

Merck KGaA, Darmstadt, Germany

Berenberg Pennyhill Conference 2012

Eva Schäfer-Jansen

Merck KGaA, Darmstadt, Germany Investor Relations

December 7, 2012

Merck KGaA
Darmstadt · Germany



Disclaimer Publication of Merck KGaA, Darmstadt, Germany. In the United States and Canada the subsidiaries of Merck KGaA, Darmstadt, Germany operate under the umbrella brand EMD.

To reflect such fact and to avoid any misconception of the reader of the publication certain logos, terms and business descriptions of the publication have been substituted or additional descriptions have been added. This version of the publication, therefore, slightly deviates from the otherwise identical version of the publication provided outside the United States and Canada.

Disclaimer

Remarks

All comparative figures relate to the corresponding last year's period.

Important information




This presentation does not constitute an offer of securities for sale or a solicitation of an offer to purchase securities in the United States. The shares referred to herein have not been and will not be registered under the U.S. Securities Act of 1933, as amended (the "Securities Act"), and may not be offered or sold in the United States absent registration under the Securities Act or an available exemption from such registration.

Note regarding forward-looking statements

The information in this document may contain "forward-looking statements". Forward-looking statements may be identified by words such as "expects", "anticipates", "intends", "plans", "believes", "seeks", "estimates", "will" or words of similar meaning and include, but are not limited to, statements about the expected future business of Merck KGaA, Darmstadt, Germany resulting from the proposed transaction. These statements are based on the current expectations of management of Merck KGaA, Darmstadt, Germany and E. Merck KG, Darmstadt, Germany, and are inherently subject to uncertainties and changes in circumstances. Among the factors that could cause actual results to differ materially from those described in the forward-looking statements are factors relating to satisfaction of the conditions to the proposed transaction, and changes in global, political, economic, business, competitive, market and regulatory forces. Merck KGaA, Darmstadt, Germany and E. Merck KG, Darmstadt, Germany do not undertake any obligation to update the content of this presentation and forward-looking statements to reflect actual results, or any change in events, conditions, assumptions or other factors.

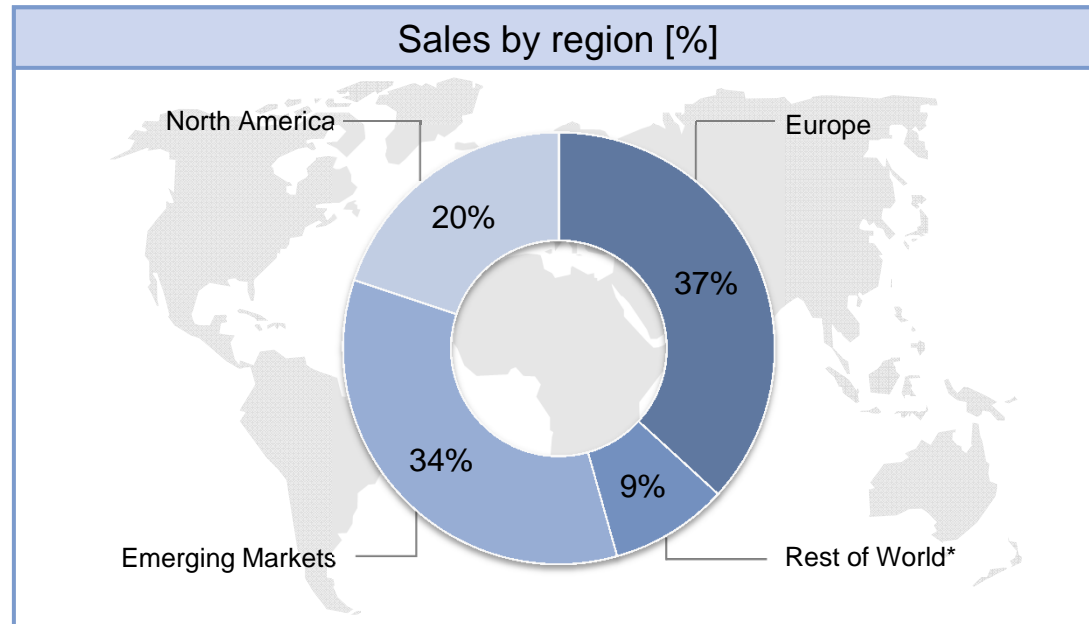
All trademarks mentioned in the presentation are legally protected.

A healthy portfolio

Our business areas	
	<p>Pharmaceuticals</p> <p>Development, manufacturing and marketing of prescription and over-the-counter drugs</p>
	<p>Life Science Tools</p> <p>Products and solutions to support life science research, pharmaceutical development and drug production</p>
	<p>Speciality Chemicals</p> <p>Number one supplier of liquid crystal mixtures used in LCD panels</p>

Merck KGaA
Darmstadt · Germany

Geographically diverse business



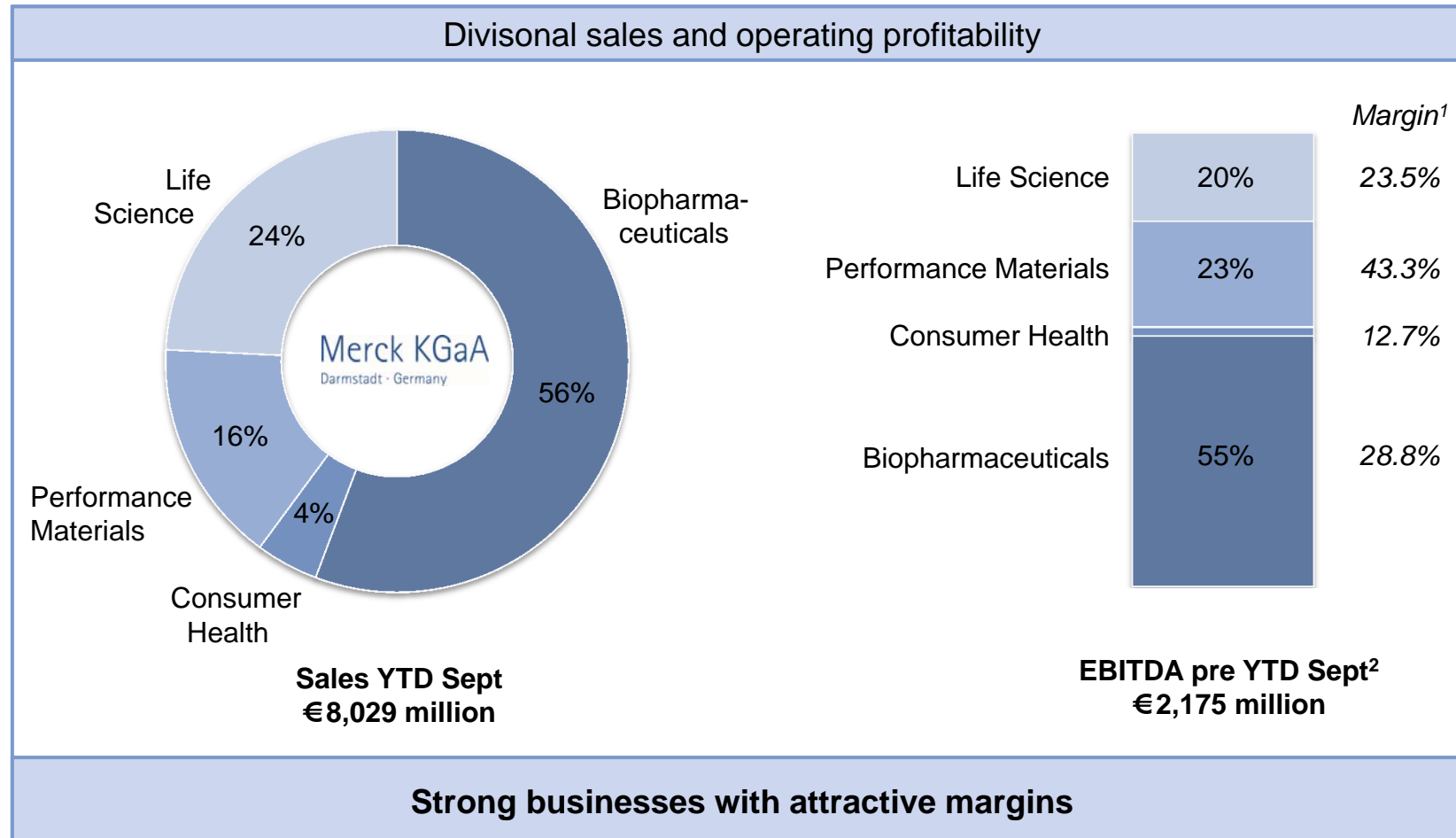
Strong presence in Emerging Markets



* Africa, Australia, Japan

The Group

A balanced portfolio of four divisions

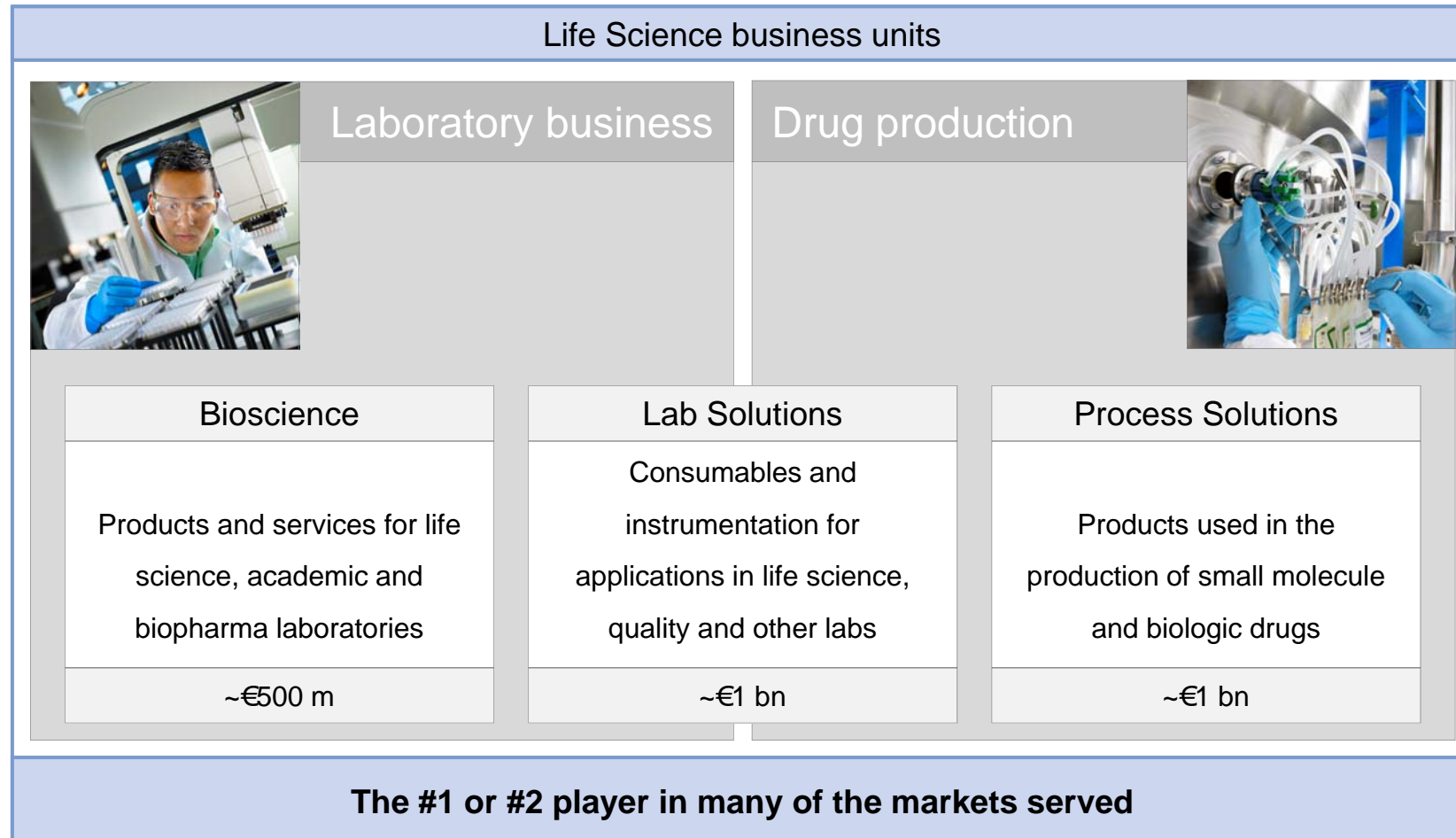


¹ EBITDA pre one-time items as % of sales

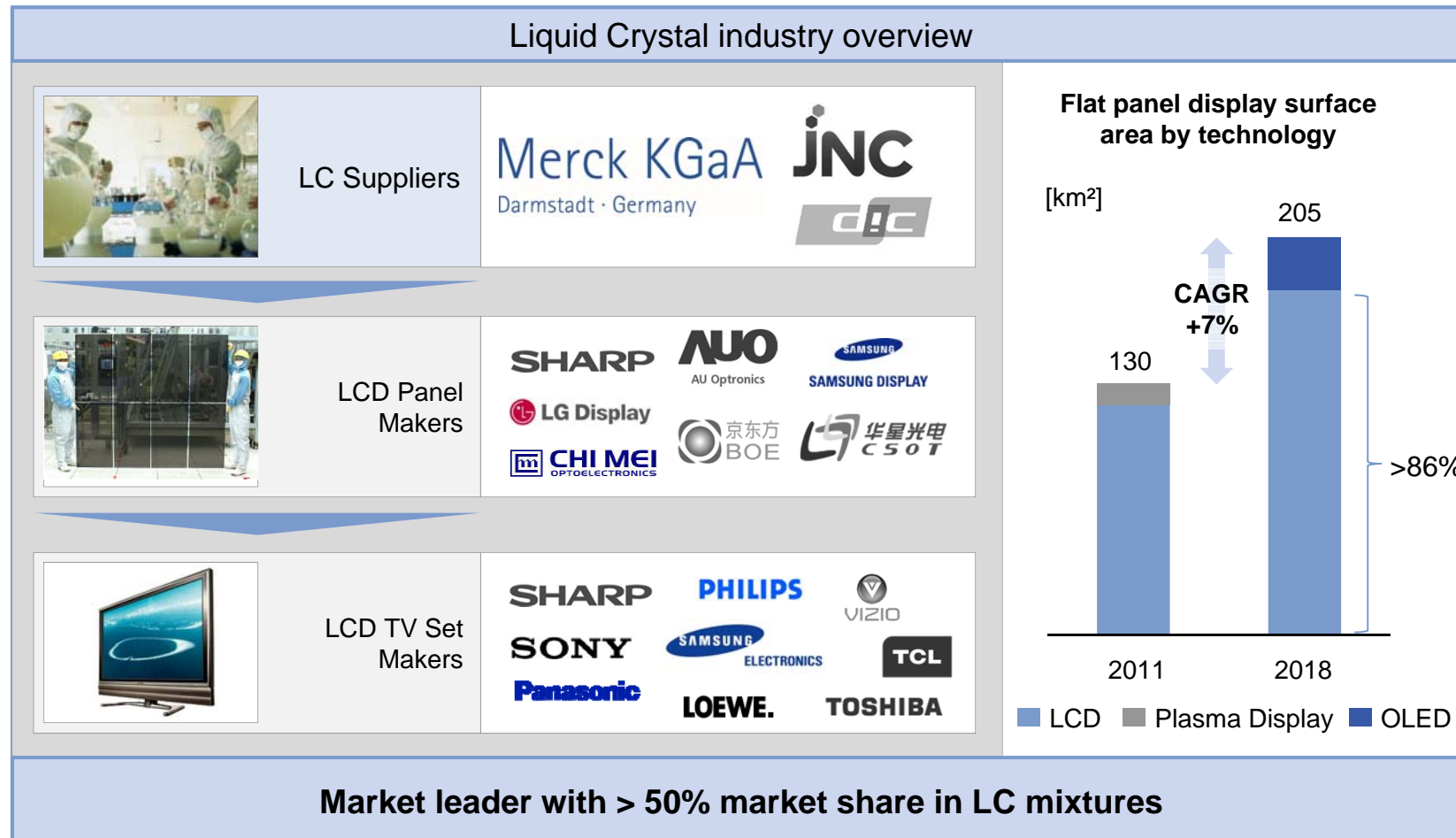
² Including Corporate and Others (- €161 million)

Life Science

A leader in life science tools products



Highly specialized chemical business dominated by display materials



Source: DisplaySearch, Quarterly Worldwide Flat Panel Forecast Report Q3 2012

Consumer Health

Improving its operating model and competitiveness

Core brands and markets with top 3 market share position	
Pain	 
Cough, Cold and Allergy	        
Vitamins, Multivitamins and Supplements	                 

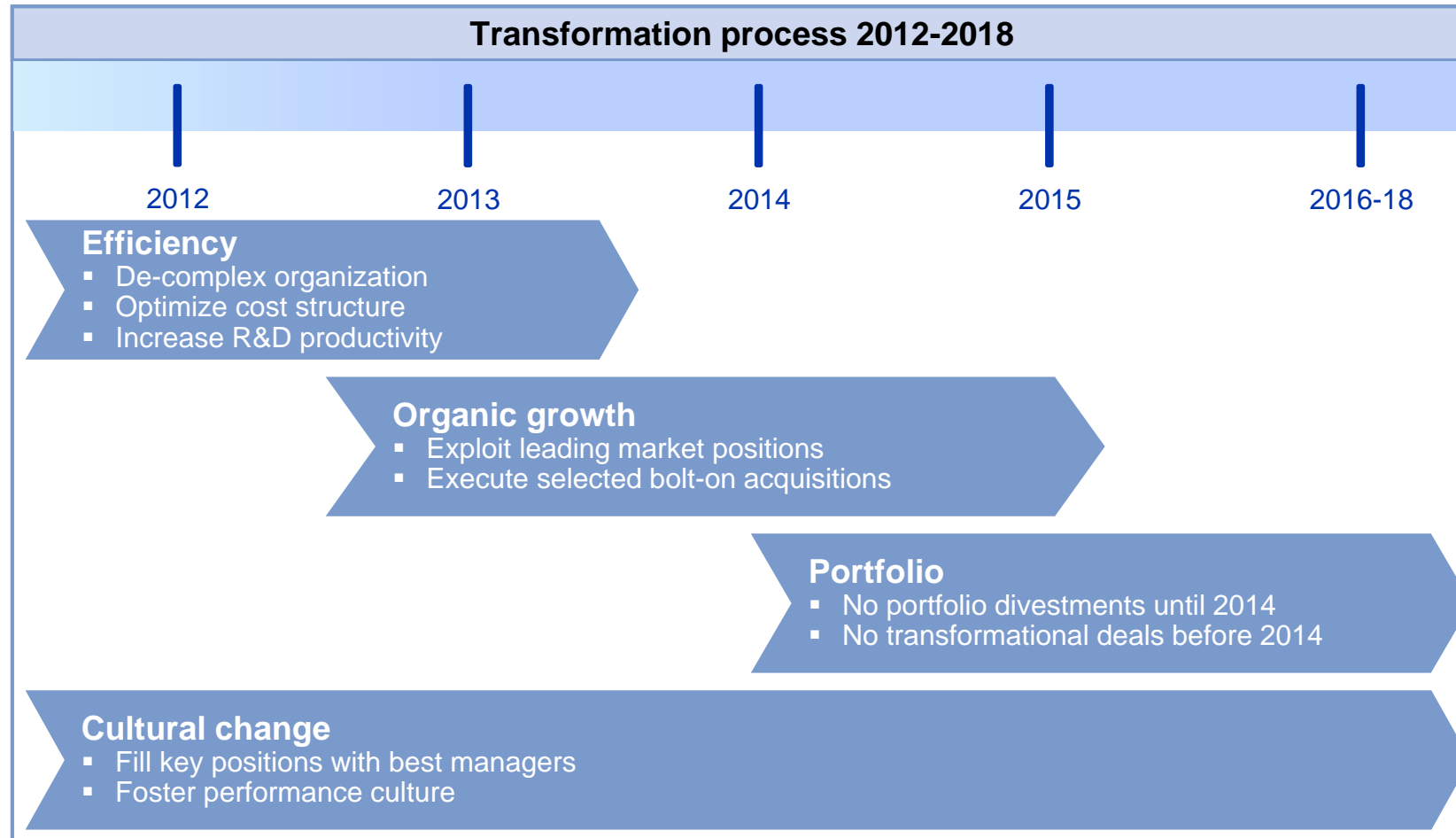
Ongoing restructuring initiatives:

- Focus promotional spending on products and geographies that matter
- Pipeline pruning to reduce R&D spending to industry levels
- Reduce overall headcount in administration

Focusing on growth in selective key markets

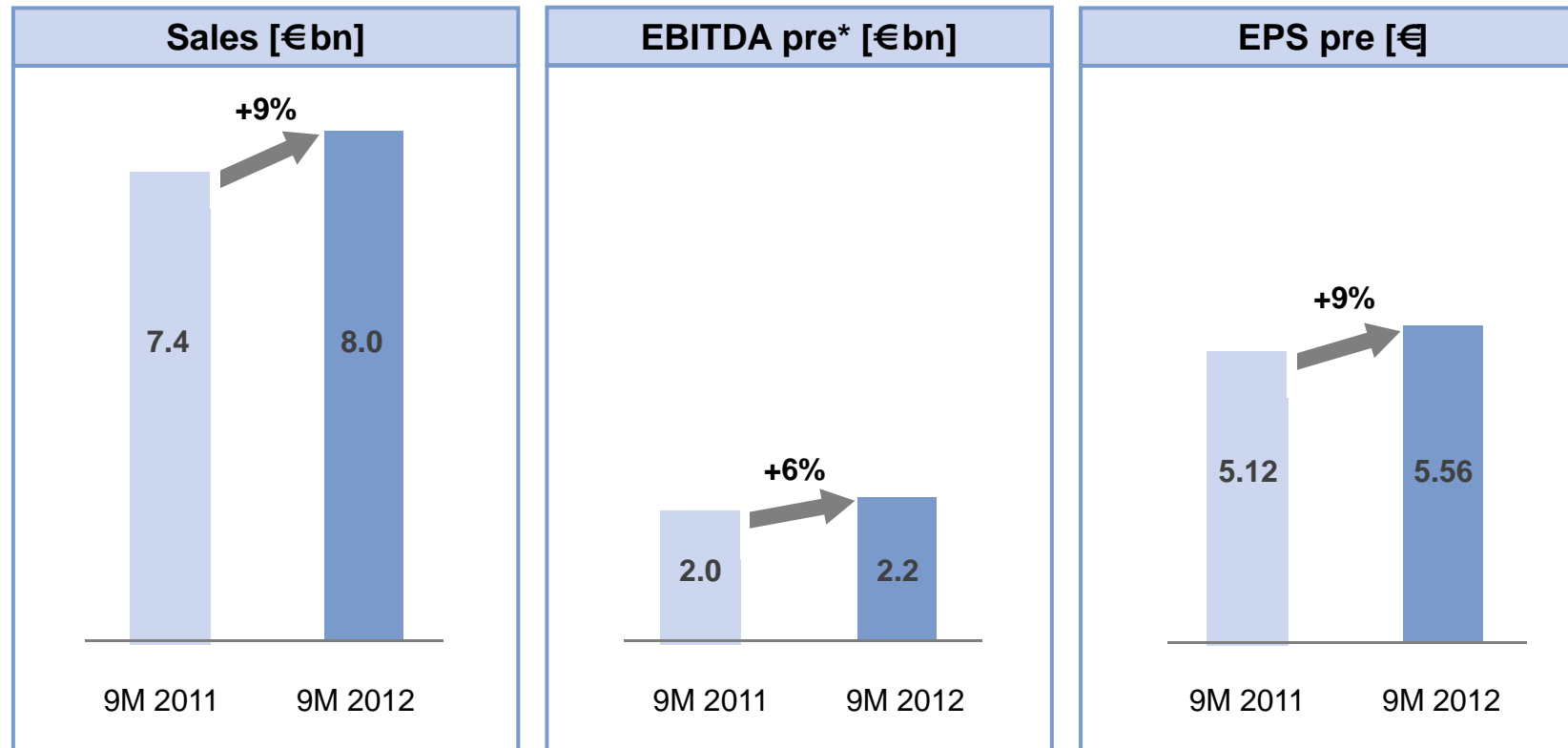
The Group

Focus on efficiency



The Group

We are positioned to report solid numbers in challenging economy and a year of change



Solid top-line and profitability improvement in first year of transformation

* EBITDA pre one-time items

Biopharmaceuticals

Berenberg Pennyhill Conference 2012

Annalisa Jenkins

Global Head of Drug Development & Medical

London, December 7, 2012

Merck KGaA
Darmstadt · Germany

Biopharmaceuticals

Our business today



Lack of patent cliff provides resilient revenue stream

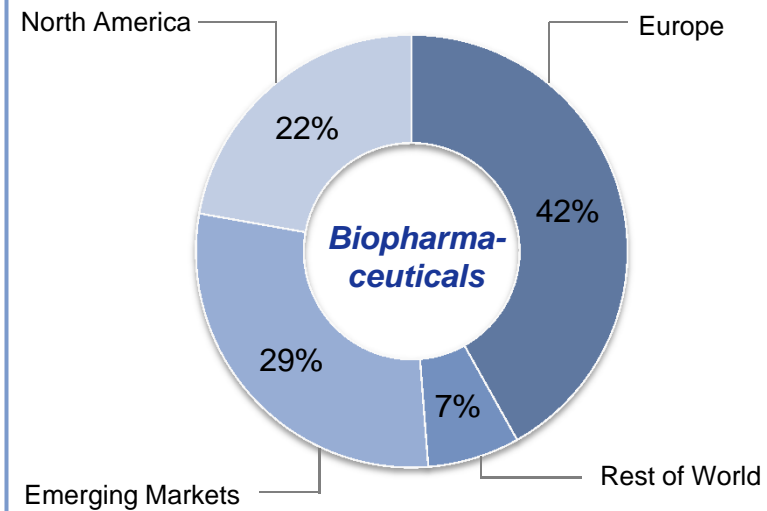


Portfolio of strong brands continue to generate growth



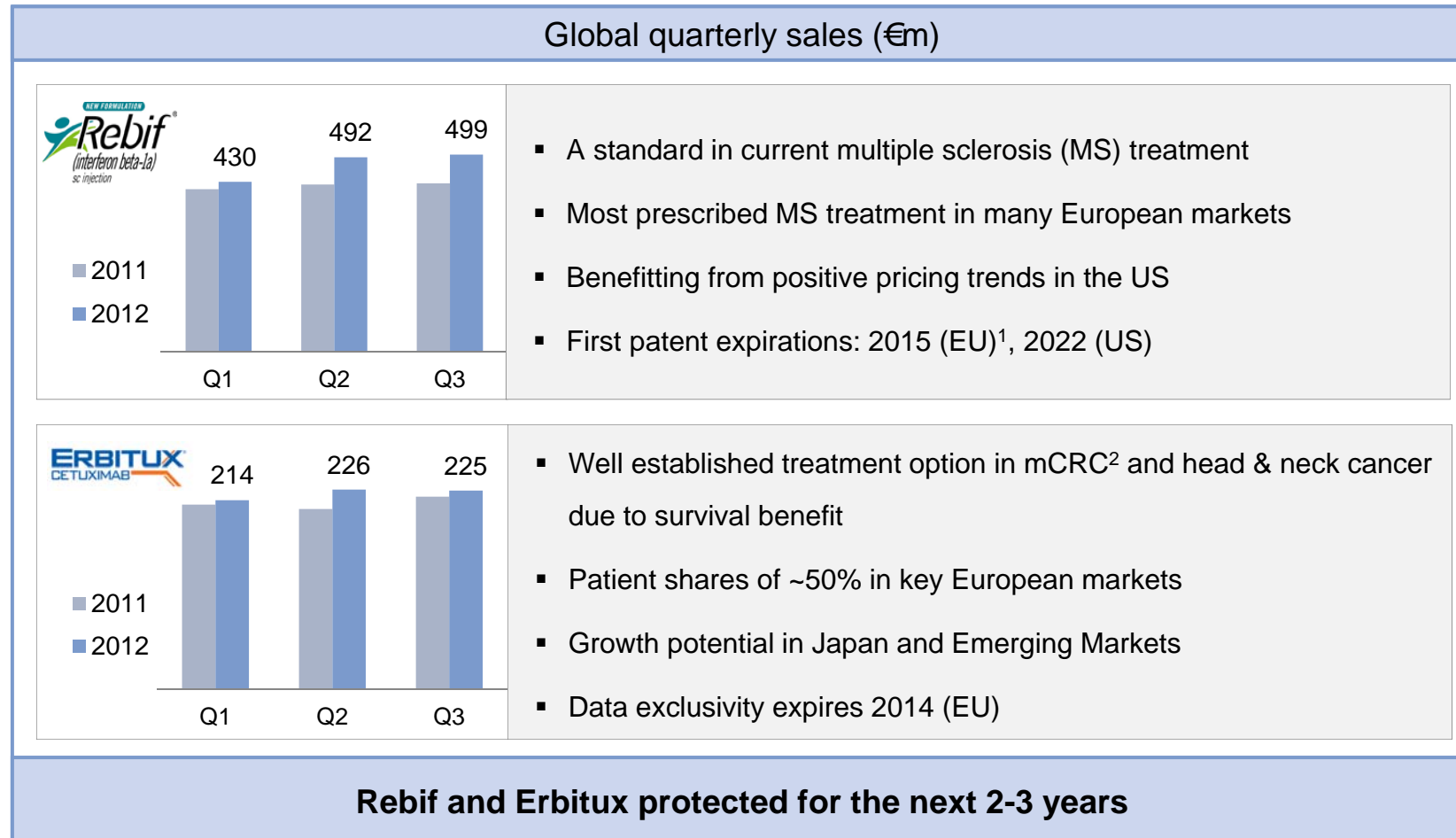
Rebuilding the pipeline to provide for future growth

Geographic sales diversification



Biopharmaceuticals

Key products Rebif and Erbitux continue to be important assets

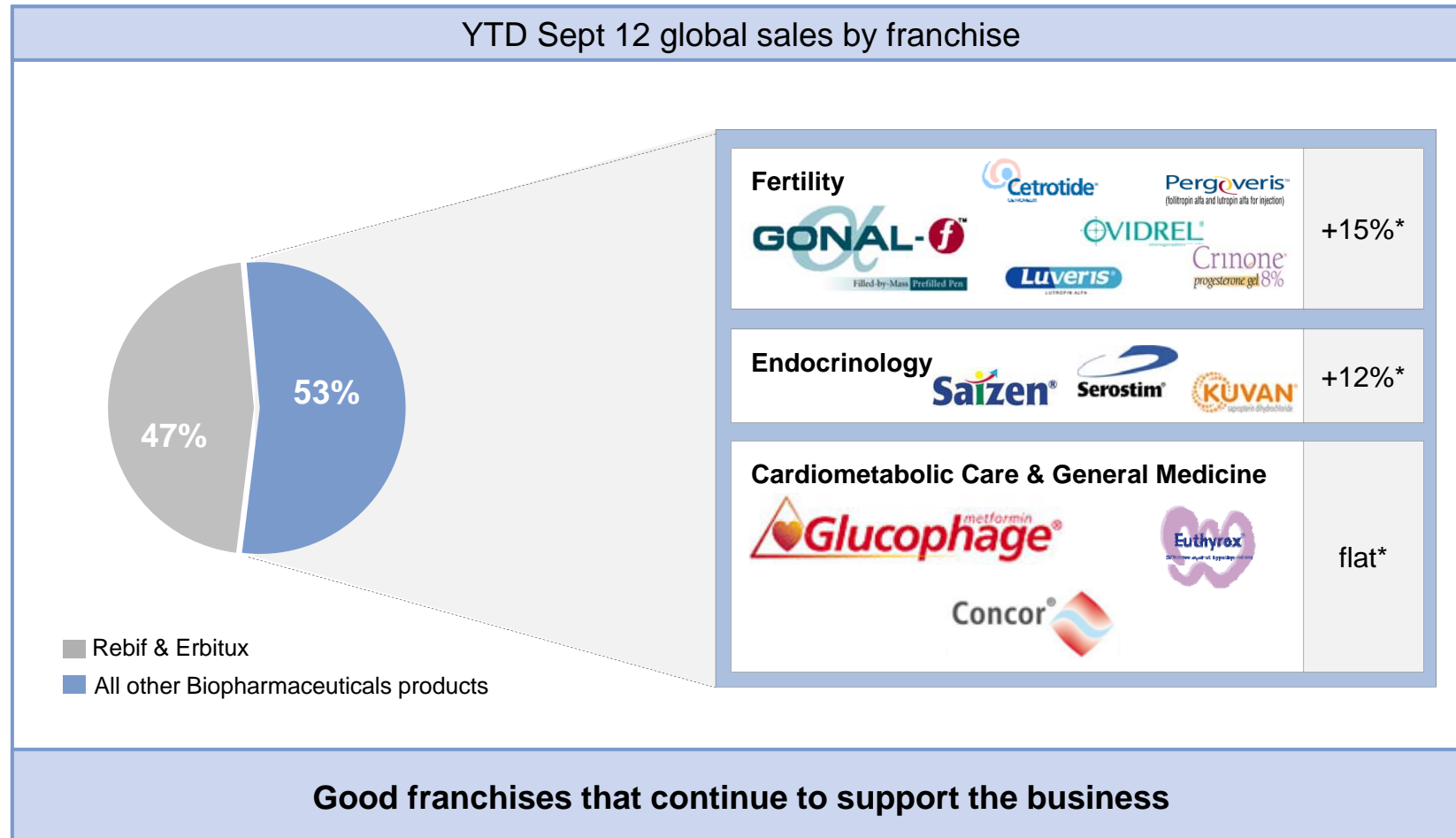


¹ First formulation, next generation (HSA-free) formulation is marketed in Europe

² KRAS wild-type, ~60% of the total patient population

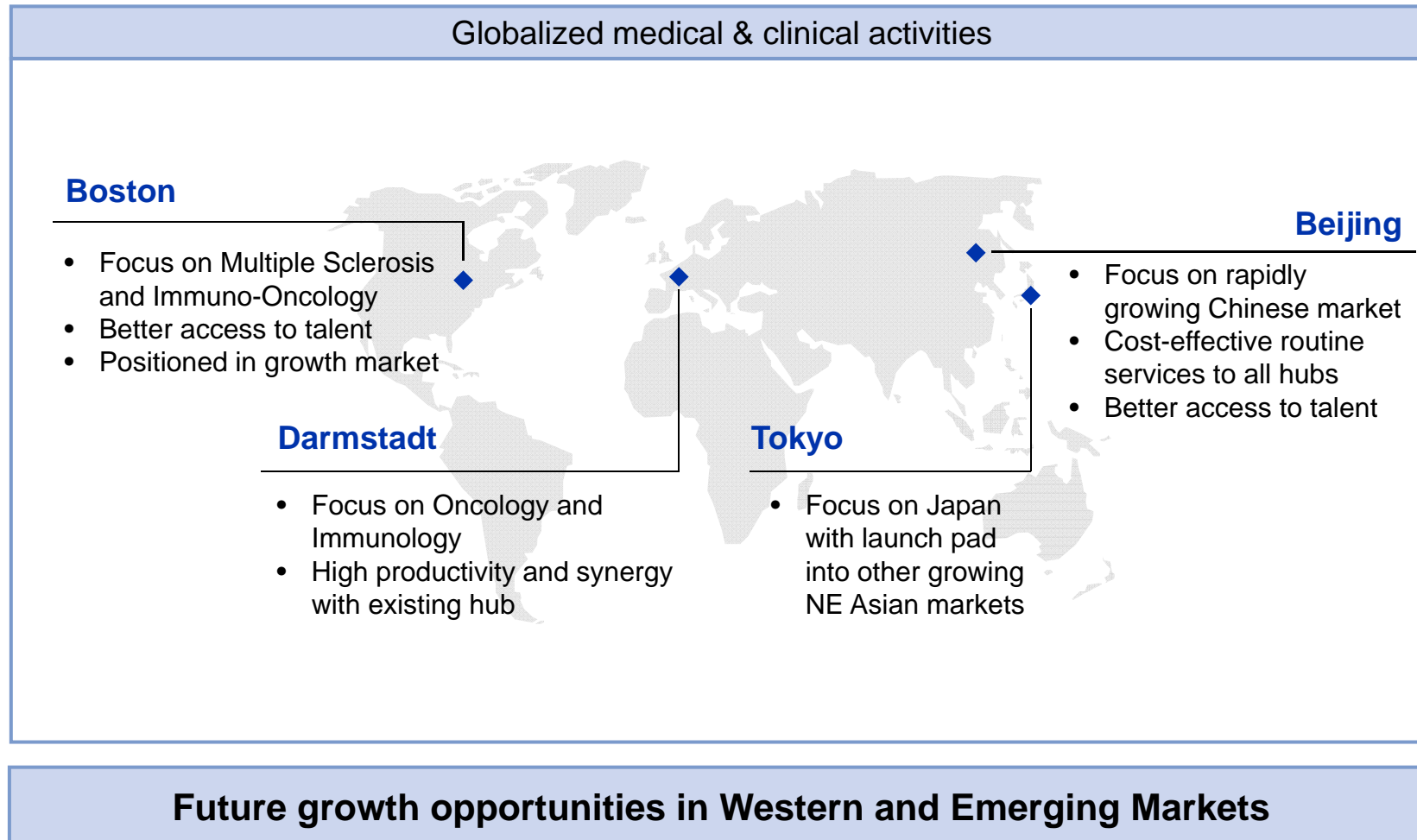
Biopharmaceuticals

Despite patent expiry many of our products continue to grow



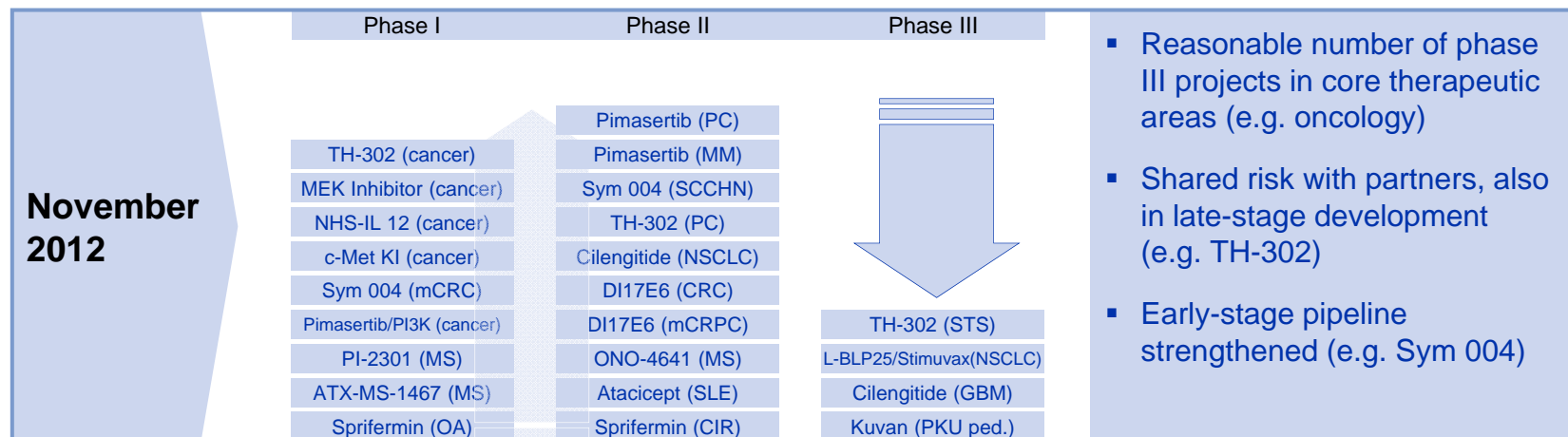
* Organic sales growth YTD Sept 12

Global R&D Centers



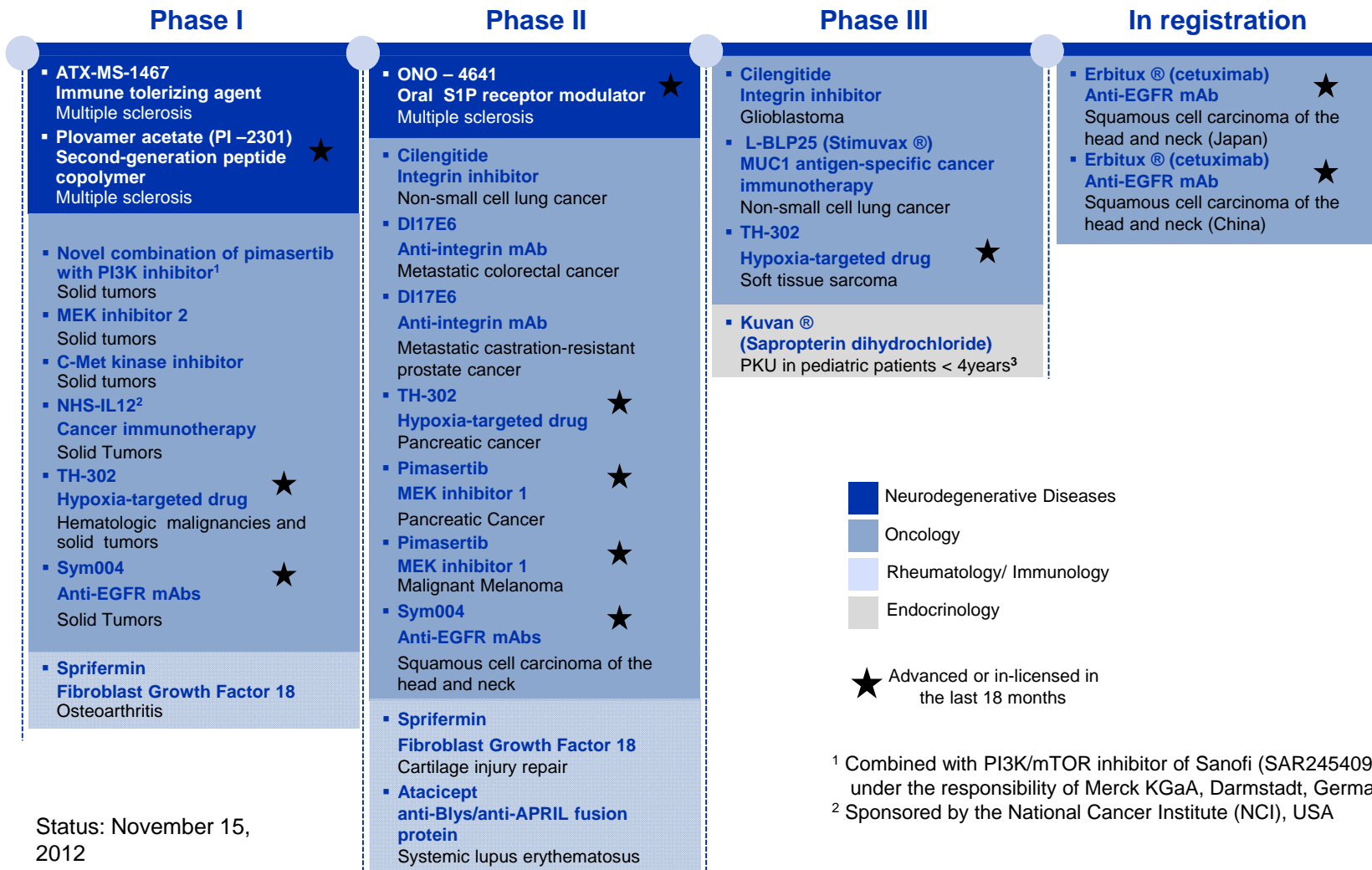
Biopharmaceuticals

Rebuilding our pipeline with an emphasis on phase I and II projects



Biopharmaceuticals

A pipeline with a strong focus on oncology



Status: November 15, 2012

Examples of access to external capabilities

Research



- Platform to discover a novel class of antibody derived therapeutic proteins
- Collaborations in the therapeutic areas of immunology, oncology and osteoarthritis
- Currently 2 projects in pre-clinical testing

Development



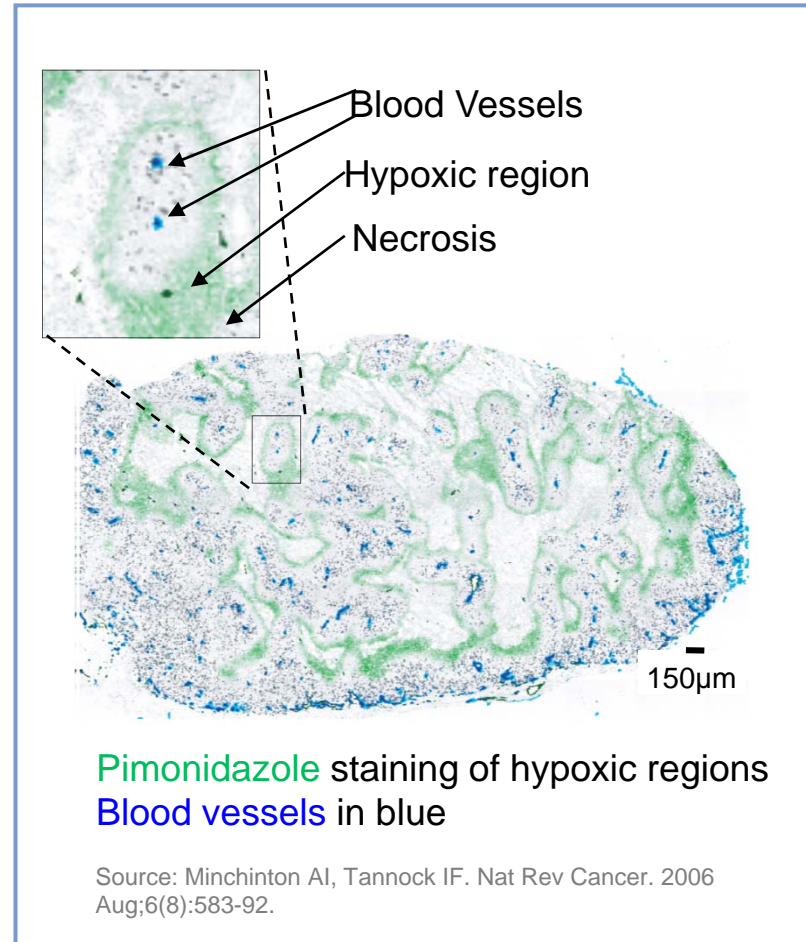
- In-licensing of SYM 004, a mixture of two EGFR-antibodies
- Currently in Phase I/II
- Potential to build on existing Erbitux franchise

Complementing our in-house capabilities in protein and antibody engineering

TH-302: Hypoxia is a feature of tumour microenvironment

Scientific background

- Hypoxia is a feature of all solid tumours and some hematologic malignancies
- Greater tumour hypoxia is associated with poor prognosis¹
 - promotes mutagenesis, invasiveness, metastasis and drug resistance
- Tumour hypoxia underlies (chemotherapy, radiotherapy) treatment failure and relapse
- TH-302 cytotoxicity is activated by hypoxia
 - targets the regions where chemotherapy and radiotherapy fail



¹ Reviewed in Vaupel, P. & Mayer, A. Cancer Metastases Rev 26 225, 2007

TH-302: pivotal trials in soft tissue sarcoma and pancreatic cancer

Mode of Action:

- DNA cross-linking effect that is targeted to areas of hypoxia
- TH-302 is the prodrug of an alkylating mustard that is activated in areas of hypoxia:

Soft tissue sarcoma

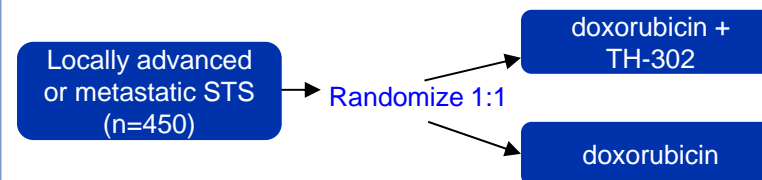
- Orphan drug designation granted by FDA
- A Special Protocol Assessment exists with FDA

Pancreatic cancer

- A Special Protocol Assessment recently agreed to by FDA

Current phase III programs

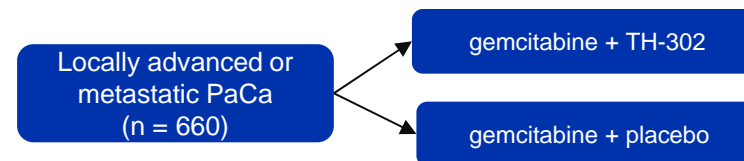
Soft tissue sarcoma (STS)



Primary endpoint: Overall survival, with PFS interim
Secondary endpoints: ORR, PFS, Duration of response, EFS

Pancreatic cancer (PaCa)

Recommended Phase III trial: double-blind, placebo-controlled



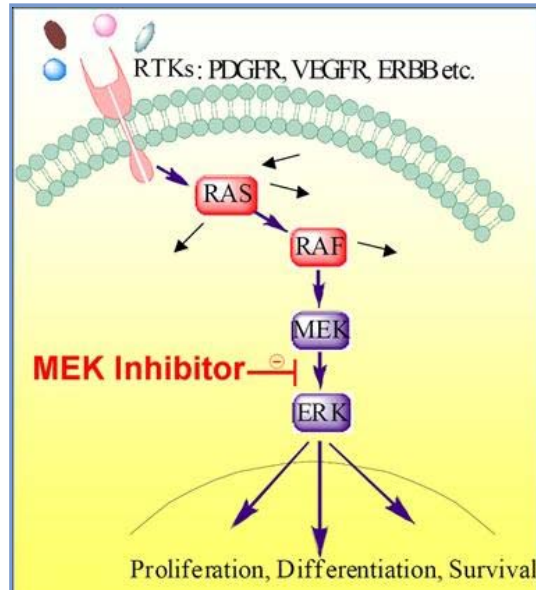
Primary endpoint: Overall survival
Secondary endpoints: PFS time (local assessment), ORR, DoR, DC, CA19-9, QoL, VAS pain score, safety, drug exposure, PK

Phase I/II trials currently underway in other solid tumors as well as hematological malignancies

Special protocol assessment: written agreement with the US Food and Drug Agency that the design and planned analysis of a study can adequately address objectives in support of a regulatory submission. However, FDA's determinations for marketing application approval are made after a complete review of a marketing application and are based on the entire data in the application

Biopharmaceuticals

Pimasertib: MAPK signaling is dysregulated in many human solid and hematological tumors



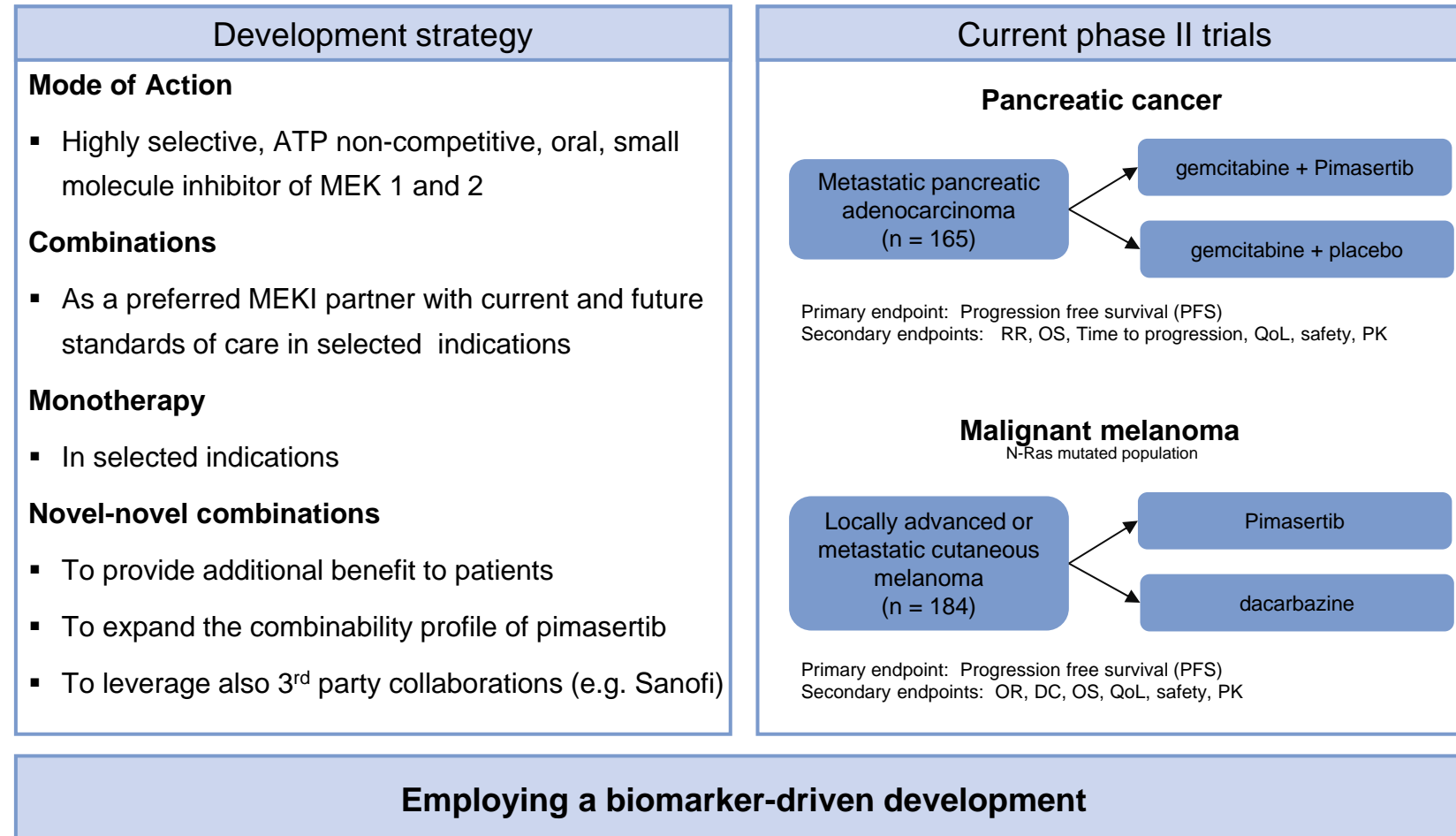
Key Competitors	Company
Trametinib (GSK1120212)	GSK
MEK162 (ARRY 162)	Novartis Array Biopharma
BAY86-9766 (RDEA119)	Bayer Ardea Biosciences
Selumetinib (AZD6244)	AstraZeneca

Scientific background

- Mitogen-activated protein kinase (MAPK) cascades are key signaling pathways involved in the regulation of cell proliferation, survival and differentiation
- The crucial role of the RAF-MEK-Erk MAPK cascade in tumorigenesis has been clearly established
- Generally, MAPK pathway activation occurs in tumors by receptor tyrosine kinase (RTK) stimulation or by activating mutations in regulators of the pathway
- Evidence of anti-tumor activity following MEK inhibition has been demonstrated particularly in tumors where constitutive activation of the MAPK pathway is significantly present

Competitive field with Pimasertib being one of the most advanced compounds

Pimasertib: selective and potent MEK inhibitor



Biopharmaceuticals

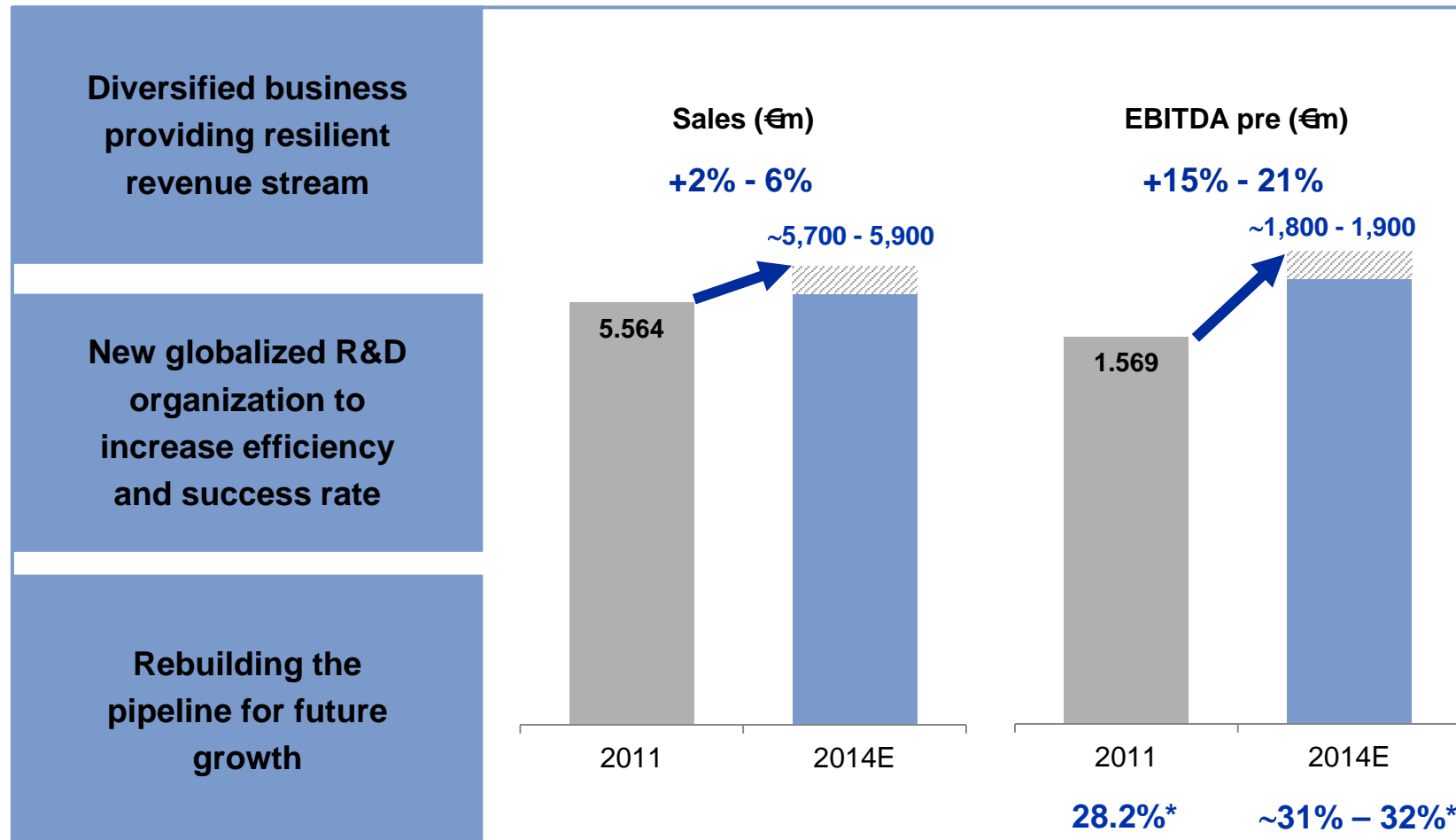
Upcoming pipeline newsflow

Project	Indication	Current phase	Timing	Event
Erbix	SCCHN	In registration		Approval in Japan
L-BLP25 (Stimuvax)	Stage III NSCLC	Phase III	Q1 2013	Head-line result (START)
Cilengitide	Glioblastoma	Phase III	H1 2013	Head-line result (CENTRIC)
TH-302	Soft tissue sarcoma	Phase III	H1 2013	Futility analysis
ONO-4641	Multiple sclerosis	Phase II	2013	Phase III 'go/no go' decision
Atacicept	Systemic lupus erythematosus	Phase II	H1 2013	Publication of results (APRIL SLE)



Biopharmaceuticals

Conclusion and mid-term targets



* % of sales, assumes no major new product launches until end 2014

Merck KGaA

Darmstadt · Germany