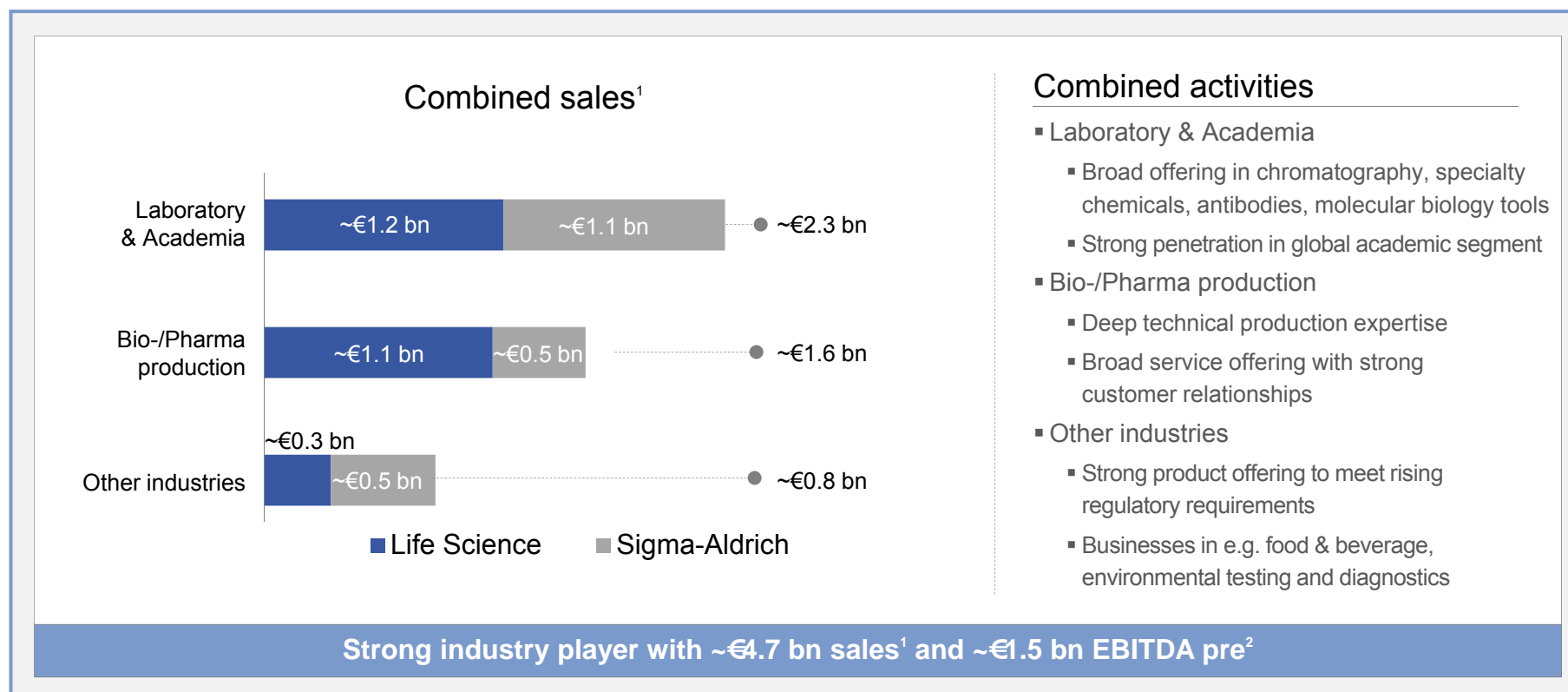
Sales by region FY 2013\*



\*Company reports FY 2013

# Merck KGaA, Darmstadt, Germany and Sigma-Aldrich

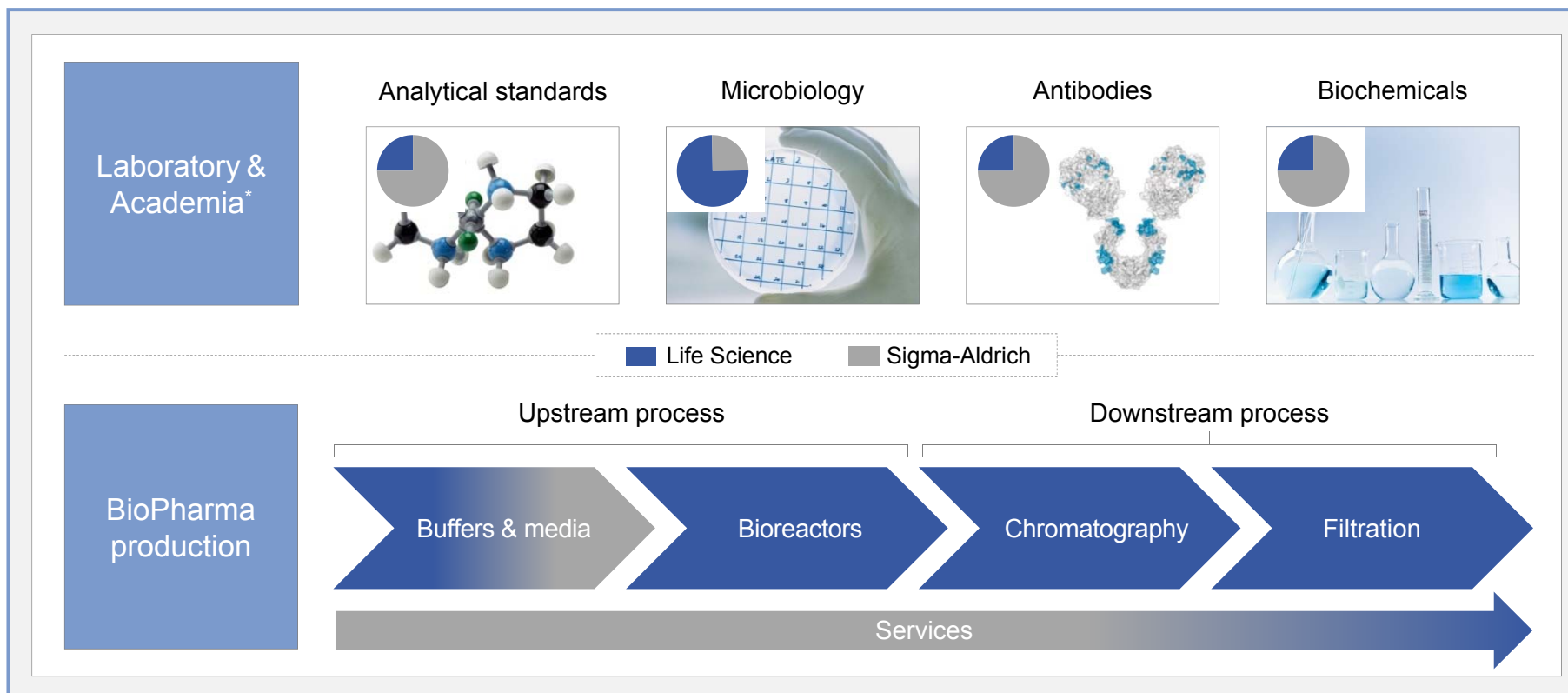
## – Presenting a leading life science industry player



<sup>1</sup>Pro-forma calculation based on published sales for FY 2013 for Life Science and Sigma-Aldrich (FX conversion: EUR/USD 1.30);

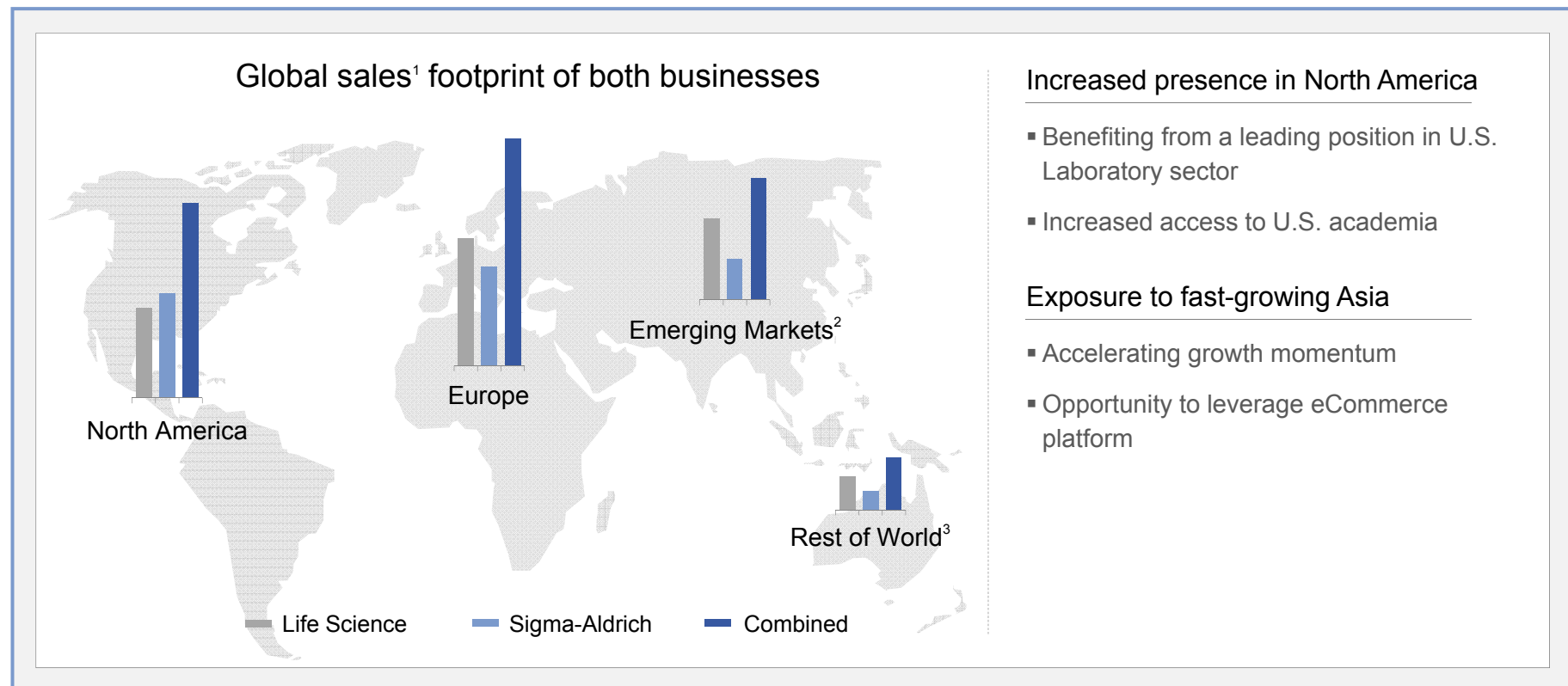
<sup>2</sup>Pro-forma calculation based on 100% expected synergies and published figures for FY 2013 for Life Science and Sigma-Aldrich (FX conversion: EUR/USD 1.30)

# Broad and complementary product fit in attractive segments



\*Key laboratory and academia areas illustrated

# Expanding global reach and scale



<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

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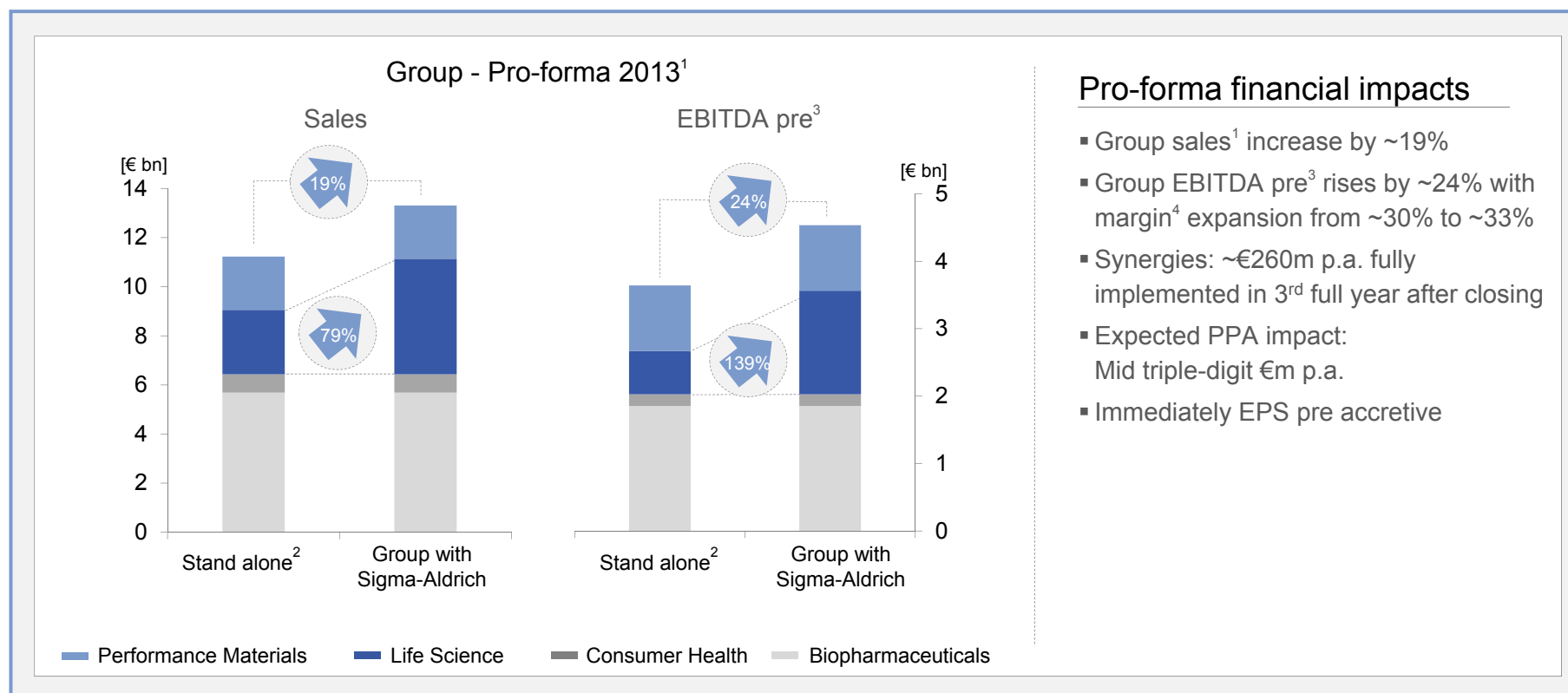
Overview of financial data <sup>1</sup>				Proposed transaction details <sup>2</sup>		
US\$ m	2012	2013	2014E <sup>4</sup>	<ul style="list-style-type: none"> <li>▪ Equity value ~US\$17 bn (€13.1 bn)</li> <li>▪ Enterprise value (EV) ~€12.7 bn including net cash ~€360 m</li> <li>▪ Financing through cash and debt; no equity</li> <li>▪ Assumed synergies: ~€260m</li> <li>▪ In line with core acquisition criteria                             <ul style="list-style-type: none"> <li>▪ Immediately accretive to EPS pre</li> <li>▪ Solid investment grade rating will be maintained</li> </ul> </li> </ul>		
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.			
				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)

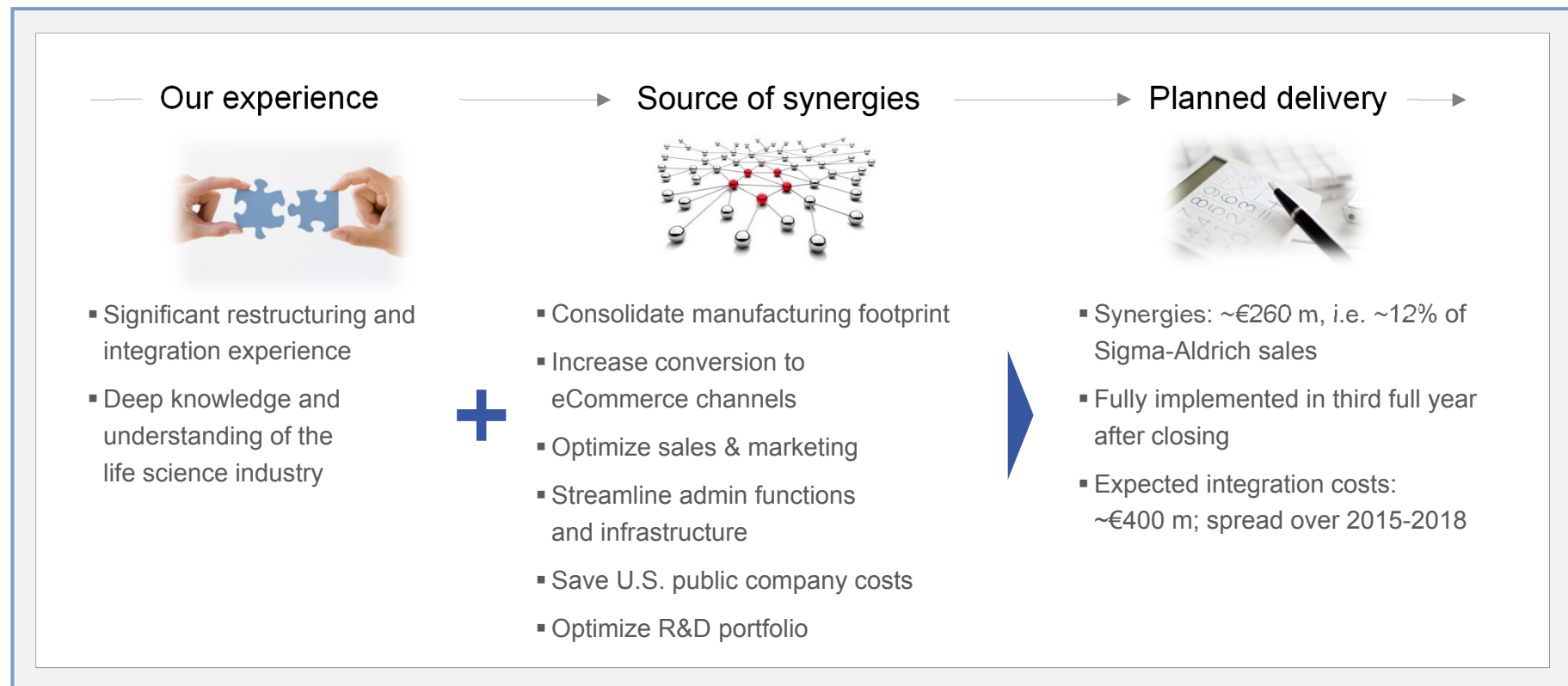


# Transaction enhances our financial profile

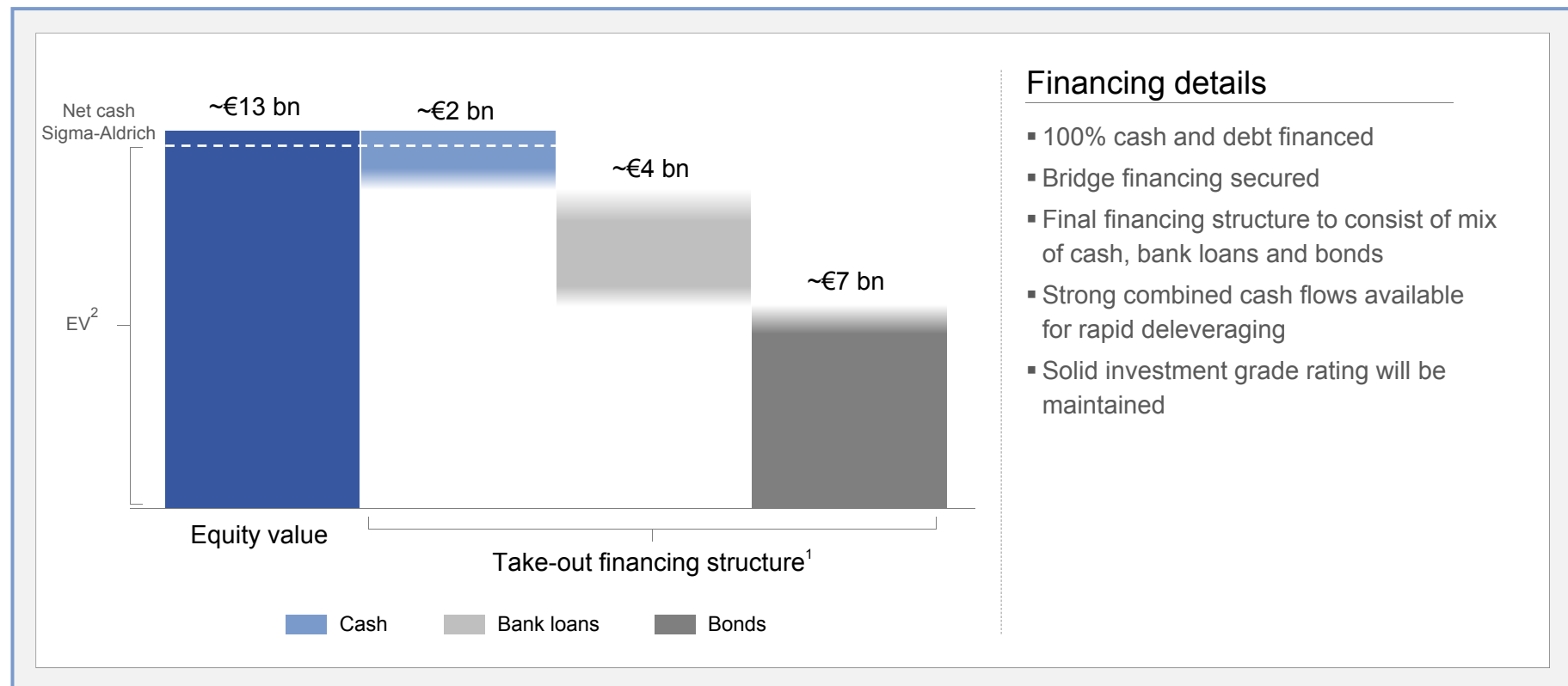


<sup>1</sup>Pro-forma calculation based on published sales for FY 2013 for Merck KGaA, Darmstadt, Germany (including pro-forma AZ Electronic Materials) and Sigma-Aldrich; <sup>2</sup>Pro-forma calculation based on published sales for FY 2013 for Merck KGaA, Darmstadt, Germany (including pro-forma AZ 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



# Sigma-Aldrich acquisition – Financing secured



<sup>1</sup>Indicative only; <sup>2</sup>Enterprise value

## Agenda

Business overview

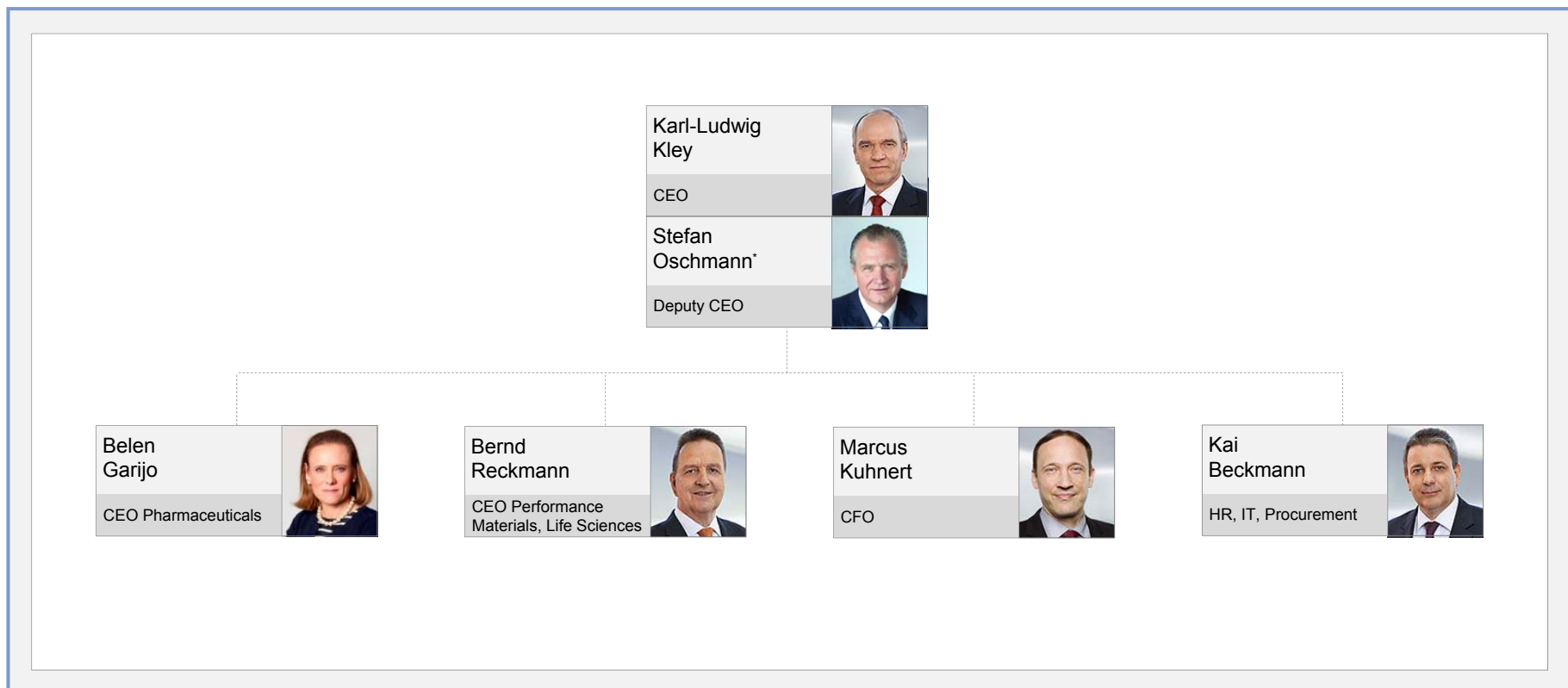
Next strategic step: quantum leap in Life Sciences

**Update on Biopharmaceuticals**

Financial review & guidance

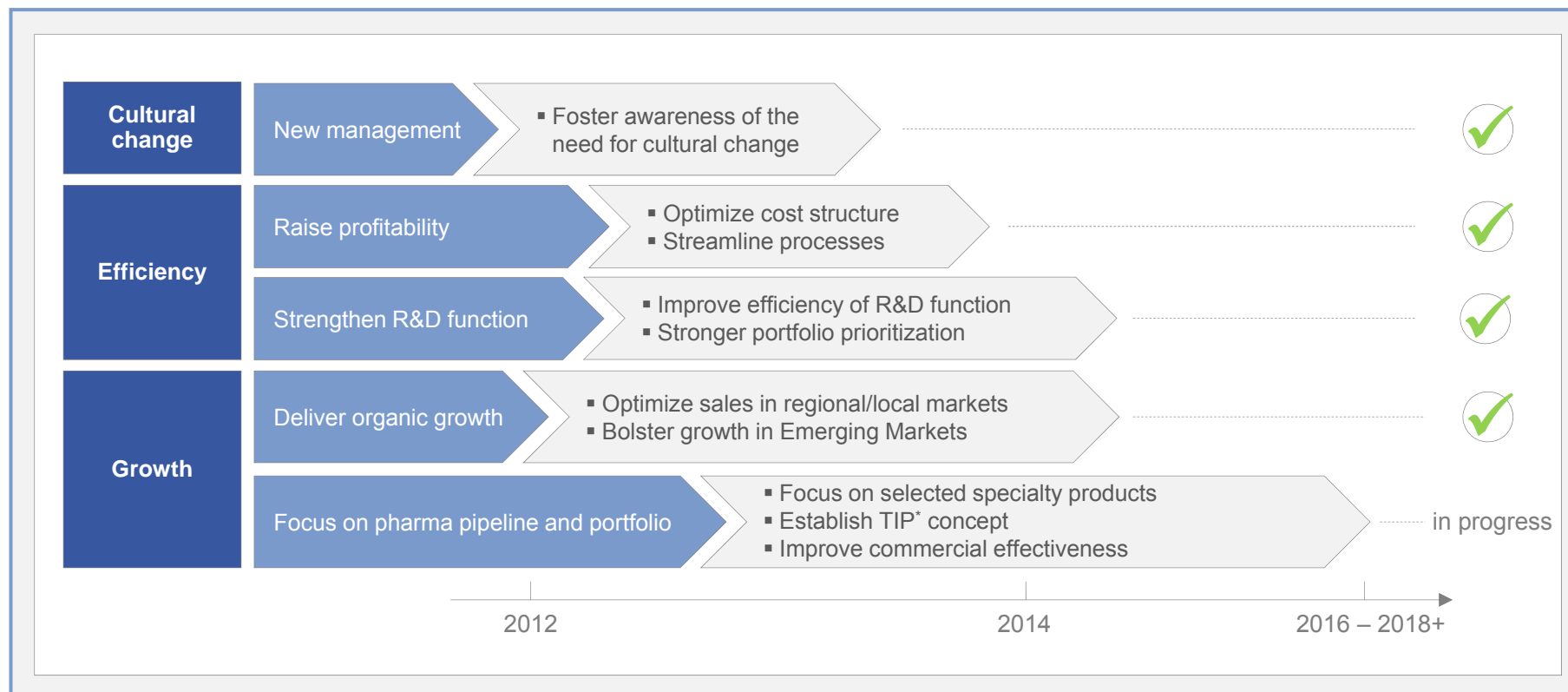
# Executive Board as of January 1, 2015

Merck KGaA  
Darmstadt · Germany



\*Responsibilities include Group Strategy & Organization, Regional Strategies, Public Affairs, Patents

# A substantial number of “Fit for 2018” measures have already been implemented



\*TIP = Translational Innovation Platform

# Portfolio management: Differentiating across diverse business models

Merck KGaA  
Darmstadt · Germany

## General Medicine portfolio



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



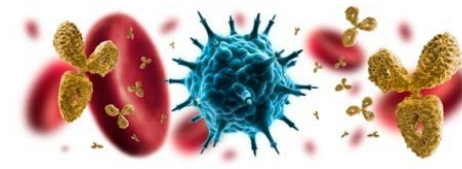
## Biologicals portfolio



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



## Oncology & Immunology innovation portfolio

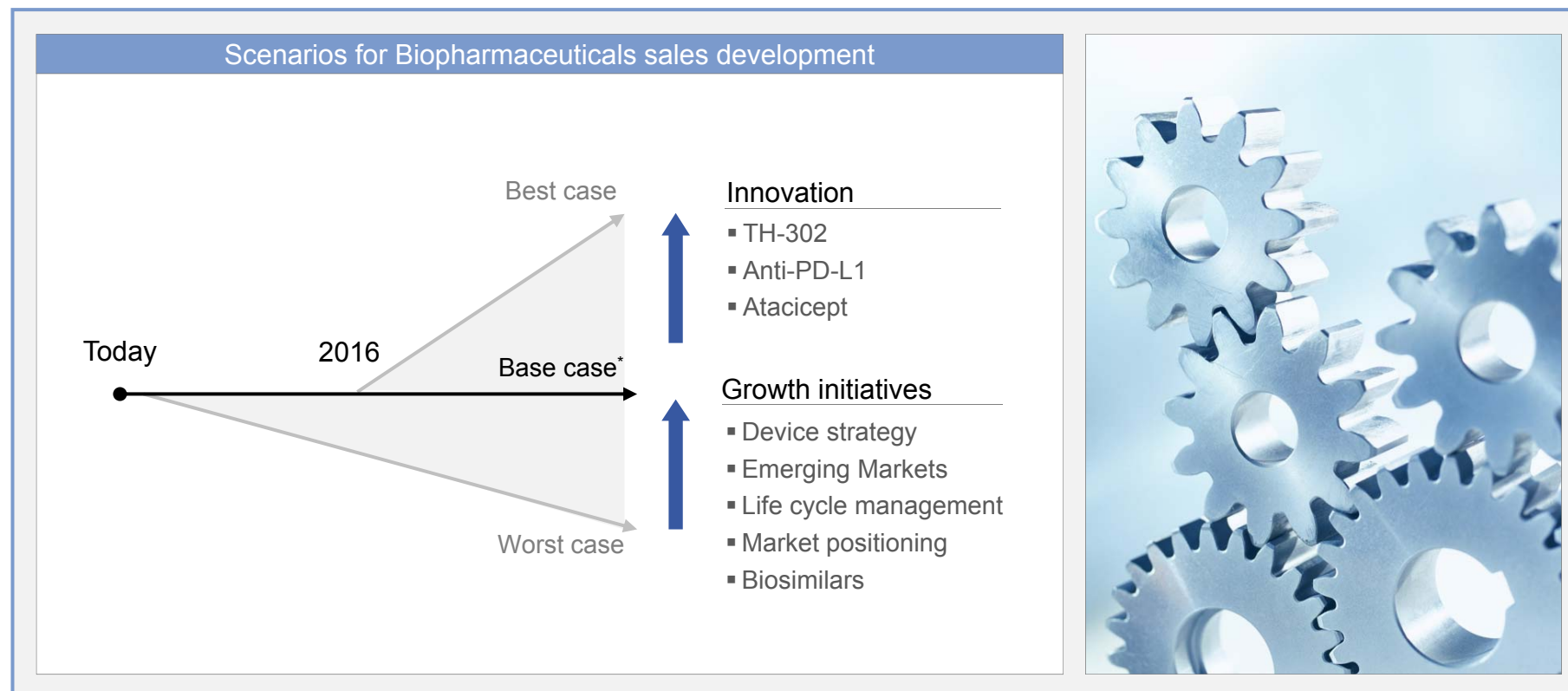


- High reward at high risk
- Innovation key success factor – high R&D spend
- Promising pipeline projects



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

## Growth initiatives will balance rising Rebif pressure – 'Innovation projects' provide upside potential



Illustration; \* without pipeline contribution



# Strategic priorities are well defined to maximize core franchises

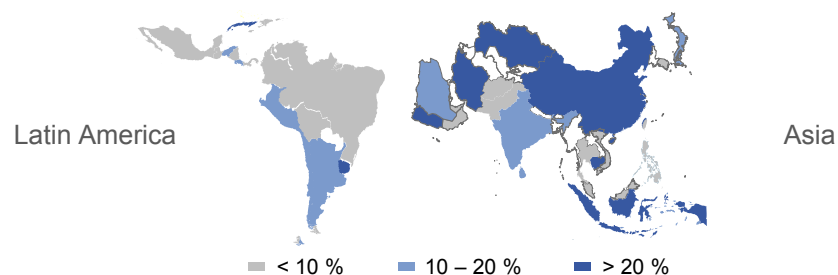
<b>Oncology</b>	<ul style="list-style-type: none"> <li>Promote Erbitux' value to personalized treatments</li> <li>Increase RAS testing adoption and usage</li> </ul>
<b>Multiple Sclerosis</b>	<ul style="list-style-type: none"> <li>Strengthen Rebif's competitive position as a leading treatment</li> <li>Drive differentiation via smart devices and first MS* e-health platform</li> </ul>
<b>Fertility</b>	<ul style="list-style-type: none"> <li>Provide innovative services and technologies beyond drugs</li> <li>Drive Emerging Markets presence, especially in China and Russia</li> </ul>
<b>Devices and services</b>	<ul style="list-style-type: none"> <li>Promote as key differentiator of Biopharmaceuticals' business</li> <li>Build as a focus area of innovation and service to patients</li> </ul>
<b>General Medicine and others</b>	<ul style="list-style-type: none"> <li>Focus on growth in Emerging Markets</li> <li>Enhance life-cycle management and recover growth levers in core markets</li> </ul>



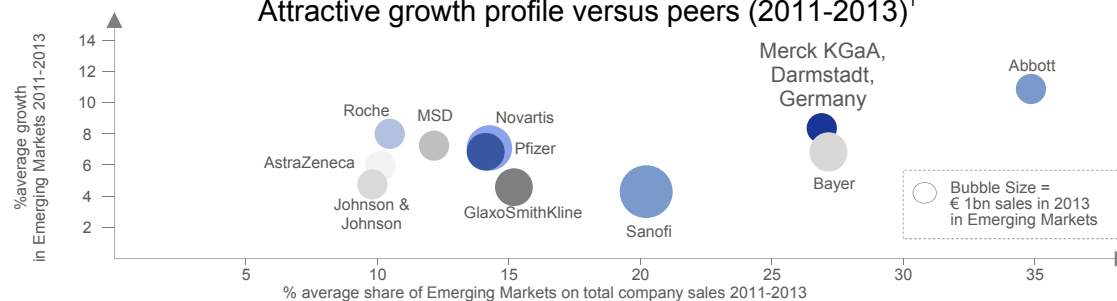
\*MS = multiple sclerosis

# Emerging Markets are a key pillar of growth for Biopharmaceuticals

2013 Organic growth rates of Biopharmaceuticals in Emerging Markets



Attractive growth profile versus peers (2011-2013)<sup>1</sup>



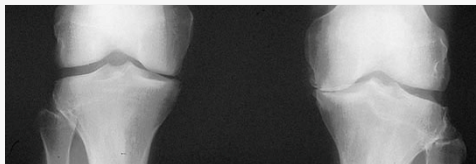
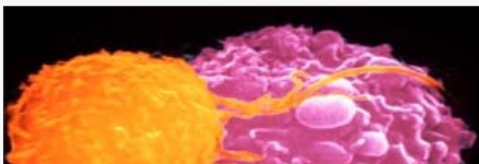

## Key facts

- Emerging Markets are a key driver for the branded products as well as for Biopharmaceuticals overall
- ~30% of sales in Emerging Markets
- ~50:50 breakdown between Latin America and Asia
- Emerging Markets account for >60% of organic growth 2011-2013<sup>2</sup>

Emerging Markets support existing business and serve as a platform for strategic growth initiatives

<sup>1</sup>Source: IMS MIDAS, 2012/2013 constant USD; <sup>2</sup>Source: Biopharmaceuticals  
 Note: Size of bubble = € bn sales in Emerging Markets (2013)

# Commitment to scientific innovation makes a meaningful difference

	Immunology & Neurology	Oncology	Immuno-Oncology
Efficiency			
Focus	Vision	Vision	Vision
	Understand disease-led human immunology to build a competitive drug portfolio	Leverage our presence in oncology to deliver the best benefit possible to patients	Transform cancer into a chronic disease
Innovation	Key projects*	Key projects*	Key projects*
	<ul style="list-style-type: none"> <li>▪ Atacicept</li> <li>▪ ATX-MS-1467</li> <li>▪ BTK inhibitor</li> </ul>	<ul style="list-style-type: none"> <li>▪ TH-302</li> <li>▪ c-Met inhibitor</li> <li>▪ p7056K &amp; Akt inhibitor</li> </ul>	<ul style="list-style-type: none"> <li>▪ Anti-PD-L1</li> <li>▪ NHS-IL2LT</li> <li>▪ NHS-IL-12</li> </ul>

\*Examples

# Anti-PD-L1 – A promising asset

## PRODUCT PROFILE

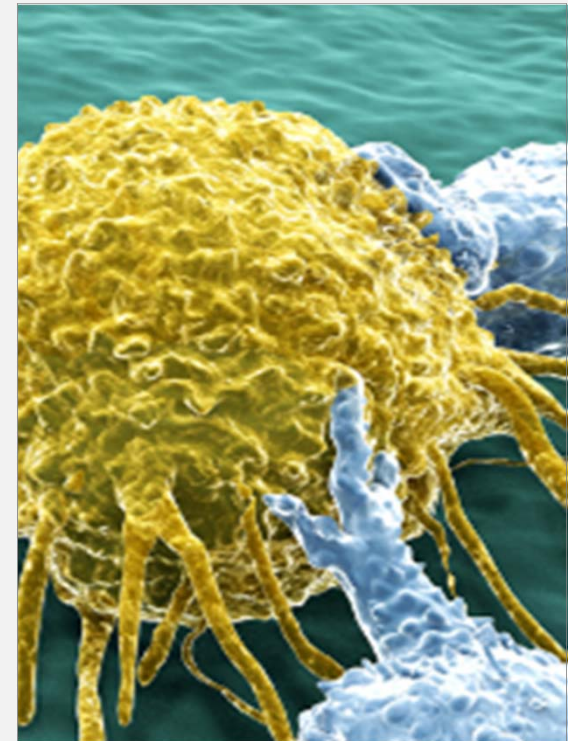
### Increasing clinical evidence of competitive product profile

- Over 500 patients treated in Phase I study across multiple tumor types
- Interim analysis of expansion cohorts confirms promising risk/benefit on 2<sup>nd</sup> line NSCLC and heavily pre-treated ovarian cancer patients
- On-going Phase II study in m-Merkel cell carcinoma

## GLOBAL CO-DEVELOPMENT AND CO-COMMER- CIALIZATION

### Strategic approach

- Competitive process for global co-development and co-commercialization has been initiated
- Decision will be driven by development, regulatory and commercial track record as well as deal financials
- Currently in advanced discussions with several oncology players



## Agenda

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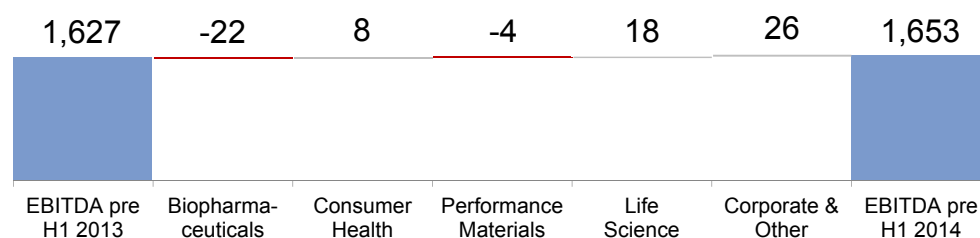
Update on Biopharmaceuticals

**Financial review & guidance**

## All divisions post organic growth while currency headwinds continue

H1 YoY sales	Organic	Currency	Portfolio	Total
Biopharmaceuticals	3.6%	-4.8%	0.0%	-1.2%
Consumer Health	7.1%	-5.8%	0.0%	1.2%
Performance Materials	1.5%	-5.4%	10.4%	6.5%
Life Science	3.8%	-4.9%	-0.4%	-1.5%
<b>The Group</b>	<b>3.6%</b>	<b>-5.0%</b>	<b>1.5%</b>	<b>0.1%</b>

H1 YoY EBITDA pre contributors [€ m]



- Portfolio reflects the acquisition of AZ Electronic Materials
- Currency headwinds mainly driven by the U.S. dollar

- Life Science contributes with solid organic performance
- Performance Materials faces strong comparables
- Biopharmaceuticals affected by loss of Avonex and Enbrel royalty income
- Corporate & Other includes higher hedging gains versus last year

Totals may not add up due to rounding

# H1 2014: Stable financials amid royalty income reduction and currency headwinds

[€ m]	H1 2013	H1 2014	Δ
<b>Sales</b>	<b>5,404</b>	<b>5,409</b>	<b>0.1%</b>
<b>EBITDA pre</b>	<b>1,627</b>	<b>1,653</b>	<b>1.6%</b>
<i>Margin (% of sales)</i>	<i>30.1%</i>	<i>30.6%</i>	
<b>EPS pre [€]</b>	<b>2.19</b>	<b>2.32</b>	<b>5.9%</b>
<b>Operating cash flow</b>	<b>958</b>	<b>838</b>	<b>-12.5%</b>
[€ m]	Dec 31, 2013	June 30, 2014	Δ
<b>Net financial debt</b>	<b>307</b>	<b>2,220</b>	<b>&gt;100%</b>
<b>Working capital</b>	<b>2,132</b>	<b>2,434</b>	<b>14.2%</b>
<b>Employees</b>	<b>38,154</b>	<b>39,230</b>	<b>2.8%</b>
<b>Net financial debt increases on AZ acquisition</b>			

- | H1 2014  |
|--|
| <ul style="list-style-type: none"> <li>▪ Sales stable as organic growth and portfolio offset negative FX effects</li> <li>▪ EBITDA pre and EPS pre improve on solid organic performance and AZ despite loss of royalty income</li> <li>▪ Operating cash flow burdened by higher tax payments</li> <li>▪ Jump in working capital reflects consolidation from AZ</li> <li>▪ Increase in headcount includes ~1,150 employees from AZ</li> </ul> |

# Full-year guidance confirmed

Merck KGaA  
Darmstadt · Germany

## Group guidance for 2014, including AZ<sup>1</sup>

▶	<b>Sales:</b>	<b>~ €10.9 – 11.1 bn</b>	◀
▶	<b>EBITDA pre:</b>	<b>~ €3.3 – 3.4 bn</b>	◀
▶	<b>EPS pre<sup>2</sup>:</b>	<b>~ €4.50 – 4.75</b>	◀




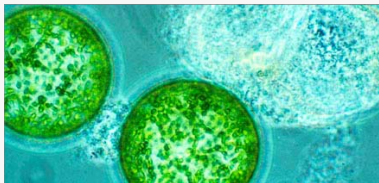


<sup>1</sup>Including AZ Electronic Materials from May to December 2014

<sup>2</sup>Based on number of shares after the share split, which has been effective since June 30, 2014



# Guidance details

Biopharmaceuticals	Consumer Health	Performance Materials	Life Science
			
Sales	Sales	Sales	Sales
Slight organic growth	Moderate organic growth	Slight organic growth	Moderate organic growth
EBITDA pre	EBITDA pre	EBITDA pre*	EBITDA pre
~ €1,750 – 1,830 m	~ €170 – 180 m	~ €850 – 880 m	~ €640 – 670 m
<b>Group 2014 guidance*: ~ €3.3 to €3.4 billion EBITDA pre</b>			

\* Including AZ Electronic Materials from May to December 2014

# Merck KGaA

Darmstadt · Germany

# Appendix

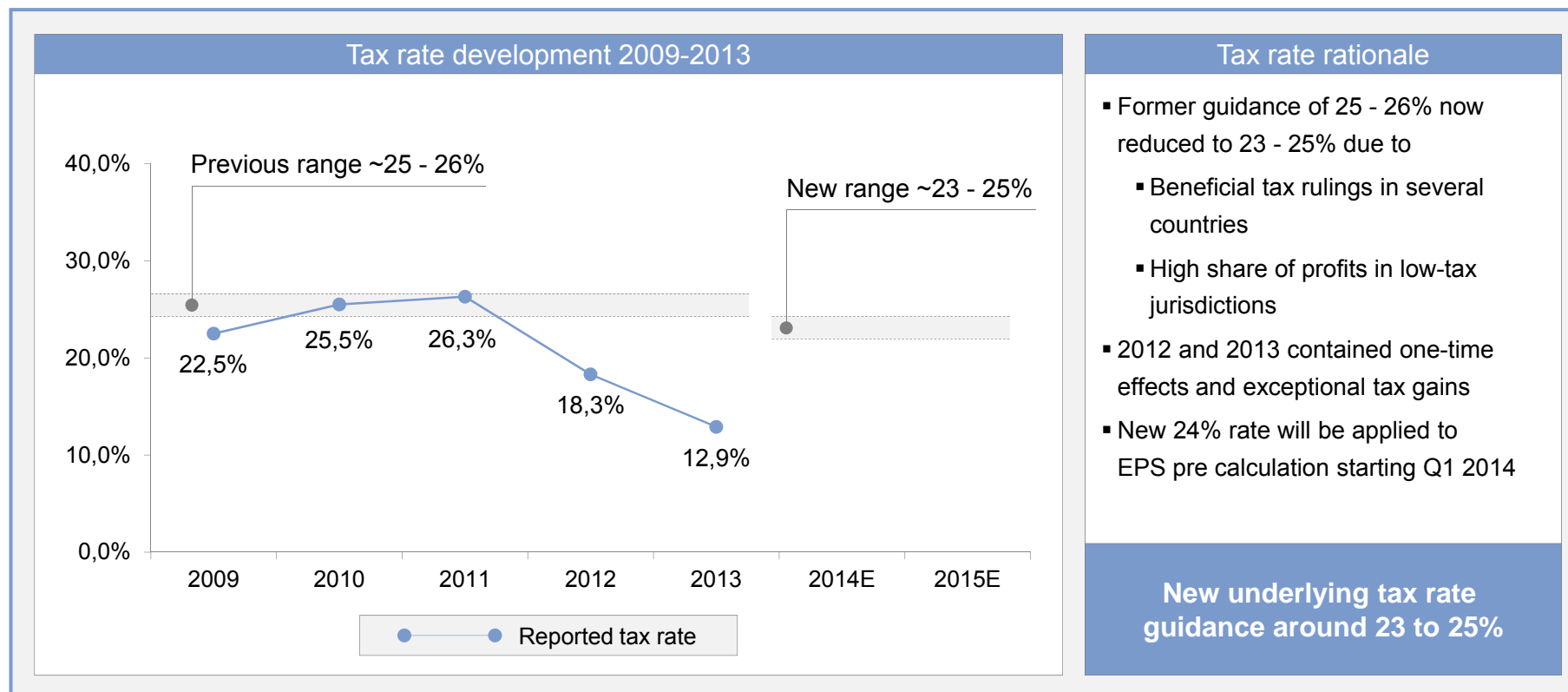
## Additional financial guidance

### Further financial details

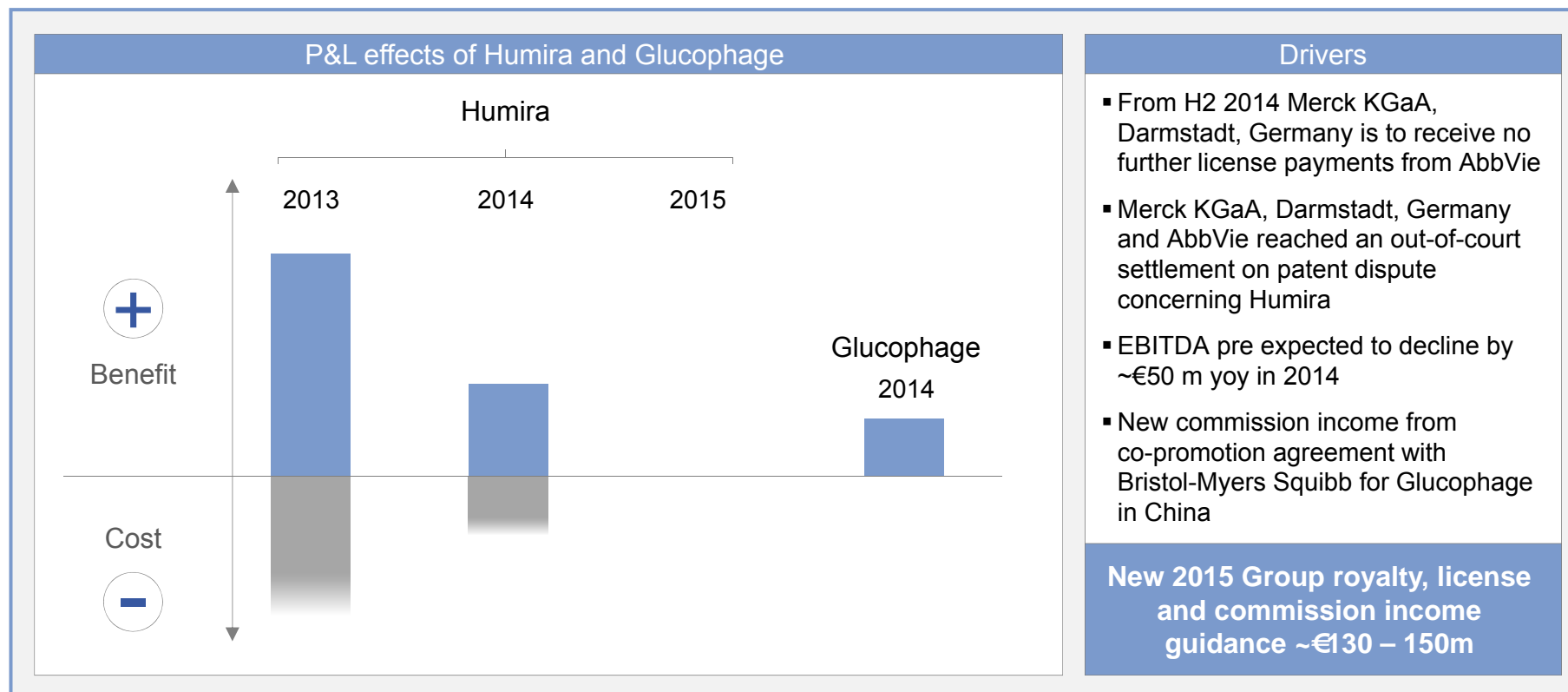
Group royalty, license and commission income in 2015	~€130 – 150 m
Corporate & Other EBITDA pre	~€ -160 – 190 m
Underlying tax rate	~23% to 25%
Capex on PPE and software	~€450 - 500 m
Hedging / USD assumption	2014 & 2015 hedge rate ~30% at EUR/USD ~1.30 to 1.35



## Favorable tax rulings in several countries result in decrease in underlying tax rate



## Settlement on patent dispute with AbbVie, while BMS co-promotion will yield first results



Illustration

# Group 2014 industry outlook

Merck KGaA  
Darmstadt · Germany

## Biopharmaceuticals

- ▶ Growth will be driven by emerging markets, especially China and Brazil
- ▶ Mature markets will continue to be affected from austerity measures

## Consumer Health

- ▶ Industry growth of ~5% in Consumer Health end markets
- ▶ Emerging markets grow mid to high-single digit, European growth lower

## Performance Materials

- ▶ LC display market growth fueled by trend to larger displays
- ▶ World automotive market forecasted to grow low-single digit

## Life Science

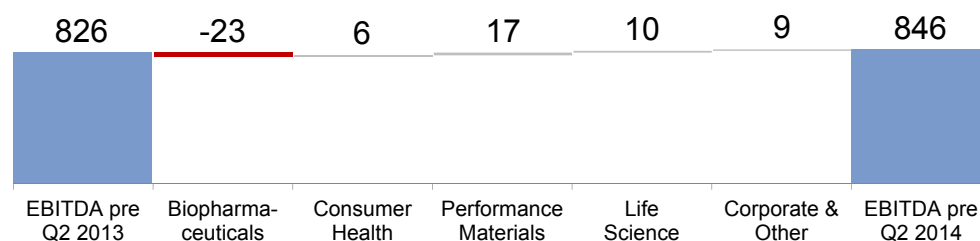
- ▶ Biotech R&D investments increase, benefiting Process Solutions
- ▶ Lab supply market grows 1-2%; austerity measures affect Bioscience



## All our businesses drive organic growth while currency headwinds remain

Q2 YoY sales	Organic	Currency	Portfolio	Total
Biopharmaceuticals	3.0%	-4.4%	0.0%	-1.4%
Consumer Health	8.5%	-5.2%	0.0%	3.3%
Performance Materials	1.8%	-5.1%	20.5%	17.3%
Life Science	4.0%	-4.2%	-0.9%	-1.1%
<b>The Group</b>	<b>3.4%</b>	<b>-4.5%</b>	<b>3.0%</b>	<b>1.9%</b>

Q2 YoY EBITDA pre contributors [€ m]



- Portfolio reflects the acquisition of AZ Electronic Materials
- Currency headwinds mainly driven by U.S. dollar & related currencies

- Performance Materials contains two months EBITDA pre from AZ
- Biopharmaceuticals affected by loss of Avonex and Enbrel royalty income
- Corporate & Other includes higher hedging gains (~€10 m) versus LY

Totals may not add up due to rounding

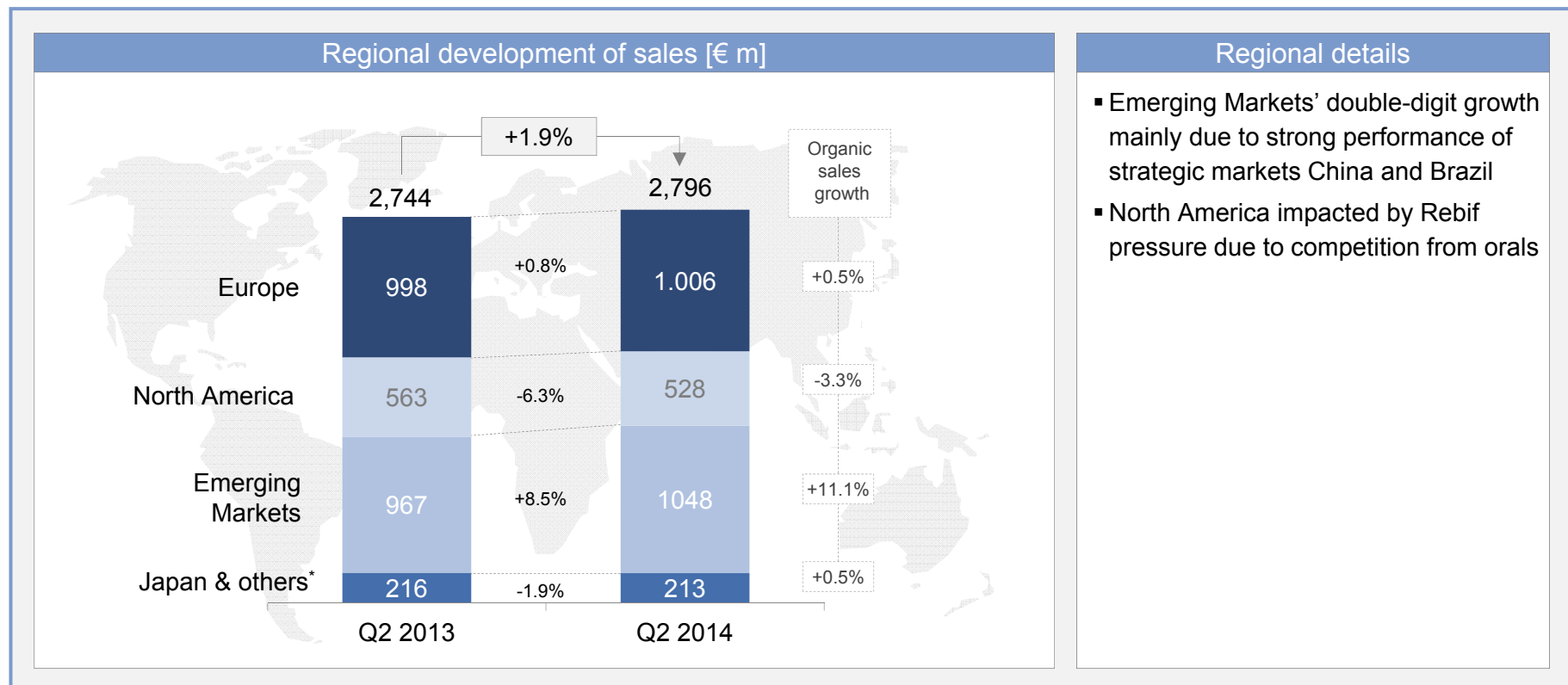


# Q2 2014: Solid financials amid royalty reduction & FX

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[€ m]	Q2 2013	Q2 2014	Δ	Q2 2014
<b>Sales</b>	<b>2,744</b>	<b>2,796</b>	<b>1.9%</b>	<ul style="list-style-type: none"> <li>▪ Sales up on organic improvement &amp; portfolio overcompensating for negative currency effects</li> <li>▪ EBITDA pre and EPS pre up on organic performance and portfolio despite loss of royalty income</li> <li>▪ Underlying operating cash flow remains on healthy level</li> <li>▪ Jump in working capital reflects consolidation from AZ</li> <li>▪ Increase in headcount includes ~1,150 employees from AZ</li> </ul>
<b>EBITDA pre</b>	<b>826</b>	<b>846</b>	<b>2.3%</b>	
<i>Margin (% of sales)</i>	<i>30.1%</i>	<i>30.3%</i>		
<b>EPS pre [€]</b>	<b>1.13</b>	<b>1.16</b>	<b>2.7%</b>	
<b>Operating cash flow</b>	<b>443</b>	<b>429</b>	<b>-3.0%</b>	
[€ m]	Dec 31, 2013	June 30, 2014	Δ	
<b>Net financial debt</b>	<b>307</b>	<b>2,220</b>	<b>&gt;100%</b>	
<b>Working capital</b>	<b>2,132</b>	<b>2,434</b>	<b>14.2%</b>	
<b>Employees</b>	<b>38,154</b>	<b>39,230</b>	<b>2.8%</b>	
<b>Net financial debt increases on AZ acquisition</b>				

# Double-digit growth in Emerging Markets, all divisions contribute



\*Australia/Oceania, Africa  
Totals may not add up due to rounding

# Reported earnings contain AZ inventory step-up

[€ m]	Q2 2013	Q2 2014	Δ	Reported results
<b>EBIT</b>	<b>465</b>	<b>441</b>	<b>-5.2%</b>	<ul style="list-style-type: none"> <li>▪ EBIT contains AZ inventory step-up of ~€30 m, fully expensed in cost of sales</li> <li>▪ Tax rate benefits from favorable regional profit split and one-time tax refund</li> </ul>
Financial result	-49	-50	3.5%	
<b>Profit before tax</b>	<b>417</b>	<b>391</b>	<b>-6.3%</b>	
Income tax	-101	-85	-15.8%	
<i>Tax rate (%)</i>	<i>24.2%</i>	<i>21.7%</i>		
<b>Net income</b>	<b>316</b>	<b>303</b>	<b>-4.0%</b>	
<b>EPS (€)</b>	<b>0.73</b>	<b>0.70</b>	<b>-4.1%</b>	

# Solid business performance leads to EPS increase

Merck KGaA  
Darmstadt · Germany

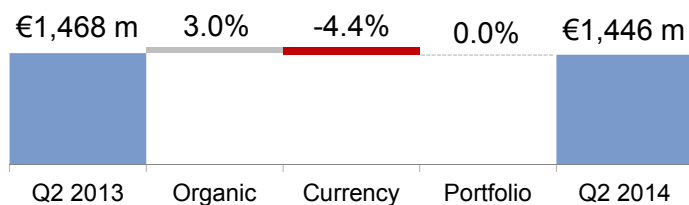
[€ m]	H1 2013	H1 2014	Δ	Reported results
<b>EBIT</b>	<b>865</b>	<b>909</b>	<b>5.1%</b>	<ul style="list-style-type: none"> <li>▪ EBIT up on organic growth and lean cost structure, offsetting lower royalties, one-time costs and FX</li> <li>▪ Financial result improves on lower interest payments due to bond repayment and CTA* funding</li> <li>▪ Net income increases on solid H1 operational performance, partly offset by one-time effects of AZ acquisition</li> </ul>
Financial result	-107	-85	-20.8%	
<b>Profit before tax</b>	<b>758</b>	<b>824</b>	<b>8.8%</b>	
Income tax	-172	-191	10.7%	
<i>Tax rate (%)</i>	<i>22.8%</i>	<i>23.2%</i>		
<b>Net income</b>	<b>582</b>	<b>628</b>	<b>8.0%</b>	
<b>EPS (€)</b>	<b>1.34</b>	<b>1.45</b>	<b>8.2%</b>	

\* Contractual Trust Arrangement

# Biopharmaceuticals: Emerging Markets drive organic growth

[€ m]	Q2 2013 <sup>1</sup>	Q2 2014
<b>Sales</b>	<b>1,468</b>	<b>1,446</b>
Marketing and selling	-332	-324
Admin	-50	-56
R&D	-295	-312
<b>EBIT</b>	<b>266</b>	<b>240</b>
EBITDA	478	444
<b>EBITDA pre</b>	<b>475</b>	<b>452</b>
<i>Margin (% of sales)</i>	<i>32.4%</i>	<i>31.3%</i>

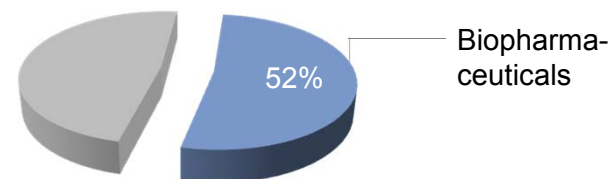
Sales bridge



Comments

- Solid organic sales growth is overshadowed by FX headwinds
- Rebif softer as past U.S. pricing is outweighed by competition from orals, increasingly also in Europe
- Erbitux performance driven by volume expansion in Emerging Markets (EM) and market share gains in Japan
- General Medicine<sup>2</sup> with largest contribution to EM performance
- R&D increase due to cost phasing as well as one-time costs
- Despite positive pricing effects, EBITDA pre margin declines on termination of Avonex and Enbrel royalty streams and FX

Q2 2014 share of group sales



<sup>1</sup>Restated for product reclassification of Neurobion and Floratil from Biopharmaceuticals to Consumer Health; <sup>2</sup>includes "Cardiometabolic Care & General Medicine and Others"

# Consumer Health: Strategic brands fuel growth

[€ m]	Q2 2013*	Q2 2014	Comments
<b>Sales</b>	<b>179</b>	<b>185</b>	<ul style="list-style-type: none"> <li>▪ Slight increase in sales driven by strong organic growth offsetting continued currency headwinds</li> <li>▪ Strategic brands show ongoing good development in Emerging Markets (Neurobion and Floratil in Brazil)</li> <li>▪ Pregnancy supplements (Femibion) continue to contribute nicely in Europe due to good demand and new sales force initiatives</li> <li>▪ Strong season for mosquito repellents following soft winter supports performance of local brands in Europe</li> <li>▪ Improved profitability driven by positive pricing and favorable product mix as a result of focusing on strategic products</li> </ul>
Marketing and selling	-72	-70	
Admin	-6	-7	
R&D	-6	-5	
<b>EBIT</b>	<b>34</b>	<b>37</b>	
EBITDA	37	39	
<b>EBITDA pre</b>	<b>35</b>	<b>41</b>	
<i>Margin (% of sales)</i>	<i>19.8%</i>	<i>22.4%</i>	
<b>Sales bridge</b>			<b>Q2 2014 share of group sales</b>
<p>€179 m    8.5%    -5.2%    0.0%    €185 m</p> <p>Q2 2013    Organic    Currency    Portfolio    Q2 2014</p>			<p>Consumer Health 7%</p>

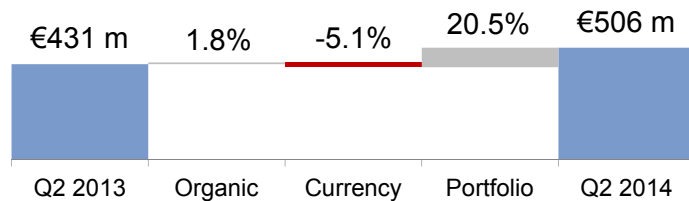
\*Restated for product reclassification of Neurobion and Floratil from Biopharmaceuticals to Consumer Health

# Performance Materials: First quarter of AZ contribution

Merck KGaA  
Darmstadt · Germany

[€ m]	Q2 2013	Q2 2014
<b>Sales</b>	<b>431</b>	<b>506</b>
Marketing and selling	-37	-45
Admin	-8	-15
R&D	-33	-38
<b>EBIT</b>	<b>170</b>	<b>137</b>
EBITDA	205	178
<b>EBITDA pre</b>	<b>209</b>	<b>226</b>
<i>Margin (% of sales)</i>	<i>48.5%</i>	<i>44.8%</i>

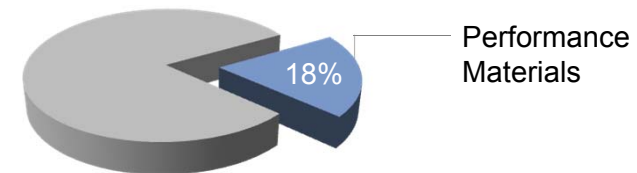
Sales bridge



Comments

- Sales increase as organic growth and portfolio effects from AZ more than offset currency headwinds
- Liquid Crystals with healthy demand for flagship technologies PS-VA and IPS yields sound organic growth on tough comparables
- AZ with slight organic growth mainly from Optronics
- Solid demand from coating industry for Xirallic products yields slight organic growth in Pigments
- Reported EBIT and EBITDA contain AZ inventory step-up

Q2 2014 share of group sales



# Life Science: Profitable growth in Process Solutions

Merck KGaA  
Darmstadt · Germany

[€ m]	Q2 2013	Q2 2014
<b>Sales</b>	<b>666</b>	<b>659</b>
Marketing and selling	-174	-164
Admin	-23	-26
R&D	-40	-39
<b>EBIT</b>	<b>72</b>	<b>75</b>
EBITDA	148	150
<b>EBITDA pre</b>	<b>156</b>	<b>166</b>
<i>Margin (% of sales)</i>	<i>23.4%</i>	<i>25.2%</i>

### Sales bridge

€666 m	4.0%	-4.2%	-0.9%	€659 m
Q2 2013	Organic	Currency	Portfolio	Q2 2014

Comments
<ul style="list-style-type: none"><li>▪ Organic growth offset by FX and portfolio</li><li>▪ Process Solutions continues to drive divisional performance due to strong biopharma demand in all regions</li><li>▪ Lab Solutions organically flat, as good demand for solvents and consumables in Emerging Markets is offset by softer Europe</li><li>▪ Bioscience slightly growing as demand for Amnis* products and Q2 sales initiatives outweigh impact of U.S. budget sequestration</li><li>▪ Increase in EBITDA pre and margin owing to higher volumes and prices as well as continued cost control</li></ul>

### Q2 2014 share of group sales

Life Science  
23%

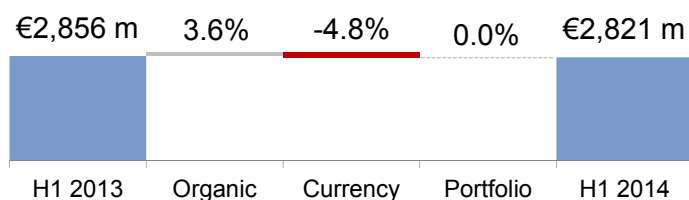
\*Amnis Corporation was acquired in August 2011. Amnis products focus on high speed cell imaging instrumentation



## Biopharmaceuticals: Solid performance supported by all franchises amid royalty income reduction

[€ m]	H1 2013 *	H1 2014
<b>Sales</b>	<b>2,856</b>	<b>2,821</b>
Marketing and selling	-627	-604
Admin	-100	-108
R&D	-617	-610
<b>EBIT</b>	<b>437</b>	<b>476</b>
EBITDA	886	872
<b>EBITDA pre</b>	<b>913</b>	<b>890</b>
<i>Margin (% of sales)</i>	<i>31.9%</i>	<i>31.5%</i>

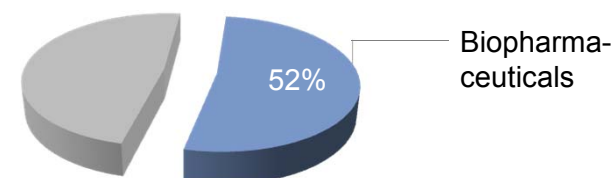
Sales bridge



Comments

- Organic growth more than offset by adverse currency effects leading to slight reduction in sales
- Rebif organically stable, as U.S. pricing and Q1 wholesaler restocking overcompensate volume declines due to competition
- Erbitux performance driven by growth in Emerging Markets and support from Japan, partly offset by soft Europe
- Strong organic growth of fertility business as a result of good demand for entire portfolio especially from China
- Marketing and selling benefits from efficiency initiatives
- Lower profitability owing to royalty decline and FX

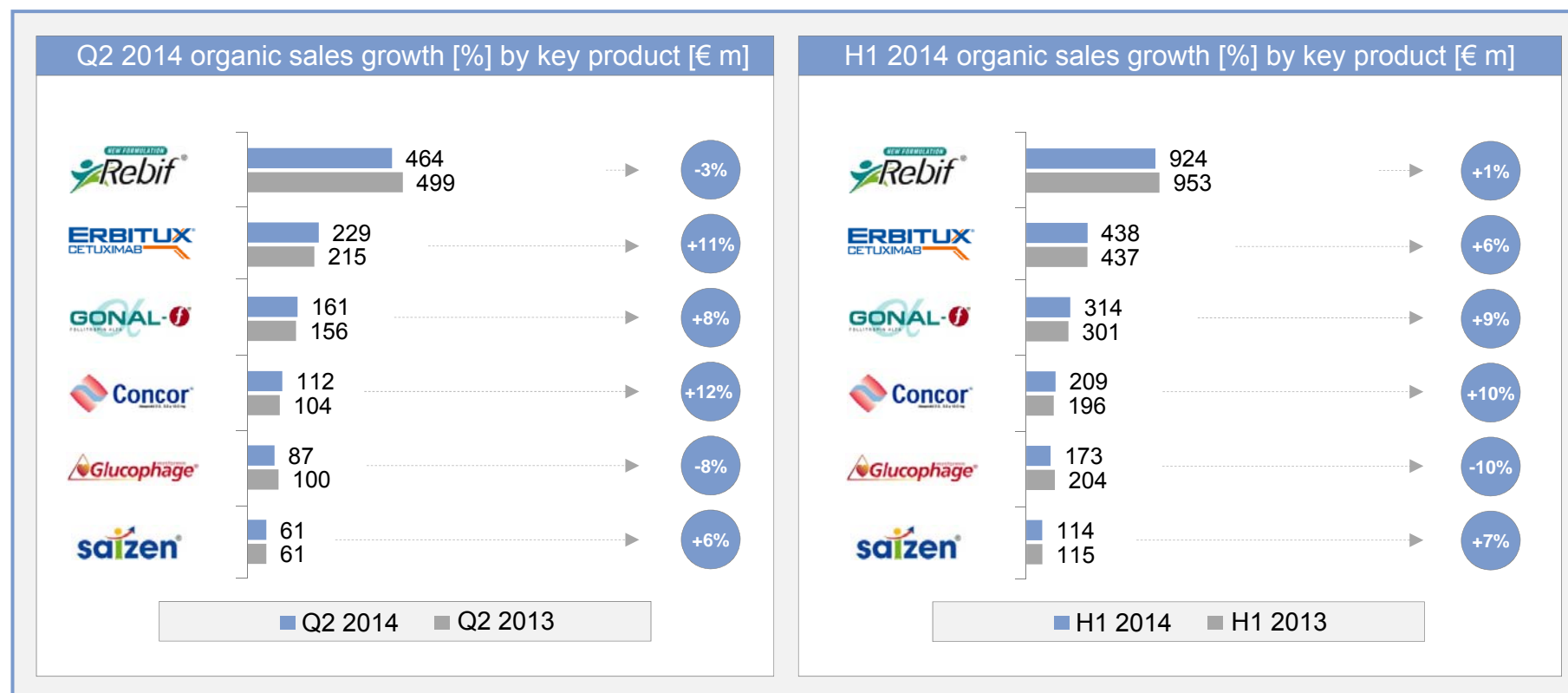
H1 2014 share of group sales



\*Restated for product reclassification of Neurobion and Floratil from Biopharmaceuticals to Consumer Health

# Biopharmaceuticals organic growth by product

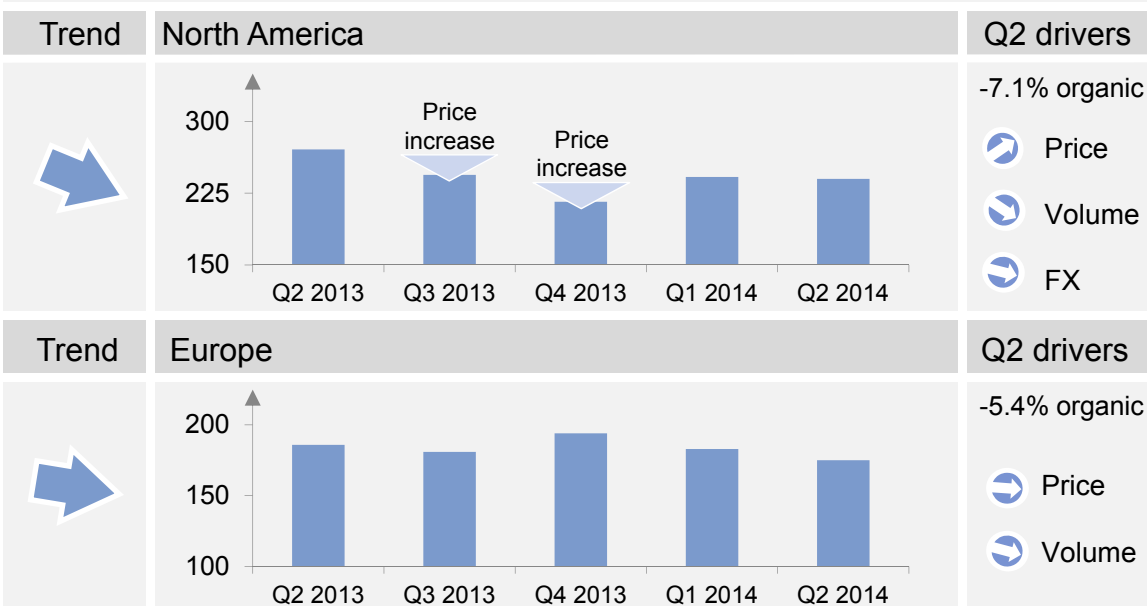
Merck KGaA  
Darmstadt · Germany



# Rebif – defending market leadership in Europe; competitive pressure in the U.S.



- Regional sales evolution [€ m]

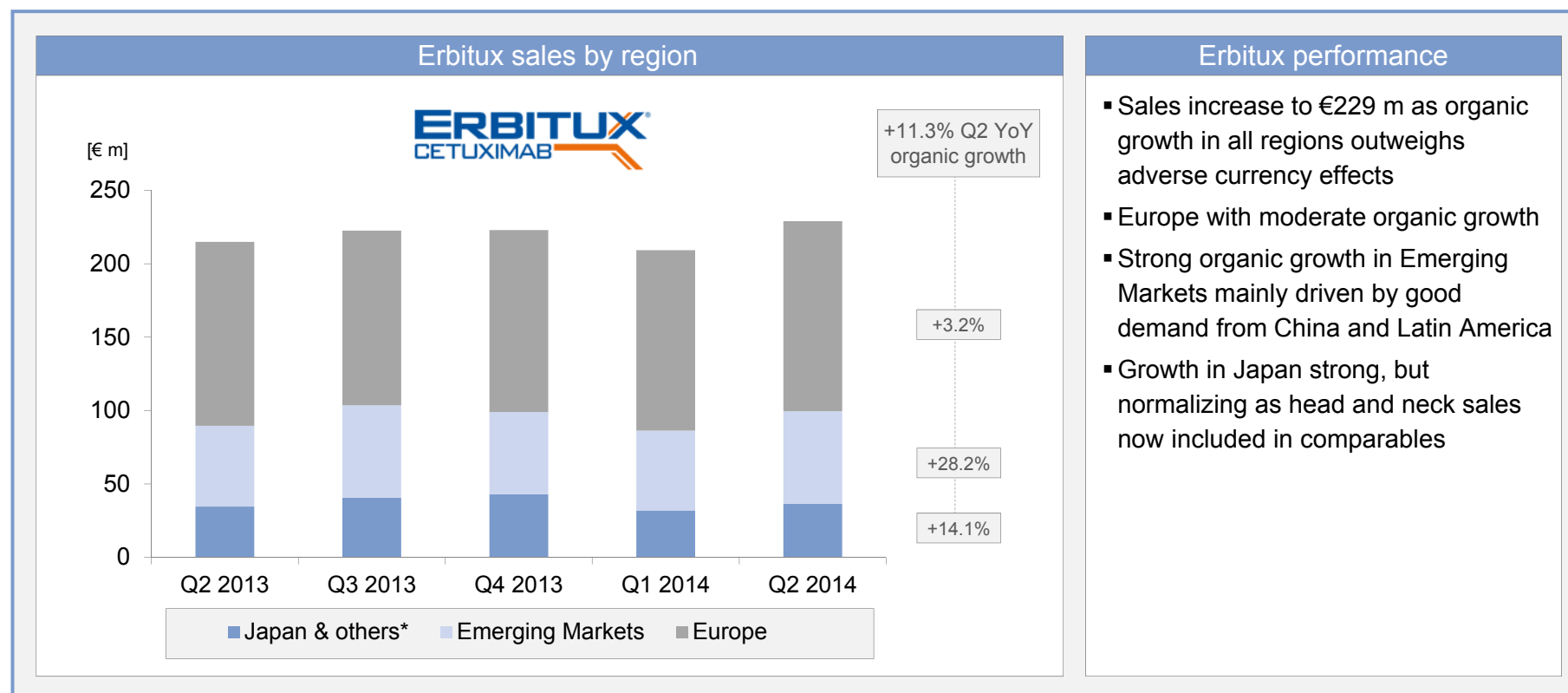


## Rebif performance

- Rebif sales decline to €464 m in Q2
- Organic growth of -2.8% is driven by volume decreases and FX, mitigated by U.S. price increases
- Oral competition main factor of U.S. volume decline
- Lower sales in Europe as oral competition increases, weighing on volumes
- Despite competition, Rebif remains market-leading injectable on the European market

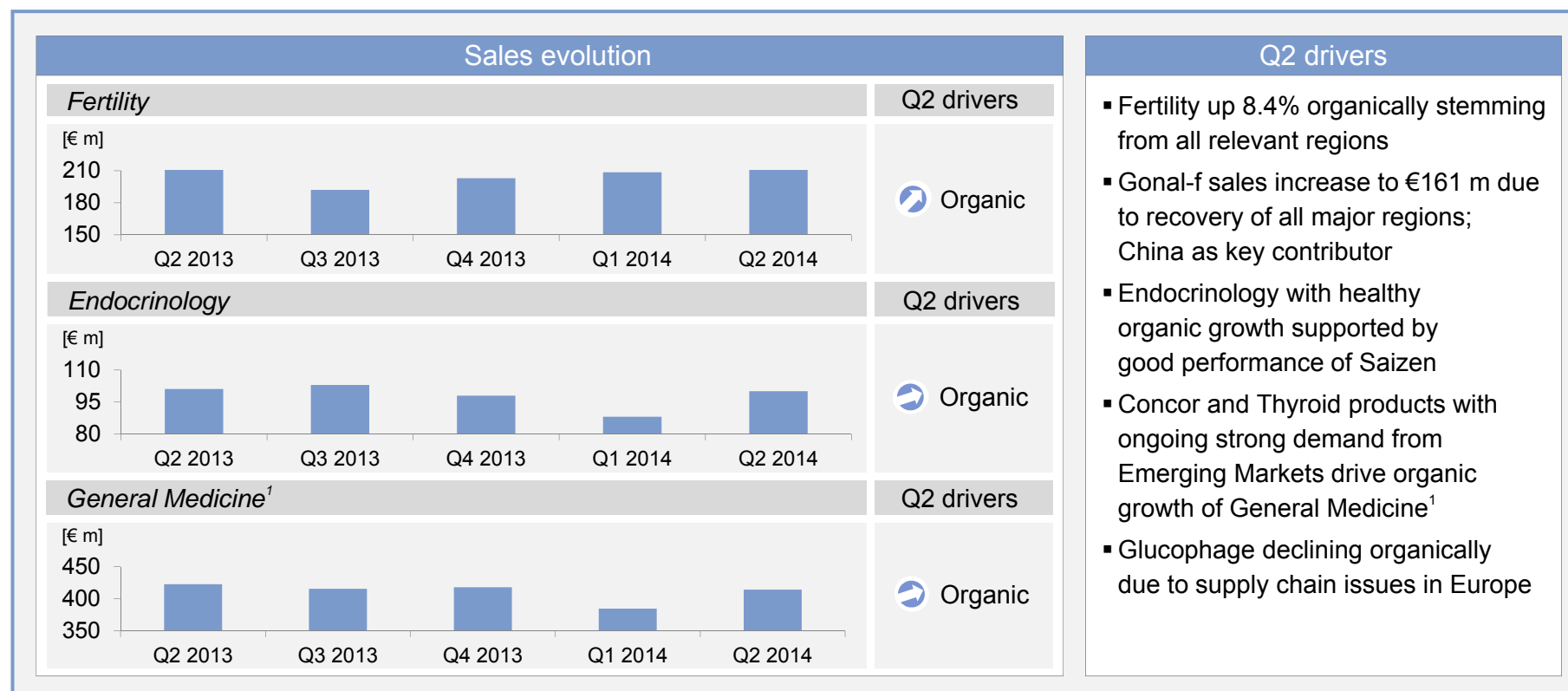
# Erbitux – Strong in Emerging Markets and Japan

Merck KGaA  
Darmstadt · Germany



\*Australia/Oceania, Africa

# Strong growth in Fertility while Endocrinology and General Medicine grow more moderately

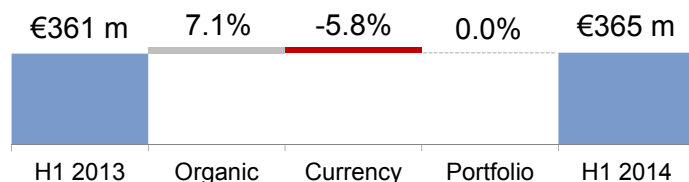


<sup>1</sup>includes "Cardiometabolic Care & General Medicine and Others"

## Consumer Health: Focus on strategic brands in Emerging Markets drives performance

[€ m]	H1 2013 *	H1 2014
<b>Sales</b>	<b>361</b>	<b>365</b>
Marketing and selling	-141	-138
Admin	-12	-13
R&D	-12	-10
<b>EBIT</b>	<b>71</b>	<b>74</b>
EBITDA	76	78
<b>EBITDA pre</b>	<b>75</b>	<b>83</b>
<i>Margin (% of sales)</i>	<i>20.7%</i>	<i>22.6%</i>

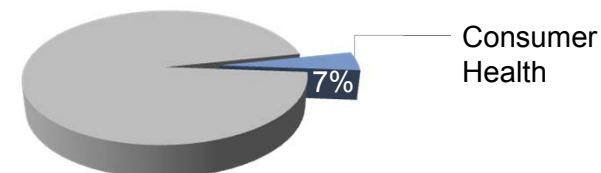
Sales bridge



Comments

- Slight increase in sales as good organic growth driven by Emerging Markets is almost offset by FX headwinds
- New strategic brands Neurobion and Floratil drive organic growth mainly from EM supported by customer oriented marketing
- Europe solid, as growth of Femibion is partially offset by soft demand for cough and cold products due to milder winter
- Marketing and selling slightly decreasing, while shift in promotional spending towards strategic brands continues
- Increase in profitability supported by strong organic growth, favorable product mix as well as cost discipline

H1 2014 share of group sales

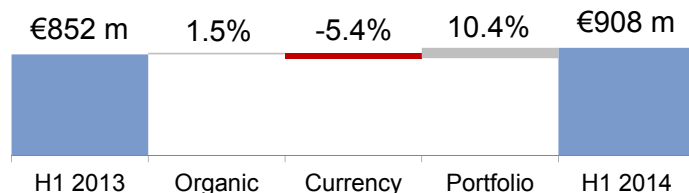


\*Restated for product reclassification of Neurobion and Floratil from Biopharmaceuticals to Consumer Health

# Performance Materials: Solid performance amid high comparables and strong currency headwinds

[€ m]	H1 2013	H1 2014
<b>Sales</b>	<b>852</b>	<b>908</b>
Marketing and selling	-72	-78
Admin	-15	-22
R&D	-70	-75
<b>EBIT</b>	<b>343</b>	<b>289</b>
EBITDA	408	357
<b>EBITDA pre</b>	<b>416</b>	<b>413</b>
<i>Margin (% of sales)</i>	<i>48.8%</i>	<i>45.5%</i>

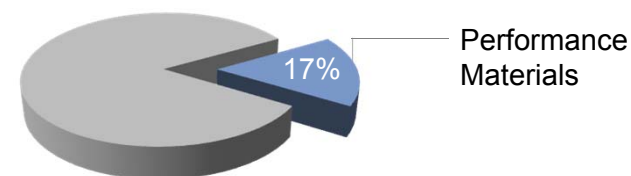
Sales bridge



Comments

- Sales increase as slight organic growth and portfolio effects overcompensate for negative FX effects
- LC\* organically flat, facing tough comparables due to last year's strong demand and subsidy program for consumers in China
- LC\* flagship technologies benefitting from ongoing demand
- Pigments benefits from coating industry demand for Xirallic products
- Cost base reflects portfolio effects from AZ
- EBITDA pre stable, reflecting high comparables, FX headwinds as well as the contribution from AZ

H1 2014 share of group sales

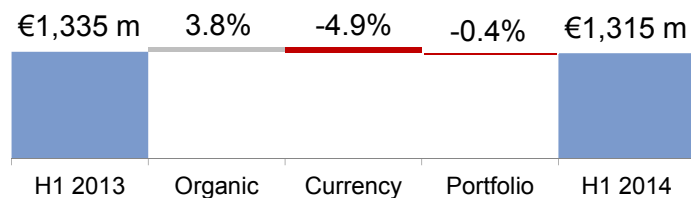


# Life Science: Growth in Process Solutions improves profitability

Merck KGaA  
Darmstadt · Germany

[€ m]	H1 2013	H1 2014
<b>Sales</b>	<b>1,335</b>	<b>1,315</b>
Marketing and selling	-343	-333
Admin	-50	-54
R&D	-81	-78
<b>EBIT</b>	<b>145</b>	<b>162</b>
EBITDA	300	314
<b>EBITDA pre</b>	<b>318</b>	<b>335</b>
<i>Margin (% of sales)</i>	<i>23.8%</i>	<i>25.5%</i>

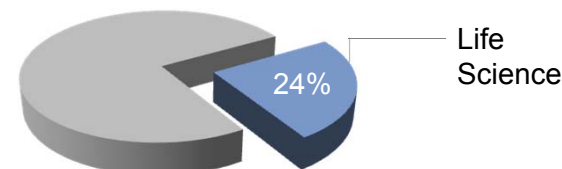
Sales bridge



Comments

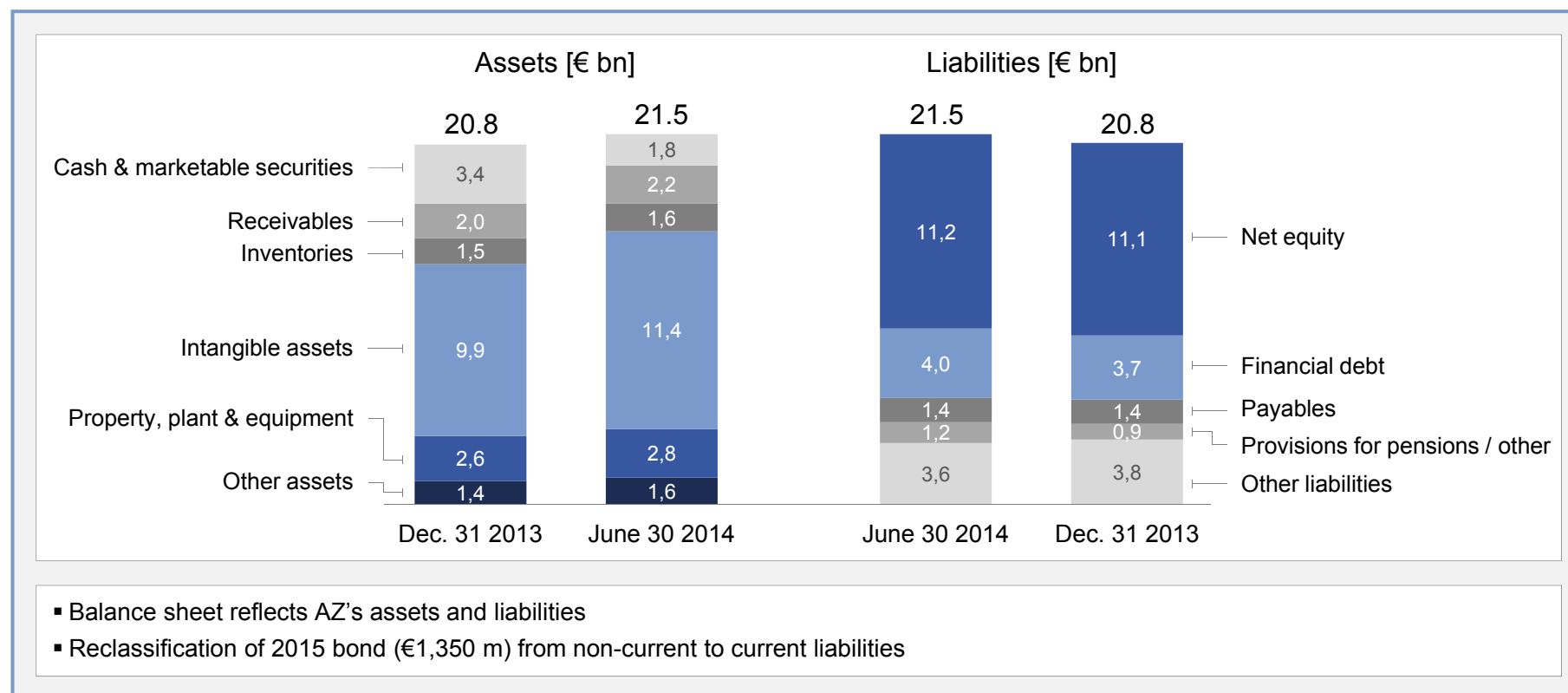
- Sales decrease slightly as organic growth is more than offset by FX mainly driven by U.S. dollar and Japanese yen
- Process Solutions growth driven by biopharma demand for filtration and single-use products mainly stemming from EM and Europe
- Bioscience organically flat, as solid demand for cell imaging devices in Q2 mitigates soft U.S. academia demand
- Demand for consumables and water purification solutions in Emerging Markets drive organic growth in Lab Solutions
- Profitability increases due to solid volumes, pricing as well as ongoing cost discipline in marketing and selling

H1 2014 share of group sales





# Balance sheet: A strong foundation



Totals may not add up due to rounding

## Solid operating cash flow in Q2 2014

[€ m]	Q2 2013	Q2 2014	Δ	Cash flow drivers
<b>Profit after tax</b>	<b>316</b>	<b>306</b>	<b>-10</b>	<ul style="list-style-type: none"> <li>▪ Lower profit after tax impacted by one-time inventory step-up from AZ</li> <li>▪ Lower interest and tax payments drive changes in other assets and liabilities</li> <li>▪ Changes in working capital reflect increase in receivables</li> <li>▪ Investing cash flow contains disposal of financial assets and purchase of AZ</li> <li>▪ Payment for AZ and repayment of its loans drive financing cash flow</li> </ul>
D&A	328	326	-2	
Changes in provisions	-20	-42	-22	
Changes in other assets / liabilities	-203	-141	62	
Other operating activities	-32	-10	23	
Changes in working capital	54	-10	-64	
<b>Operating cash flow</b>	<b>443</b>	<b>429</b>	<b>-13</b>	
<b>Investing cash flow</b>	<b>-268</b>	<b>-1,233</b>	<b>-966</b>	
thereof Capex <sup>1</sup>	-120	-85	35	
<b>Financing cash flow</b>	<b>-115</b>	<b>-855</b>	<b>-740</b>	

<sup>1</sup>Only PPE without intangibles  
Totals may not add up due to rounding

# Underlying cash flow strength

[€ m]	H1 2013	H1 2014	Δ	Cash flow drivers
<b>Profit after tax</b>	<b>585</b>	<b>633</b>	<b>48</b>	<ul style="list-style-type: none"> <li>▪ Higher profit after tax due to sound business performance</li> <li>▪ D&amp;A lower as LY included restructuring related-impairment as well as amortization for Avonex intangible</li> <li>▪ Changes in provisions contains lower provisions for LTIP<sup>2</sup> &amp; pensions vs. LY</li> <li>▪ Increase in changes in other assets and liabilities is mainly driven by higher tax payments</li> <li>▪ Operating cash flow decreases on lower provisions &amp; higher tax payments</li> <li>▪ Investing and financing cash flows reflect AZ acquisition</li> </ul>
D&A	682	628	-54	
Changes in provisions	3	-89	-92	
Changes in other assets / liabilities	-131	-215	-84	
Other operating activities	-40	-4	36	
Changes in working capital	-141	-115	26	
<b>Operating cash flow</b>	<b>958</b>	<b>838</b>	<b>-120</b>	
<b>Investing cash flow</b>	<b>-592</b>	<b>-134</b>	<b>458</b>	
thereof Capex <sup>1</sup>	-157	-142	15	
<b>Financing cash flow</b>	<b>-222</b>	<b>-848</b>	<b>-627</b>	

<sup>1</sup>Only PPE without intangibles; <sup>2</sup>Long Term Incentive Plan  
Totals may not add up due to rounding

# Therapeutic areas of focus determine revamped R&D pipeline

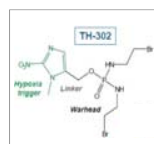
	Immunology	Oncology		Immuno-Oncology
Phase I	BTK-i (f.i.m.) <sup>1</sup>	c-Met-i (solid tumors)	P70S6K/Akt-i (solid tumors)	anti PD-L1 (solid tumors)
	anti IL-17 (f.i.m.)	TH-302 (cancer)	Sym004 (NSCLC)	NHS-IL 12 (solid tumors)
		pimasertib (solid tumors)	BRAF-i (solid tumors)	
		DNA-PK-i (solid tumors) <sup>1</sup>	PARP-i (solid tumors)	
Phase II	atacept (SLE)	abrituzumab (CRC)	TH-302 (NSCLC)	anti PD-L1 (MCC)
	sprifermin (OA)	Sym004 (CRC)	TH-302 (melanoma)	NHS-IL 2 (melanoma)
	ATX-MS-1467 (RRMS) <sup>1</sup>	c-Met-i (HCC) <sup>1</sup>	pimasertib (melanoma)	
	plovamer (RRMS)	c-Met-i (NSCLC) <sup>1</sup>	pimasertib (OvCa)	
Phase III		TH-302 (STS)	TH-302 (PaCa)	

Under preparation
New in pipeline
Moved into next phase<sup>2</sup>
Maintained position

As of September 2014; <sup>1</sup>Under preparation for this phase; <sup>2</sup>Since Capital Markets Day in May 2012

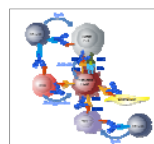
# Indicative timeline for pipeline priority projects in selected indications

## Pipeline Priority Projects<sup>1</sup>



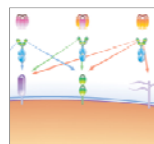
TH-302

Phase III	Soft Tissue Sarcoma	Interim Analysis	H2 2014
		Primary Analysis Date	H2 2015
Phase III	Pancreatic Cancer	Primary Analysis Date	H1 2016



Anti-PD-L1

Phase I	Various Indications	Interim Analysis	H2 2014
Phase II	mMCC <sup>2</sup>	Primary Completion Date	H1 2016
Phase III	Various Indications	Under Preparation	H2 2014



Atacicept

Phase II	SLE <sup>3</sup>	Primary Completion Date	H1 2016
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<sup>1</sup>As of September 2014; <sup>2</sup>Metastatic Merkel Cell Carcinoma; <sup>3</sup>Systemic Lupus Erythematosus

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