MERCK KGAA, DARMSTADT, GERMANY -01 2016 ROADSHOW

Investor Relations

May 2016



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Agenda

Business overview

O2 Transforming the company



- **Life Science Focusing on profitable growth**
- **D5** Performance Materials Maintaining superior profitability
- **Executive Summary and Guidance**



BUSINESS OVERVIEW

Group Portfolio of three high-tech businesses



Leading in specialty pharma markets

- Biologics and small-molecules
- Research focus: Oncology, Immunology & Immuno-Oncology
- Over-the-counter medicine



Leading life science company

- Tools and services for biotech
 research & production
- Tools and laboratory supply for the academic research and industrial testing



Market leader in display materials

- Innovative display materials
- Effect pigments and functional materials
- High-tech materials for electronics





Group Looking back: Our Ambition in 2007



Transform a mid-sized conglomerate into a world class technology leader



Create a truly global and modern company

Secure sustainable profitable growth

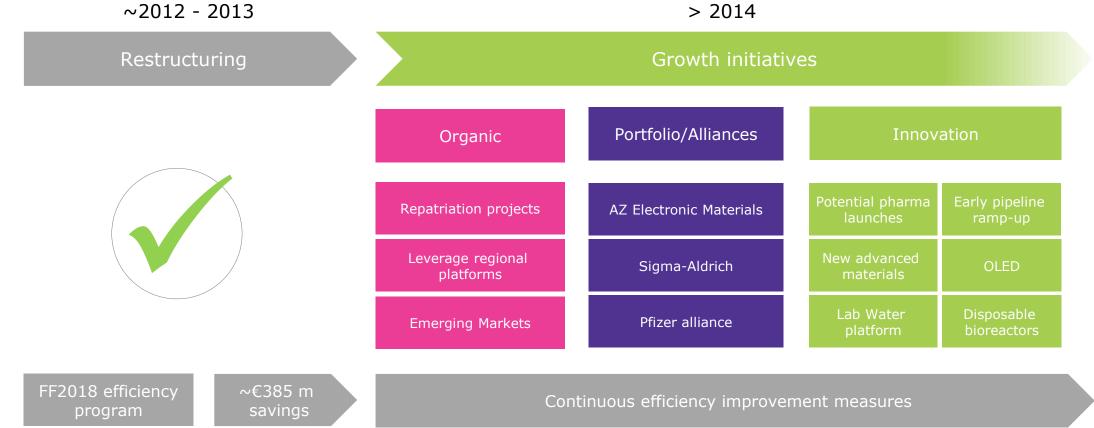


Generate value for our owners

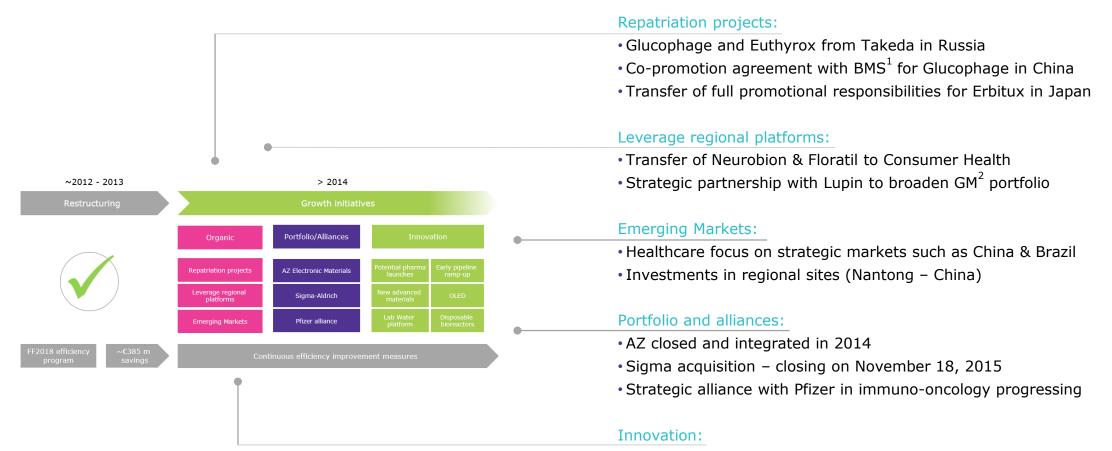


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Group Strategic agenda 2018 – milestones achieved

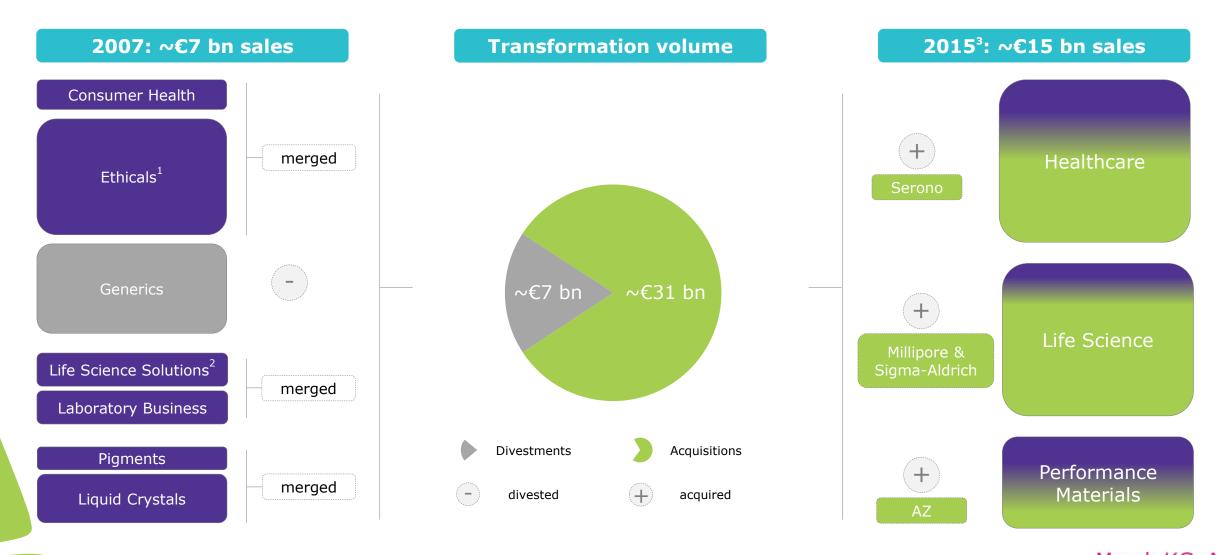


Group Strategic agenda 2018 – milestones achieved



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

Group We have added scale and strengthened the attractiveness of its portfolio



Sigma-Aldrich

Group We have created three leading businesses

Healthcare

+ Serono

- Leading biotech company
- Global footprint
- Strong presence in growth markets
- Solid underlying business
- Promising pipeline assets

Life science

MilliporeSigma

performance materials

➡ AZ

- No. 2 in the world market
- Broad and global product portfolio
- Leading eCommerce platform
- Best-in-class supply chain management

- World market leader
- Technology and innovation leader

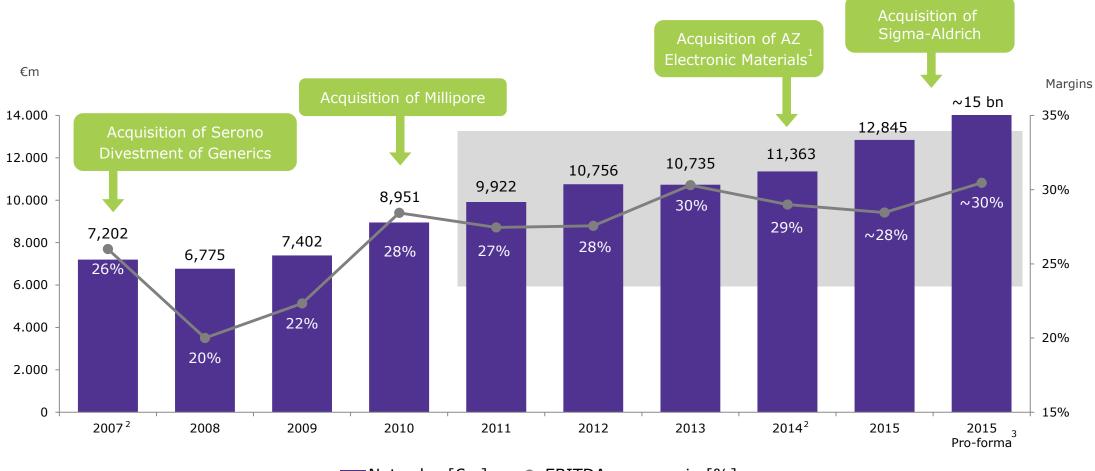
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Group North America and Emerging Markets have driven growth



Darmstadt, Germany

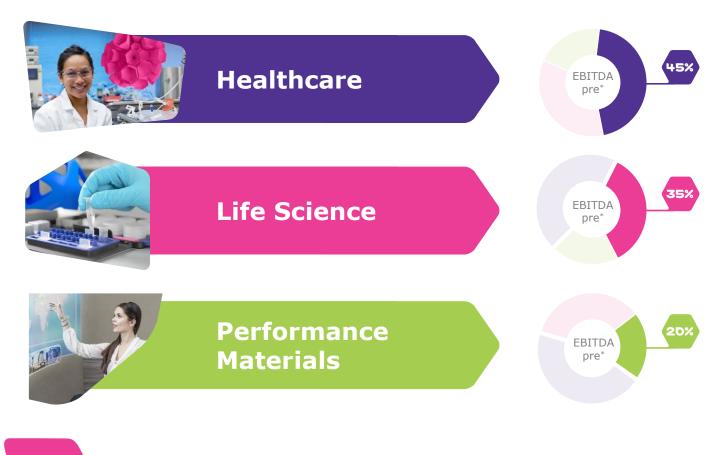
Group Profitability improved fundamentally



¹Included since 2 May 2014; ²2007 and 2014 EBITDA pre margin adjusted for comparability; ³Pro-forma calculation assumes 2015 full-year contribution from Sigma-Aldrich based on ThomsonReuters consensus as of November 11, 2015, and assumed 100% of realized synergies of €260m p.a.

Merck KGaA Darmstadt, Germany

Group Each business sector has its specific priorities



Funding for success

- Invest in pharma pipeline
- Prepare for launches
- Maintain cost discipline

Focusing on profitable growth

- Sustain top-line momentum
- Drive underlying earnings
- Integrate Sigma and realize synergies

Maintaining superior profitability

- Build on resilient four-pillar platform
- Continuously innovate
- Protect margins with high value-added products

We are set for profitable and sustainable growth

*2014 reported EBITDA pre including Sigma-Aldrich 2014 results, 100% of expected synergies, excluding Corporate & Other





Healthcare Healthcare is set to deliver on promising pipeline candidates

Deliver on organic growth

Focus on pipeline



Stable existing business to fuel slight organic growth



Solid pipeline of oncology, immuno-oncology and immunology molecules



Transformation of R&D operating model ongoing



Competitive R&D funding in our focus areas



Cost discipline and efficient execution



Healthcare **Delivered organic sales growth, committed to future performance**

Stable to slight organic growth

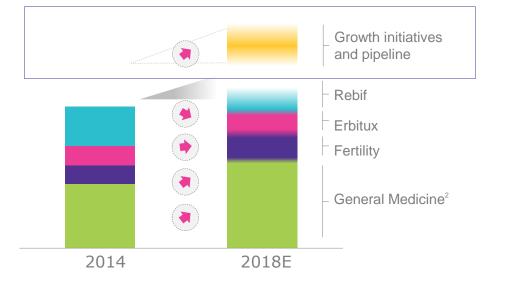


Defending the existing product portfolio is a key strength of Healthcare



Healthcare Pipeline opportunities will lead to rising investments

Stable to slightly growing¹ sales until 2018 confirmed



Should pipeline catalysts materialize, investments will lead to considerable payback as of 2018+



¹Organic; ²including Consumer Health, Cardiometabolic Care, Endocrinology, General Medicine and Others

Rising investments until 2017 to accelerate sales and earnings growth as of 2018

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Healthcare Investments in future growth

 Immuno-Oncology: avelumab and ramp-up of earlier pipeline projects +€150-200m cost increase in 2016

- Oncology/Immunology, e.g. tepotinib, BTK inhibitor: mid to high double-digit €m cost increase in 2016
- Launch readiness to be ensured for avelumab and cladribine
- Costs for launch preparation in the mid to high double-digit €m range in 2016



- Stringent pipeline assessments continue
- Investments based on sound business cases and robust clinical data

Long-term growth investments partly mitigated by strict cost management

*For scenario that pipeline catalysts materialize

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R&D*

Marketing & Selling*



LIFE SCIENCE -FOCUSING ON PROFITABLE GROWTH

Life Science Combining forces for future growth





Broad and complementary product fit in attractive segments

Strategic rationale

- Expanding global reach and scale
- Leveraging operational excellence to deliver superior value to customers
- New organizational structure designed (Applied, Research and Process Solutions)
- Management placement completed
- Focus on seamless integration for customers and the organization

Financials

Integration

- Confirming synergies of €260 m p.a., realized by the third full year after closing
- Sigma acquisition closed on Nov 18th consolidated for 43 days in 2015

Life Science We create sustainable value that is based on strong strategic levers



- A combined portfolio of +300,000 products
- Integrated offerings along the life science value chain
- Complete workflow solutions



Balanced Geographic Footprint

- Increased presence in North America
- Accelerating growth momentum in Asia
- Expanded geographic reach in 60+ countries



- Outstanding supply chain management (Ability to deal with complexity)
- Simple e-commerce platform (customer interface with global coverage)
- Expertise to manage regulatory barriers

Our capabilities are the foundation for future topline growth in Life Science

Life Science Execute on integration and leverage synergy potential



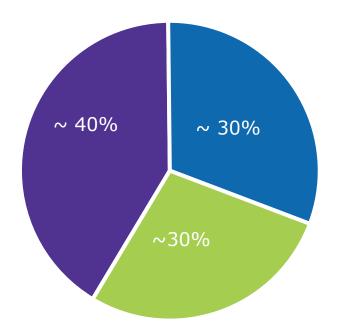
- Significant restructuring and integration experience
- Deep knowledge and understanding of the life science industry
- Organizational placement completed
- Commitment to cost synergies of ~€260m confirmed
- Sources and timing of synergies clearly identified
- Delivery of synergies already started in 2015



Integration process well set to maximize the capabilities of both worlds

Merck KGaA Darmstadt, Germany

Life Science Expected synergies identified and fully confirmed

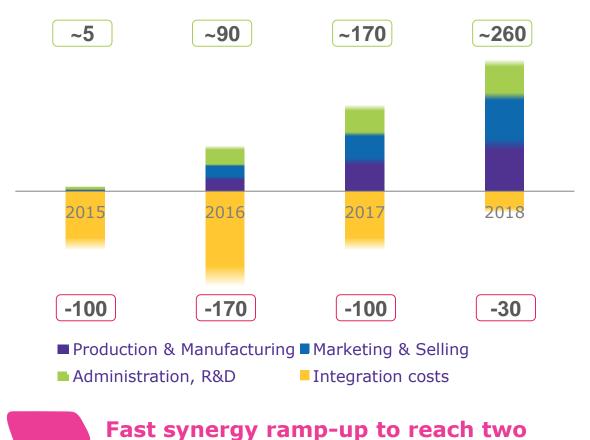


Sources of synergies (3rd full year 2018)

Production & Manufacturing Marketing & SellingAdministration, R&D

Three major areas for delivering the synergies

Timing of expected synergies and related costs [€m]



thirds of target in 2017

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Life Science We aim to be the profitability champion of the sector



Above industry margin levels

Life Science is well set for sustainable growth and profitability

New sales breakdown as of Q1 2016







Performance Materials The four pillars are set for future profitable growth



~55-65% of total sales,

- liquid crystals (LC) and photoresists for TVs, smartphones and tablet computers
- other display and non-display applications (e.g. LC Windows)

~15-20% of total sales,

- effect pigments and functional materials for coatings, plastics, printing and cosmetics
- functional materials for cosmetics and special applications

~15-20% of total sales,

- dielectrics, colloidal silica, lithography materials (photo resists), yield enhancers, edge-bead removers
- polyimide raw materials and printing materials

~5-10% of total sales,

 organic (OLED) and inorganic (LED) light emitting diodes and functional materials for electronics and energy solutions, especially OLED is providing first substantial sales

Performance Materials Innovation leadership is the backbone of future profitability and growth



Incremental product adjustments - only minor investments

LC	New singles f
pigments	Meoxal lumin
ICM	low defect CN
advanced tech.	Organic Phot

New singles for PSVA technology Meoxal luminous metal effect pigments low defect CMP² slurries Organic Photovoltaics



Fundamental research - more substantial investments needed

LC	Smart windows, smart antennas, new modes
pigments	Counterfeiting prevention applications
ICM	Directed self-assembly (DSA) in lithography
advanced tech.	OLED printing technology

Performance Materials Sound platform to deliver high earnings

Four-pillar platform diversifies earnings stream

- Liquid Crystals remain key earnings contributor
- AZ* expertise is being leveraged to develop innovative value-added solutions for customers
- OLED is becoming a visible growth driver
- Pigments continue to grow with high-end products



Continuous innovation as key profitability driver

- New products contribute high growth and profitability
- LC* technology mode UB-FFS* launched in 2014 is the most recent example

Balanced sales and consistently high earnings



We are the innovation leader "Improved picture quality" 1996 IDS* First to commercializ 2000 "Large TVs" VA* PS-"Display cost reduction & 2008 advanced performance" VD* "Superior image resolution and 2014 lower energy consumption"

Diversification of portfolio and ongoing innovation lead to strong profitability

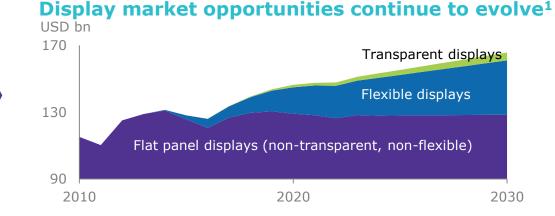
Performance Materials

Long-term growth and margin drivers are intact



Macroeconomics and electronics remain buoyant

- Global consumer electronics market expected to grow above GDP*
- Mobile data, Internet of Things and Big Data are key growth drivers for LC and IC
- Display market continues to grow

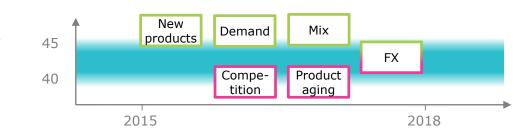


High value-added products yield superior profitablity

- High market share in liquid crystals expected to prevail
- Strong differentiation by innovation inherent mature of business

Sustainable profitability drivers

EBITDA pre margin (%)



Unique differentiation and market position will continue to lead to strong profitability and maintain low single-digit growth trajectory





Group We are well set for profitable and sustainable growth



Maximize growth of existing franchises Deliver on pipeline

Focus on seamless integration and deliver cost synergies Leverage strategic capabilities for value creation

Drive innovation and technology leadership across all businesses Innovate in applications beyond displays



Group We have clear financial priorities for the next two years



- **Strong cash flow** will be used to drive down gearing to <2x net debt / EBITDA pre in 2018
- Larger acquisitions (>€500m) ruled out for the next two years
- **Dividend policy** reflects sustainable earnings trend
- Synergy generation is utmost priority
- Cost discipline continues in all business sectors
- Further efficiency gains from ongoing improvement and harmonization of processes and systems
- All our businesses have growth potential
- **Decisions on growth investments** are based on sound business cases and robust clinical data

Near-term financial priorities will secure our profitable growth path

Full-year 2016 guidance

Group guidance for 2016, including Sigma-Aldrich









Appendix















2016 business sector guidance



Additional financial guidance 2016

Further financial details

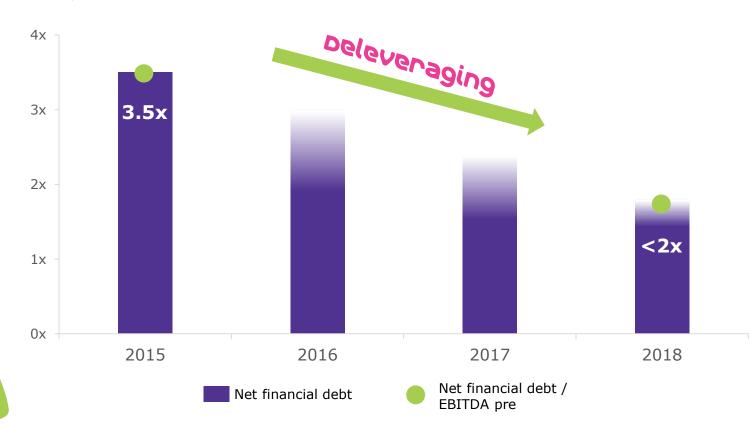
Corporate & Other EBITDA pre	~ -€370 – -400 m	
Interest result	~ -€270 – -300 m	
Intangibles amortization from Sigma P	PPA ~ €250 – 300 m p.a.	
Underlying tax rate	~23% to 25%	
Capex on PPE	~€750 – 800 m	
Hedging/USD assumption	2016 & 2017 hedge rate ~40-45% at EUR/USD ~1.10 to 1.15	
2016 Ø EUR/USD assumption	~1.07 - 1.12	



Strong focus on cash generation to ensure swift deleveraging

Net debt and leverage development

[Net debt/ EBITDA pre]



Focus on deleveraging

- Commitment to swift deleveraging to ensure a strong investment grade rating and financial flexibility
- Strong cash flow will be used to drive down leverage to expected <2x net debt/EBITDA pre in 2018
- Larger acquisitions (>€500 m) ruled out for the next two years
- Interest result in 2016: ~-€270 - -300 m

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



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





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

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



Darmstadt, Germany

42

Life Science: New reporting structure reflects customer-centric approach



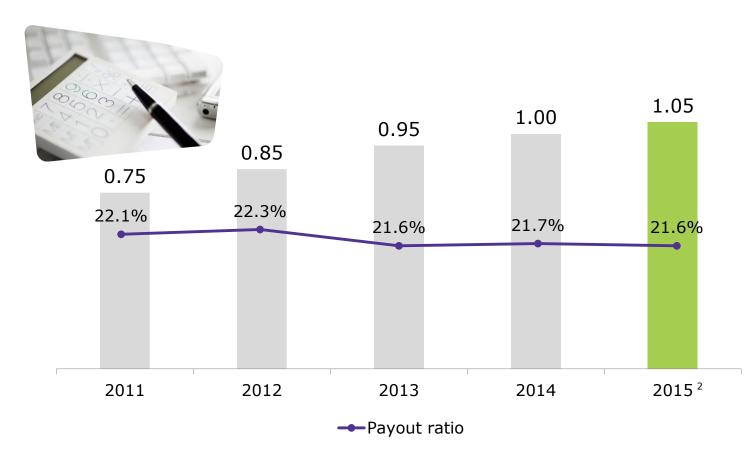
Customer-centric business approach:

- Enhanced emphasis on customers' unique needs
- Customized solutions for the specific needs of each segment from the start of product development to its completion



Sustainable dividend development

Dividend¹ development 2011-2015



2015 dividend and policy

- Dividend of €1.05 per share proposed² for 2015
- Last year's dividend constitutes the minimum level³
- Development of dividends in line with business performance and earnings progression
- Aiming for a corridor of 20%-25% of EPS pre

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





Sigma Aldrich acquisition – A compelling transaction rationale



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

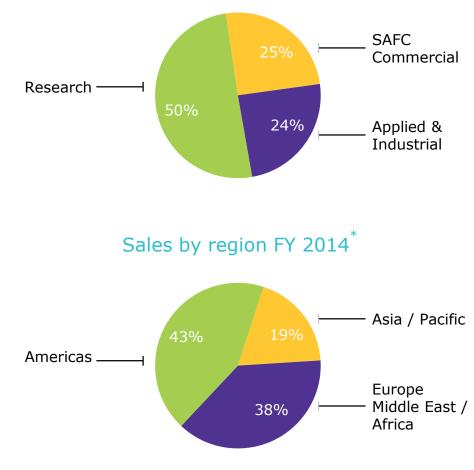
Sigma-Aldrich – A leading life science consumables supplier

Business

- •Total revenues of \$2.8 billion in 2014
- •~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

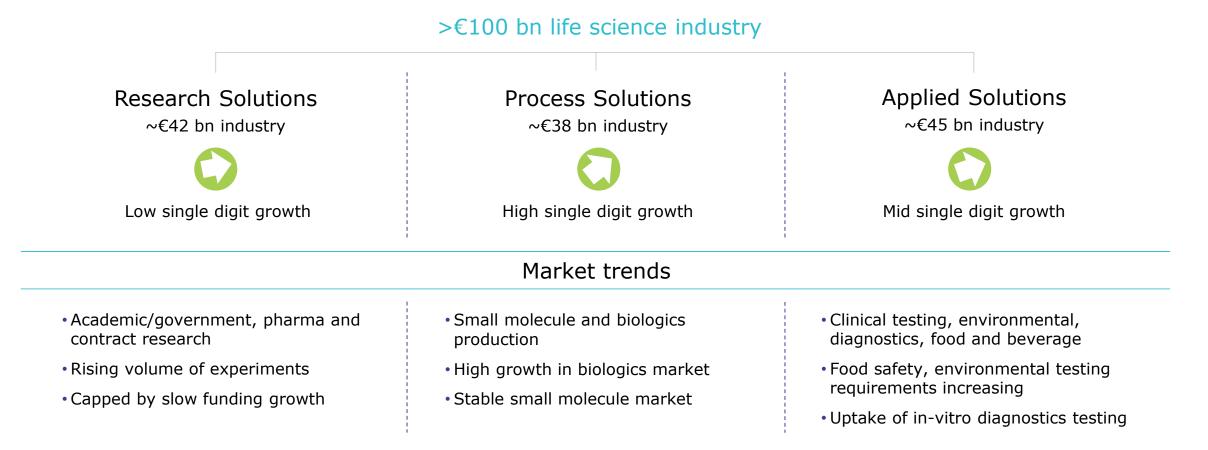
- •Balanced regional exposure; strength in North America
- •Operations in \sim 40 countries; products available in \sim 160 countries



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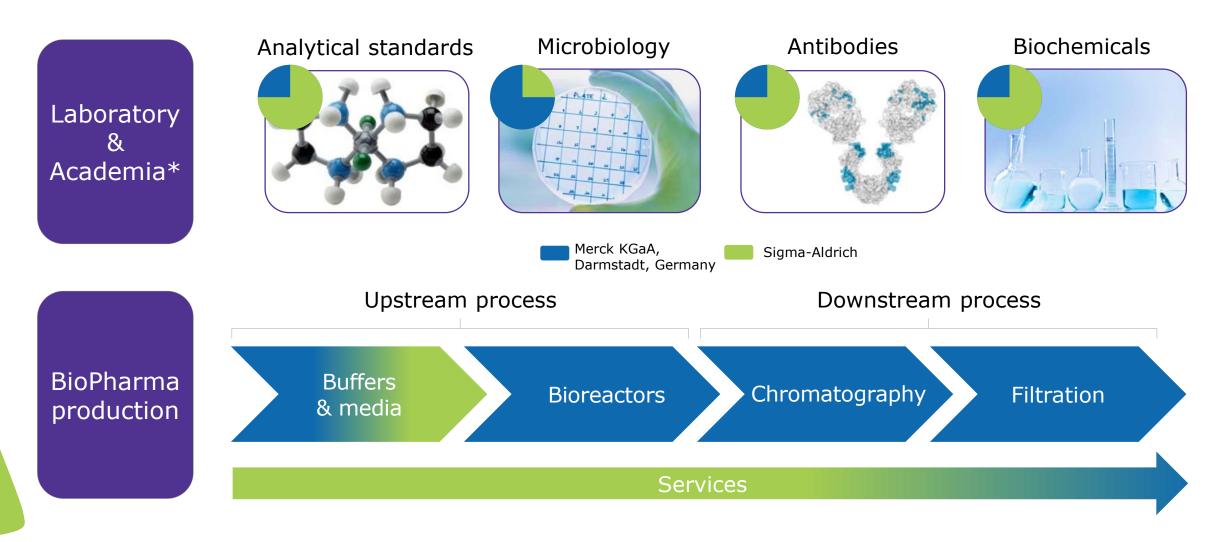
Sales by division FY 2014

Together serving the attractive >€100bn life science industry



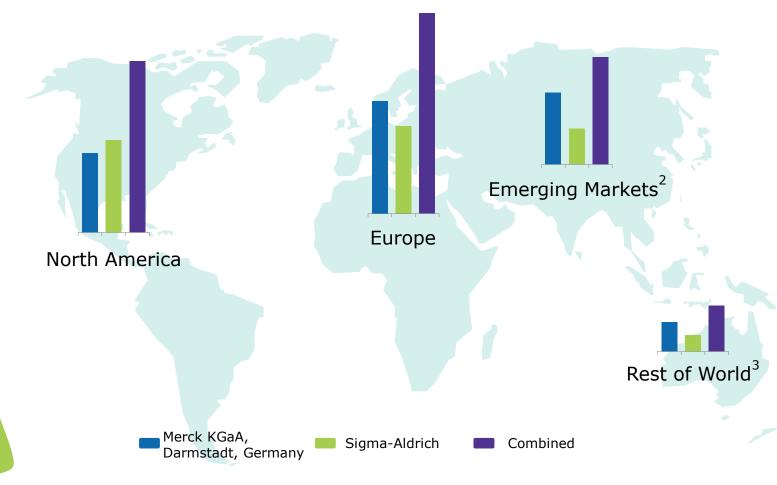
Attractive industry EBITDA margin of ~25%

Broad and complementary product fit in attractive segments



Expanding global reach and scale

Global sales¹ 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

Leveraging operational excellence to deliver superior value to customers

Product innovation

Process innovation

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



Mobius FlexReady





Amnis

- 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



eCommerce platform

Supply chain

Efficient work flow solutions and unique customer experience



Sigma-Aldrich – Business and transaction financials

Overview of financial data¹

US\$ m	2012	2013	2014 ⁴
Revenue	2,623	2,704	2,785
% YoY at constant FX	+3%	+3%	+4%
EBITDA (adjusted)	809	821	847
% of sales	31%	30%	30%
D&A	136	138	132
% of sales	5%	5%	5%
Net financial debt (period end)	-41	-357	-513
No. of shares (diluted, m)	122	121	120

Proposed transaction details²

- •Equity value ~US\$17 bn (€13.1 bn)
- Enterprise value (EV) ~€12.7 bn including net cash ~€360 m⁵
- 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 multiples³

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





The road to maximizing our 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



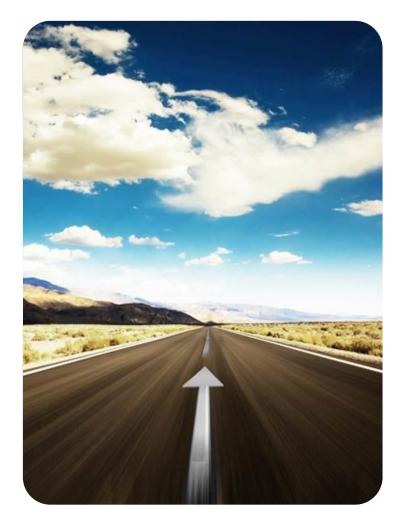
Build on No.1 position and ART¹ channel access with embryo diagnostics and other innovative technologies



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





Portfolio management: Differentiating across diverse business models

General Medicine portfolio



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

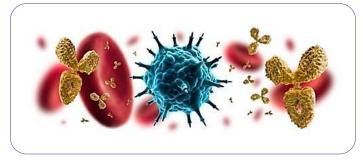
Biologicals portfolio



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



Oncology & Immunology innovation portfolio



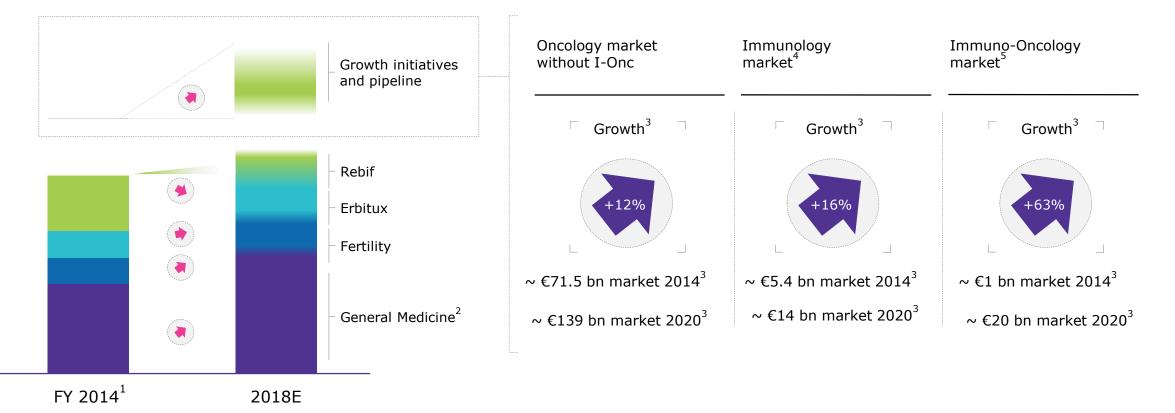
- •High reward at high risk
- Innovation key success factor high R&D spend
- Promising pipeline projects



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

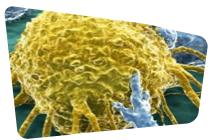
We are pursuing attractive growth opportunities with our pipeline

Healthcare investments focused on three attractive market segments



¹adapted to new Healthcare business sector to include Consumer Health; ²including Consumer Health, Cardiometabolic Care, Endocrinology, General Medicine and Others; ³Data for global market 2014, CAGR for 2014-2020; Source: Sales data according to EvaluatePharma®, accessed August 2015; ⁴Immunosuppressants Therapeutic Class as defined by EvaluatePharma, excluding ustekinumab; ⁵Immuno-oncology (PD-L1, PD-1, CTLA-4, OX-40, IDO, CAR T cells)

New revenue streams from pipeline expected from 2017/2018 onwards



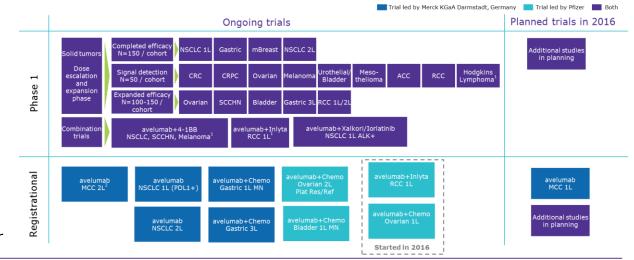
Avelumab

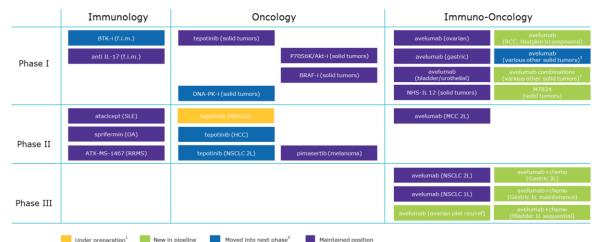
- 6 pivotal trials initiated in 2015 (NSCLC 1L/2L, ovarian platinum resistant/refractory, gastric 1L/3L, bladder 1L)
- Breakthrough therapy and Fast track designations (US) for mMCC received, Orphan Drug Designation (US and EU)
- Initiation of more than 20 clinical programs together with Pfizer across more than 15 tumor indications in 2015
- Collaboration with Syndax evaluating avelumab in combination with entinostat in ovarian cancer

selected R&D projects



- Atacicept: study enrolment completed ahead of schedule, data readout Phase II in H2 2016
- BTK inhibitor: explore options for partnering
- M7824: Phase I dose escalation for our first in class bi-functional fusion-protein targeting PD-L1 and TGF-B
- Tepotinib: Phase II data in hepatocellular carcinoma expected in H2 2016
- Cladribine: EU filing expected in H1 2016, other geographies under review







Going forward, the differentiation strategy for the alliance is fueled by the potential for combination

2016





- Phase II 2L MCC BTD, ODD and Initiation of phase III 1L MCC FTD received
- Phase III 1L and 3L gastric cancer
- Phase III 1L and 2L NSCLC
- Phase I Hodgkins Lymphoma

CHEMOTHERAPY

2015

- Phase III 1L Bladder maintenance
- Phase III Ovarian Plat res/ref

NOVEL/NOVEL

- Phase I avelumab combined with 4-1BB in NSCLC, SCCHN and Melanoma
- Phase I 1L NSCLC ALK/ROS+

- - Further studies under preparation

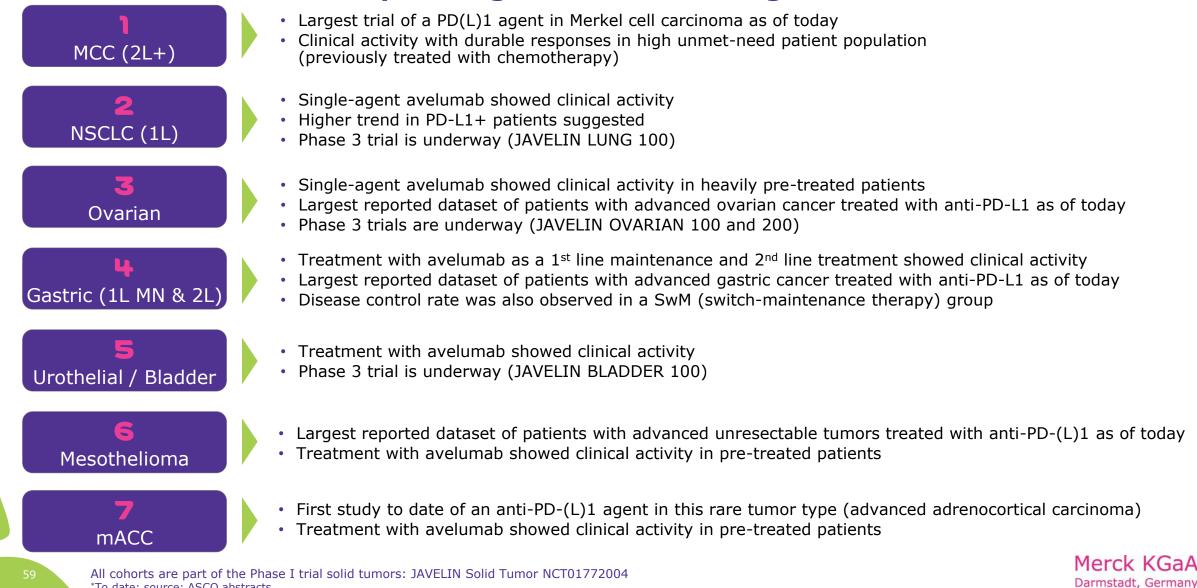
Future



- Initiation of phase III 1L ovarian cancer
- Further phase III studies under preparation
- Start of Syndax collaboration for a phase Ib/II in ovarian cancer
- Further exploratory and pivotal trials under preparation

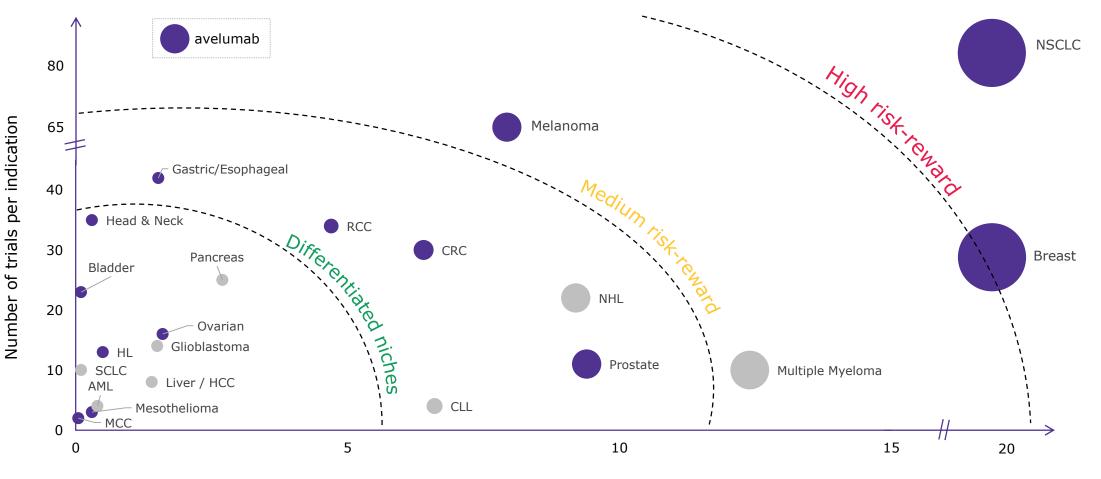
Expansion with combinations **Next generation** combinations

ASCO: We look forward to presenting the results from our avelumab trials at the upcoming scientific meeting in further detail*



*To date: source: ASCO abstracts

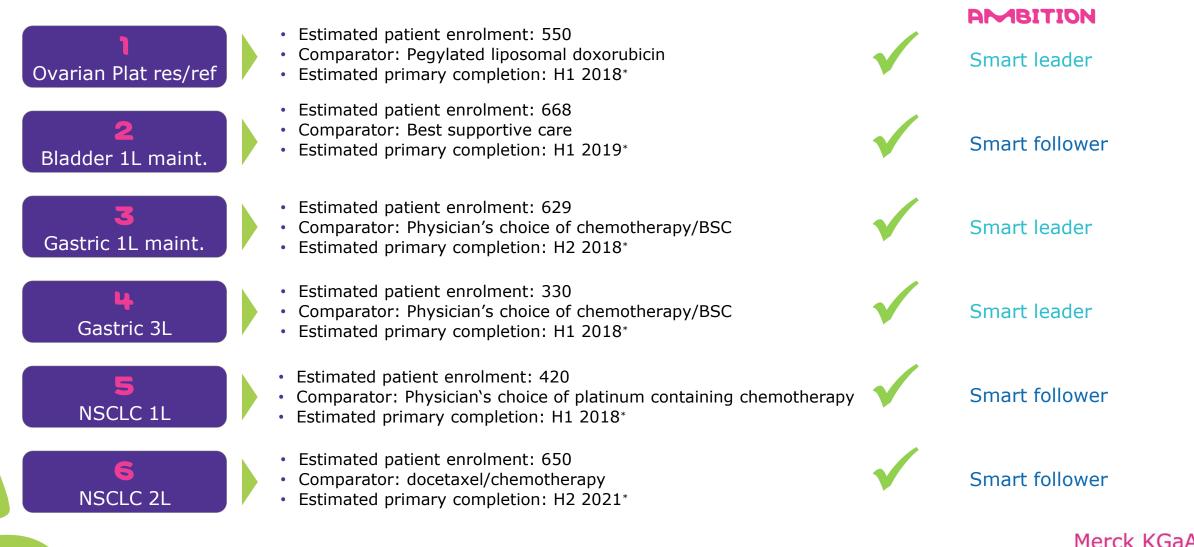
Avelumab plays predominantly in attractive and differentiated niches



Market size in 2020 per indication [€bn]

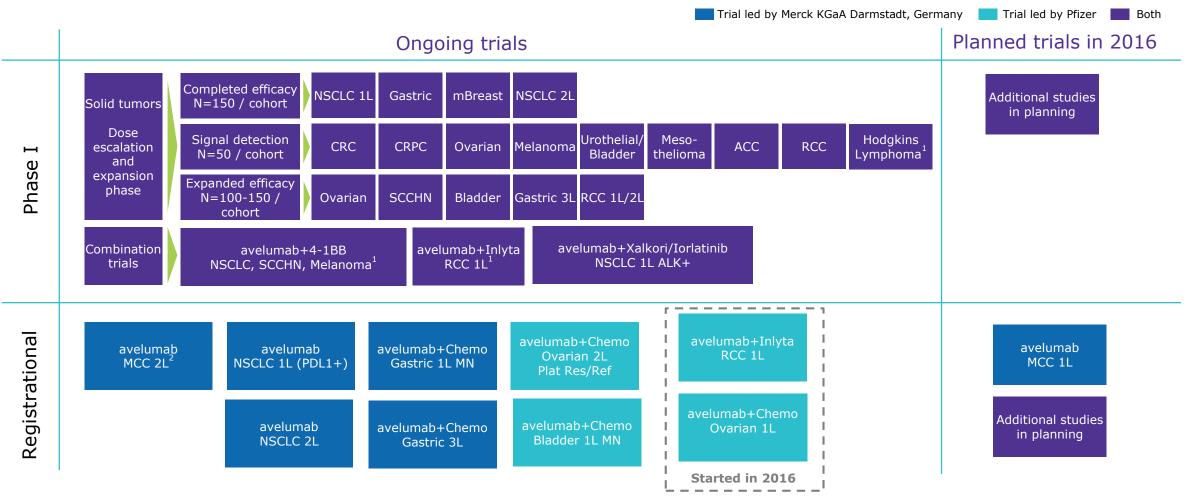
Sources: Trialtrove and Cortellis as of September 2015, Boston Consulting Group, Evaluate Pharma forecast 2020 Acronyms: SCLC = Small Cell Lung Cancer; HL = Hodgkins Lymphoma; NHL = Non Hodgkins Lymphoma; AML = Acute Myeloid Leukaemia

The alliance met its ambitious goal in 2015: the initiation of 6 pivotal trials



Darmstadt, Germany

Avelumab: JAVELIN clinical development program initiated as of Oct 2015 and continuously expanded to further indications in 2016



Acronyms: CRC = colorectal cancer; CRPC = Castrate Resistant Prostrate Cancer; ACC = Adrenocortical Cancer; SCCHN = Squamous Cell Carcinoma of the Head and Neck, RCC = Renal Cell Carcinoma; Avelumab is an investigational agent. Avelumab is the proposed non-proprietary name for the anti-PD-L1 monoclonal antibody (MSB0010718C); ¹Trials currently initiating; ²Phase II trial

Clinical pipeline

Phase I

Tepotinib c-Met kinase inhibitor Solid tumors

M2698 p70S6K & Akt inhibitor Solid tumors

M3814 DNA-PK inhibitor Solid tumors

Beigene-283 BRAF inhibitor Solid tumors

Avelumab¹ Anti-PD-L1 mAb Solid tumors M9241 (NHS-IL12)² Cancer immunotherapy Solid tumors M7824 Bifunctional immunotherapy

Solid tumors

M1095 (ALX-0761) Anti-IL-17 A/F nanobody Psoriasis

M2951 BTK inhibitor Systemic lupus erythematosus

Phase II

M2736 (ATX-MS-1467) Immune tolerizing agent Multiple sclerosis

Tepotinib c-Met kinase inhibitor Non-small cell lung cancer Tepotinib c-Met kinase inhibitor Hepatocellular cancer

Avelumab¹ Anti-PD-L1 mAb Merkel cell carcinoma

Sprifermin Fibroblast growth factor 18 Osteoarthritis

Atacicept Anti-Blys/anti-APRIL fusion protein Systemic lupus erythematosus

Phase III

Avelumab¹ – Anti-PD-L1 mAb Non-small cell lung cancer 1L³ Avelumab¹ – Anti-PD-L1 mAb Non-small cell lung cancer 2L⁴ Avelumab¹ – Anti-PD-L1 mAb Gastric cancer 1L³ Avelumab¹ – Anti-PD-L1 mAb Gastric cancer 3L⁵ Avelumab¹ – Anti-PD-L1 mAb Bladder cancer 1L³ Avelumab¹ – Anti-PD-L1 mAb Ovarian cancer platinum resistant/refractory Avelumab¹ – Anti-PD-L1 mAb Renal cell carcinoma 1L³

MSB11022 Proposed biosimilar of Adalimumab Chronic plaque psoriasis

Registration

Cladribine Tablets⁶ – **Lymphocyte targeting agent** Relapsing-remitting multiple sclerosis

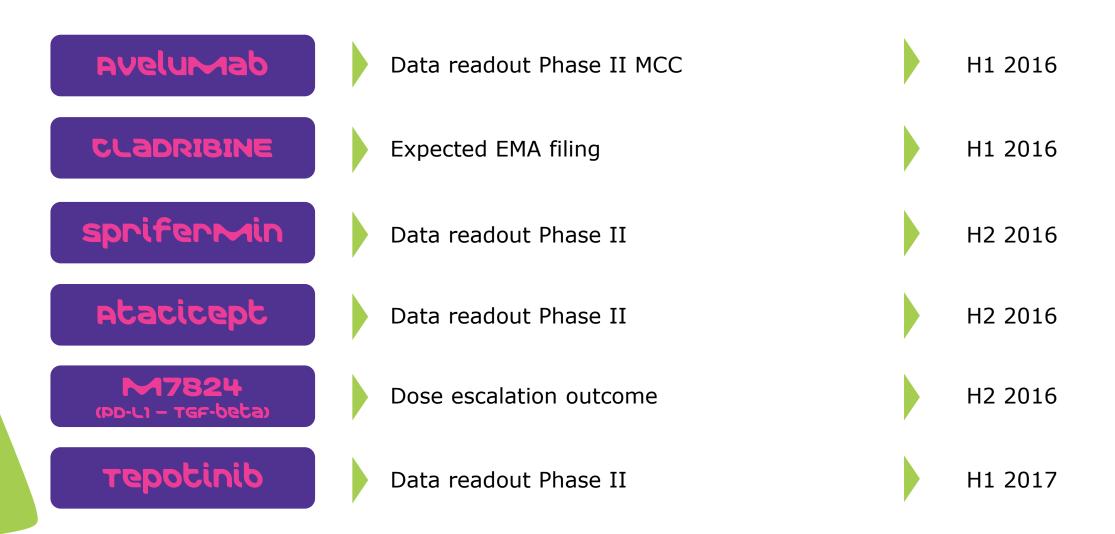
- Neurodegenerative Diseases
- Oncology
- Immunology
- Immuno-Oncology
- Biosimilars

Pipeline as of May 19, 2016

Pipeline products are under clinical investigation and have not been proven to be safe and effective. There is no guarantee any product will be approved in the sought-after indication.

¹Avelumab is the proposed International Non-proprietary Name (INN) for the anti-PD-L1 monoclonal antibody (previously known as MSB 0010718C); ²Sponsored by the National Cancer Institute (USA); ³ 1st line treatment; ⁴ 2nd line treatment; ⁵ 3rd line treatment ⁶As announced on September 11, 2015 Merck KGaA Darmstadt, Germany is preparing a regulatory submission to the European Medicines Agency

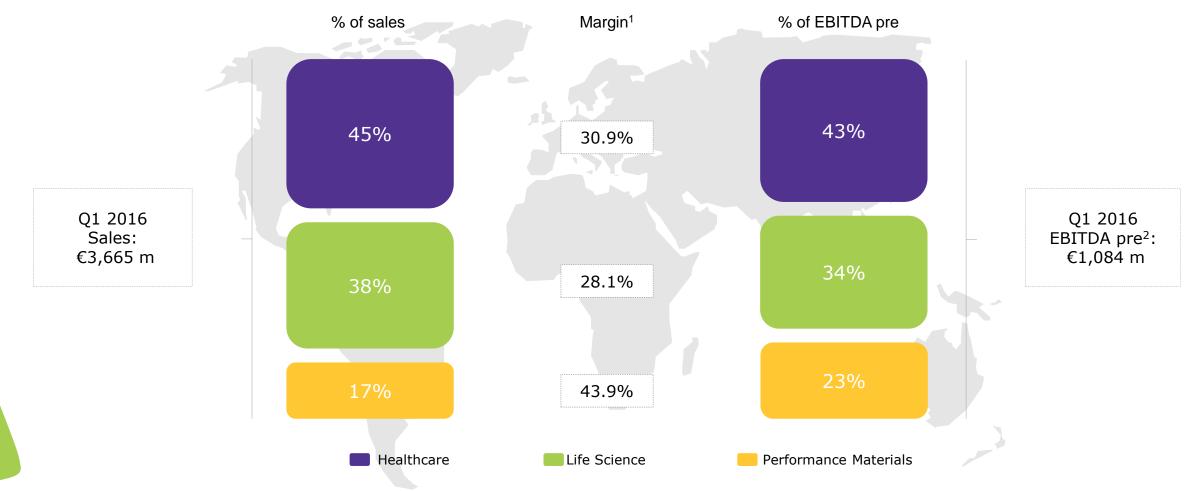
Newsflow: Upcoming pipeline catalysts





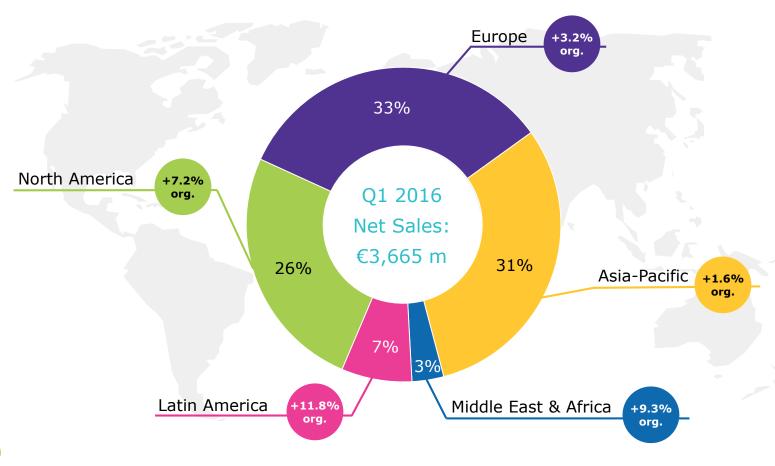


Strong businesses with attractive margins



Organic growth in all regions

Regional breakdown of net sales [€ m]



Regional development

- Organic growth in Europe driven by Life Science, partially offset by Rebif
- North America benefits from strong Fertility franchise and Life Science as well as Rebif price increases
- Asia-Pacific shows slight organic growth as good demand in Fertility is offset by display supply chain destocking
- Strong organic growth in LatAm driven by Consumer Health and new reimbursement for Rebif in Brazil

Q1 2016: Overview

Key figures

[€m]	Q1 2015	Q1 2016	Δ
Net sales	3,041	3,665	20.5%
EBITDA pre Margin (in % of net sales)	853 <i>28.0%</i>	1,084 29.6%	27.0%
EPS pre	1.12	1.54	37.5%
Operating cash flow	279	352	26.5%
[€m]	Dec. 31, 2015	March 31, 2016	Δ
Net financial debt	12,654	12,072	-4.6%
Working capital	3,448	3,726	8.0%
Employees	49,613	50,262	1.3%

Comments

- EBITDA pre & margin increase driven by Sigma, end of Rebif commission expenses and organic performance
- Strong EPS pre growth due to higher EBITDA pre; LY financial result burdened by LTIP* charges
- Operating cash flow reflects strong business performance; LY impacted by one-time tax payment
- Net financial debt reduction driven by cash-in for Kuvan & operating cash flow
- Working capital reflects increase in business activity

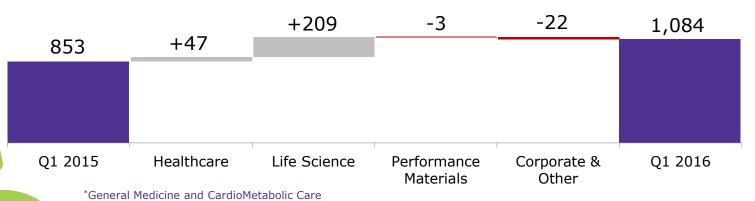
Life Science and Healthcare drive increase in EBITDA pre

Q1 2016 YoY net sales

	Organic	Currency	Portfolio	Total
Healthcare	5.4%	-6.8%	-1.0%	-2.4%
Life Science	8.9%	-1.3%	81.6%	89.3%
Performance Materials	-2.4%	0.5%	2.7%	0.9%
Group	4.7%	-4.0%	19.8%	20.5%

Q1 YoY EBITDA pre contributors [€ m]

Totals may not add up due to rounding



- Healthcare growth reflects strong Fertility, GM* and CH as well as Xalkori commissions
- Strong organic growth in Life Science driven by Process Solutions
- Slight organic decline in Performance Materials confirms expected destocking in display supply chain
- Portfolio reflects Sigma and Kuvan
- HC benefits from solid organic growth, Rebif commission savings and R&D phasing
- Life Science driven by Sigma, strong organic growth and positive product mix
- Performance Materials slightly lower due to product mix
- Corporate EBITDA pre contains hedging and investments in corporate initiatives Merck KGaA

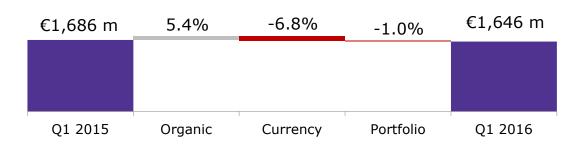
Darmstadt, Germany

Healthcare: Good organic sales growth amid ramp-up in R&D investments

Healthcare P&L

[€m]	Q1 2015	Q1 2016
Net sales	1,686	1,646
Marketing and selling	-660	-613
Administration	-66	-71
Research and development	-348	-378
EBIT	268	641
EBITDA	449	829
EBITDA pre	461	508
Margin (in % of net sales)	27.3%	30.9%

Net sales bridge

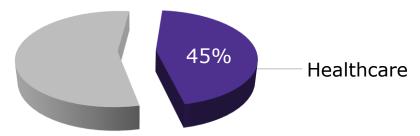


*Productive Development Partnership Totals may not add up due to rounding

Comments

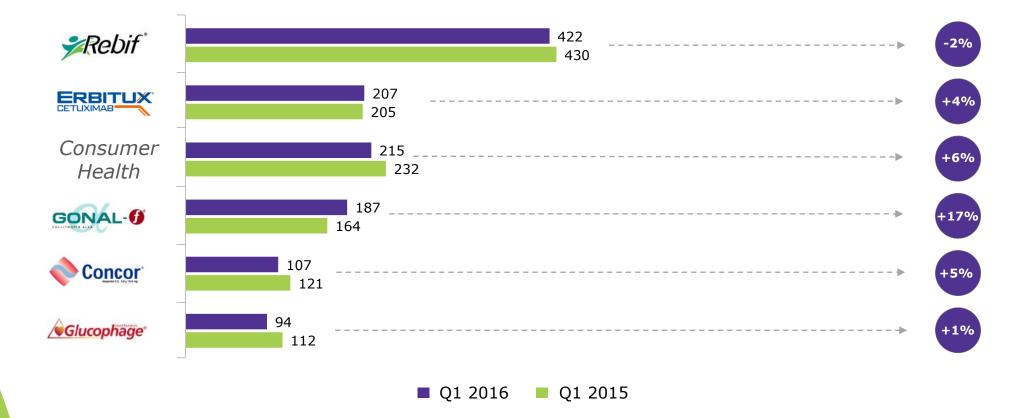
- Organic growth driven by strong Fertility, GM, CH and Xalkori
- Rebif still impacted by ramp-up of orals in Europe, while U.S. pricing and first contribution from PDP* in Brazil support performance
- Erbitux shows moderate organic growth benefiting from pick-up in Brazil, but also low comparables; EU remains competitive
- Marketing & selling reflect end of commission expenses for Rebif (U.S.) partially offset by reinvestments in sales force & launch preparations
- R&D spend starts to increase as avelumab Phase III trials progress
- EBIT reflects Kuvan disposal gain of €324 m
- Profitability improves mainly due to good organic growth, ceased Rebif commission expenses amid phased R&D cost ramp-up

Q1 2016 share of group net sales



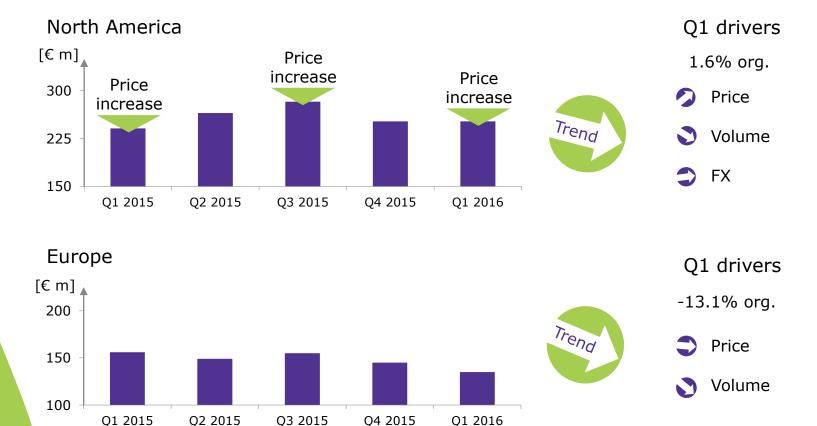
Healthcare organic growth by franchise/product

Q1 2016 organic sales growth [%] by key franchise/products [€ m]



Rebif: Relief in the U.S. – competitive ramp-up in Europe ongoing

Rebif sales evolution

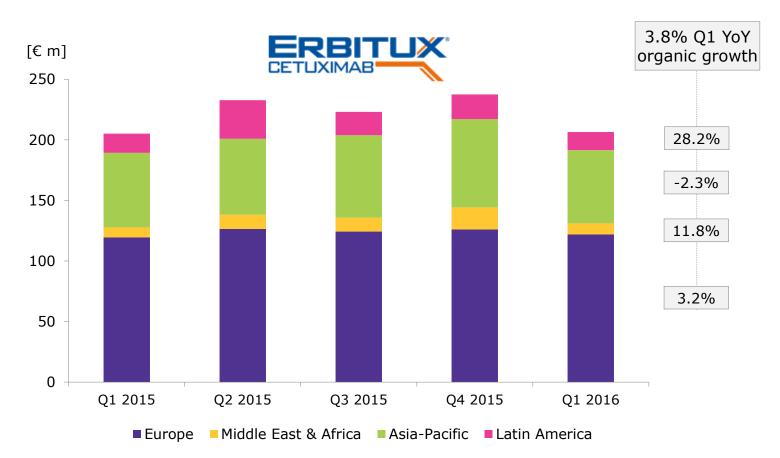


Rebif performance

- Rebif sales of €422 m in Q1 2016 reflect organic decline of -1.5% and negative FX effects from LatAm
- Market shares within interferons stable due to high retention rates and known long-term track record
- •U.S. price increases and market share stabilization outweigh decline of interferon class
- Phased market entry of orals in Europe causes ongoing volume decline
- Initiation of Productive Development Partnership (PDP) in Brazil supports Rebif growth

Erbitux: A challenging market environment

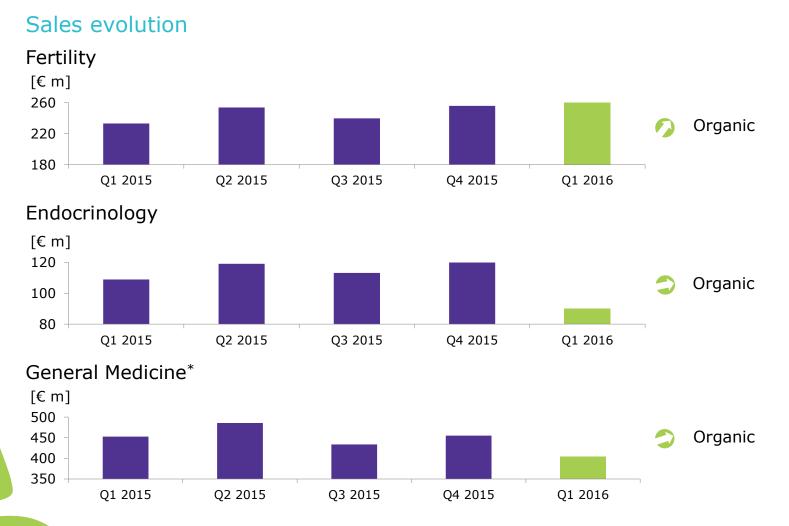
Erbitux sales by region



Erbitux performance

- Sales increase to €207 m due to solid volume development, but low base last year
- •Europe impacted by mandatory price cuts & increasing competition offset by uptake in Russia
- •Latin America shows strong growth esp. in Brazil after weak 2015
- •APAC mainly reflects reduction of patient population due to label change in Japan (April 2015)

Strong organic growth in Fertility, General Medicine and Endocrinology



Q1 drivers

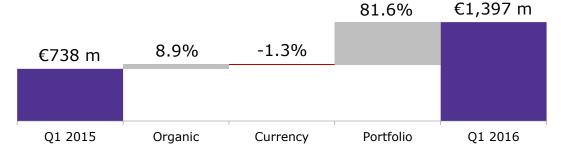
- Record quarter for Fertility (17% org.) driven by favorable competitive situation in U.S. and strong China
- Sales drop in Endocrinology reflects Kuvan divestment; remaining portfolio (Saizen, Serostim) growing organically
- General Medicine sales burdened by FX headwinds from LatAM, organic performance sustainably healthy
- Euthyrox posts strong growth driven by ongoing demand from China
- Glucophage benefits from successful repatriation in Russia; very strong comparables last year

Life Science: A strong start to 2016

Life Science P&L

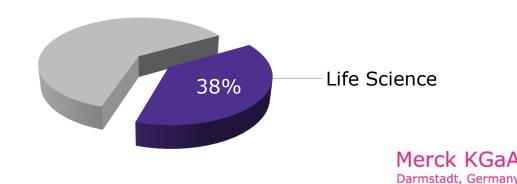
[€m]	Q1 2015	Q1 2016
Net sales	738	1,397
Marketing and selling	-233	-421
Administration	-31	-63
Research and development	-45	-62
EBIT	83	105
EBITDA	164	284
EBITDA pre	184	393
Margin (in % of net sales)	25.0%	28.1%

Net sales bridge



Comments

- Very strong growth of Process Solutions driven by increasing production of large molecules across global and regional accounts
- Applied Solutions shows moderate organic growth, driven by biomonitoring products for pharma & demand for analytical testing
- Research Solutions benefits from increased research on biologics as well as solid demand for high-value chemicals
- Absolute costs higher due to Sigma, but improve in relation to sales
- Profitability reflects Sigma, favorable product mix and synergies



Q1 2016 share of group net sales

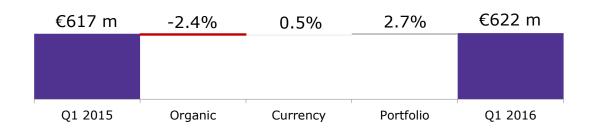
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Performance Materials: Healthy profitability amid destocking of display industry inventories

Performance Materials P&L

[€m]	Q1 2015	Q1 2016
Net sales	617	622
Marketing and selling	-46	-58
Administration	-18	-16
Research and development	-47	-48
EBIT	214	207
EBITDA	273	267
EBITDA pre	277	273
Margin (in % of net sales)	44.8%	43.9%

Net sales bridge

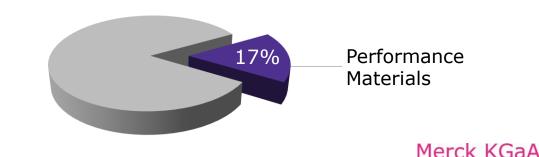


*Active pharmaceutical ingredient Totals may not add up due to rounding

Comments

- Organic growth of OLED, ICM, and Pigments mitigates LC softness
- Liquid Crystals impacted by indicated inventory correction in supply chain
- OLED continues to grow on industry capacity expansion & investments
- Integrated Circuit Materials (ICM) show solid growth mainly driven by dielectric materials for chip production
- Pigments & Functionals post moderate growth esp. due to cosmetic API*
- Marketing & selling reflect contribution from Sigma's SAFC Hitech and sales force IT initiative
- Healthy profitability reflects leading market position with highly differentiated products, despite destocking and negative mix effects

Q1 2016 share of group net sales



Darmstadt, Germany

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Reported figures reflect solid business performance and Kuvan divestment

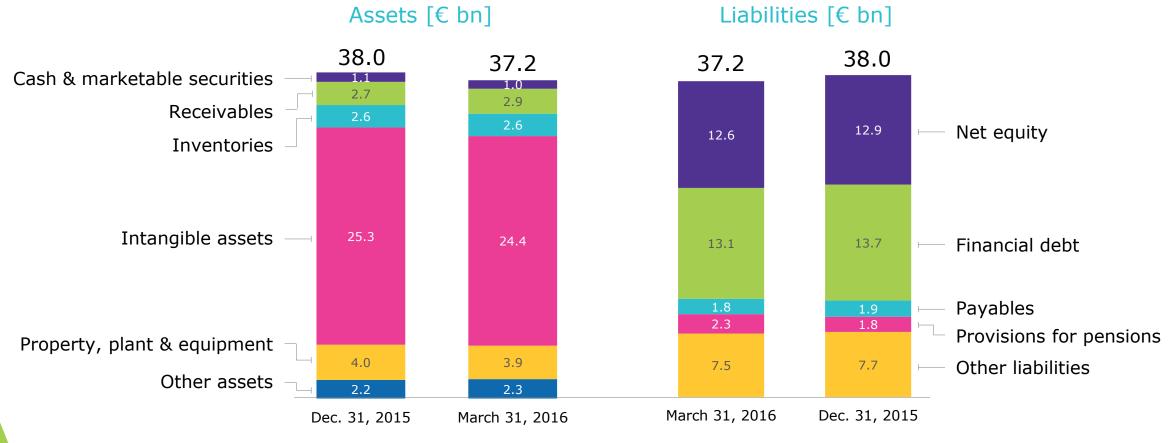
Reported results

[€m]	Q1 2015	Q1 2016	Δ
EBIT	480	849	76.8%
Financial result	-101	-68	-32.1%
Profit before tax	379	780	>100%
Income tax	-94	-187	99.2%
Tax rate (%)	24.8%	24.0%	
Net income	282	591	>100%
EPS (€)	0.65	1.36	>100%

Comments

- EBIT reflects increased EBITDA pre and Kuvan disposal gain amid integration costs and D&A from Sigma
- Financial result contains Sigma financing interest expenses; last year adversely affected by LTIP
- •Tax rate within guidance range of ~23-25%

Balance sheet – deleveraging initiated after Sigma acquisition



• Total assets decline by 2.2%, equity ratio remains at 33.8%

• Net financial debt reduced by €0.6 bn

- Reduction of intangible assets reflects D&A (€0.3 bn) and FX (€0.6 bn)
 Decline of interest rates increases pension provisions
- FX development accounts for $\sim \in 0.6$ bn total equity decrease

Hedging optimized Sigma balance sheet effects

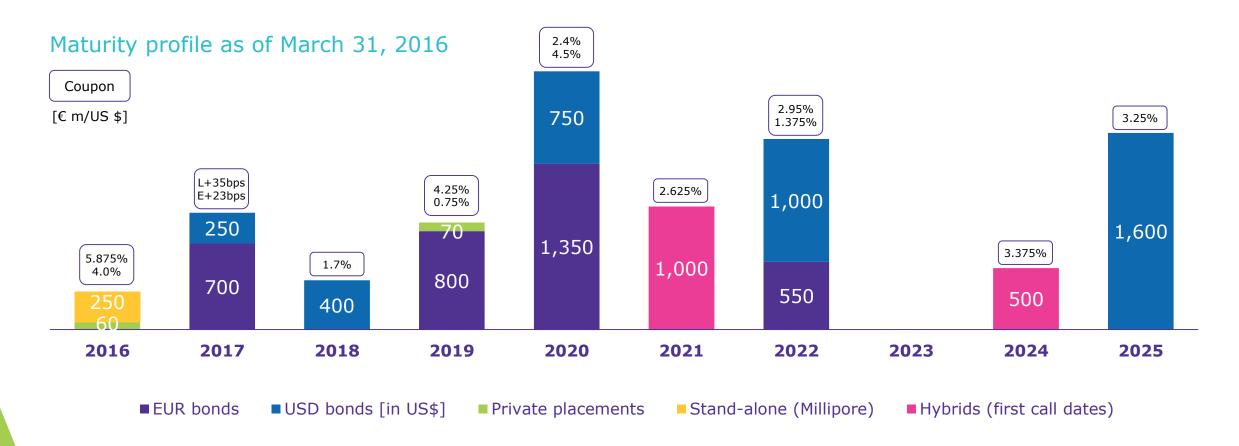


Purchase price breakdown

- Purchase price fully hedged against EUR/USD movements
- Sizable cash position indicates Sigma's cash generative business and reflects delayed closing
- Intangibles amortization from Sigma PPA*: ~€250 – 300 m p.a.



Well-balanced maturity profile reflects capital markets transactions related to Sigma-Aldrich



Financing structure enables flexible and swift deleveraging

Healthy operating cash flow enables first deleveraging measures

Q1 2016 – cash flow statement

[€m]	Q1 2015	Q1 2016	Δ
Profit after tax	285	593	308
D&A	325	433	108
Changes in provisions	90	21	-69
Changes in other assets/liabilities	-231	-34	197
Other operating activities	-20	-394	-374
Changes in working capital	-172	-266	-94
Operating cash flow	279	352	73
Investing cash flow	392	284	-108
thereof Capex on PPE	-75	-160	-85
Financing cash flow	2,288	-572	-2,860

Cash flow drivers

- Profit after tax includes gain from Kuvan divestment, which is neutralized in other operating activities
- D&A increases due to Sigma
- Tax payment (Pfizer upfront) burdened changes in other assets/liabilities LY
- Changes in working capital reflect lower payables (Pfizer-Rebif) and higher R&D receivables from Pfizer (avelumab)
- Investing cash flow contains increased Capex and Kuvan divestment; LY with sale of financial assets
- Financing cash flow reflects first repayments of Sigma-related bank loans; LY contains USD bond issuance

Exceptionals in Q1 2016

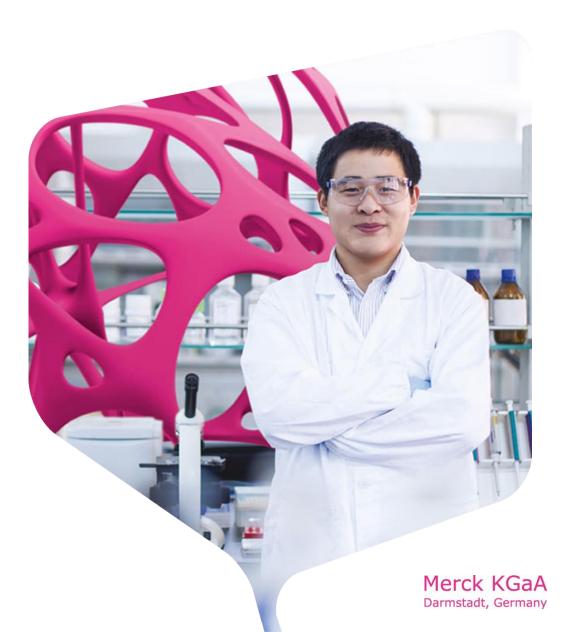
Exceptionals in EBIT

[€m]	Q1 2015		Q1 20	016
	Exceptionals	thereof D&A	Exceptionals	thereof D&A
Healthcare	12	0	-321	0
Life Science	20	0	109	0
Performance Materials	4	0	6	0
Corporate & Other	12	0	7	0
Total	48	0	-198	0



Financial calendar

Date	Event
June 20, 2016	R&D Update Call
August 4, 2016	Q2 2016 Earnings release
November 15, 2016	Q3 2016 Earnings release



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