Turning innovation into patients benefit

Severin Schwan, CEO Roche Group

Zuerich, January 2016
This presentation contains certain forward-looking statements. These forward-looking statements may be identified by words such as ‘believes’, ‘expects’, ‘anticipates’, ‘projects’, ‘intends’, ‘should’, ‘seeks’, ‘estimates’, ‘future’ or similar expressions or by discussion of, among other things, strategy, goals, plans or intentions. Various factors may cause actual results to differ materially in the future from those reflected in forward-looking statements contained in this presentation, among others:

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2. legislative and regulatory developments and economic conditions;
3. delay or inability in obtaining regulatory approvals or bringing products to market;
4. fluctuations in currency exchange rates and general financial market conditions;
5. uncertainties in the discovery, development or marketing of new products or new uses of existing products, including without limitation negative results of clinical trials or research projects, unexpected side-effects of pipeline or marketed products;
6. increased government pricing pressures;
7. interruptions in production;
8. loss of or inability to obtain adequate protection for intellectual property rights;
9. litigation;
10. loss of key executives or other employees; and
11. adverse publicity and news coverage.

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Performance update

Innovation and differentiation

Improving the standard of care

Outlook
Q3 2015: Sales growth for fifth consecutive year

All growth rates at constant exchange rates (CER)
HY 2015: Strong underlying Group core operating profit & margin

% of sales

38.1% 38.5% 40.7% 41.0% 39.2% (+0.4%p excl. filgrastim*)

CHFbn

8.3 8.6 9.5 9.4 9.2


CER=Constant Exchange Rates
* Excluding sale of filgrastim rights in 2014 at CER
2014: Dividend and payout ratio further increased

Payout ratio calculated as dividend per share divided by core earnings per share (diluted); Note: For 1995, a special dividend was paid out to mark F. Hoffmann-La Roche’s 100th anniversary in 1996
Performance update

Innovation and differentiation

Improving the standard of care

Outlook
Roche strategy: Focused on medically differentiated therapies

Regulators:
Optimised benefit / risk ratio

Payors:
Optimised benefit / cost ratio
Roche’s strategy remains unchanged
Success hinges on excellence in innovation & execution

- Focus investment on **differentiated molecules**
- Continuously **improve processes**
Roche/Genentech: Sustained record of cutting edge scientific discoveries

Research publications in Cell, Science, or Nature

(* through Oct. 2015)
Approach towards innovation

Exploring broad ... ...

We invest more early stage

% of budget

<table>
<thead>
<tr>
<th></th>
<th>Industry avg</th>
<th>Roche</th>
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<tbody>
<tr>
<td>R &amp; Early D</td>
<td>54%</td>
<td>60%</td>
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<tr>
<td>Late D</td>
<td>46%</td>
<td>40%</td>
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...to increase options to choose from

# of NME's entering Pre-clinical

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<th>2012</th>
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<tr>
<td>Industry avg</td>
<td>11</td>
<td>18</td>
<td>19</td>
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External sources: Investment split based on the CMR Pharmaceutical R&D Factbook (data from 10 companies, 2014); Number of entries into Pre-clinical for Industry based on data from KMR, data for 2011-2013.
Approach towards innovation
...but prioritizing rigorously

We select at late stage entry

...to increase sales potential

Illustrative

Medical need

low

high

Clinical differentiation

low

high

Threshold

Continued

Disqualified

Greater differentiation

Sales

Time
Achievements: Innovation

Above-average R&D success rate

Note: Success rates calculated at the project/indication level for overlapping 5-year periods based on KMR data (13 peers and Roche)
Data management
Collaborations are key

Clinical Trials
Controlled, clinical trial data on expected benefit and side effects

Clinical Practice
Real outcome data on actual benefit and side effects

Analysis

Decisions on treatment
Insight for R&D
Roche’s strategy remains unchanged

*Success hinges on excellence in innovation & execution*

- Focus investment on **differentiated molecules**
- Continuously **improve processes**
Driving operational efficiencies

Select examples R&D

Lean Protocol Design

Rethinking protocol design to reduce complexity

Sourcing Strategy

Outsourcing transactional clinical operations roles

Partnerships

Industry consortium (20 companies) to drive trial efficiency

Savings of ~100m CHF per year
Driving operational efficiencies
Optimization production capacities

Small molecules
highly potent small molecules with lower capacity requirements

Large molecules
pipeline of large molecules and entry into new high volume segments

Savings of ~100m CHF per year
Performance update

Innovation and differentiation

Improving the standard of care

Outlook
Progressing in Personalised Healthcare
60% of phase 2 & 3 products have PHC component

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<th>Phase 2</th>
<th>Phase 3/Registration</th>
<th>Marketed</th>
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- **Oncology**
- **Immunology**
- **Infectious Diseases**
- **Neuroscience**
- **Ophthalmology**

- **Molecular Diagnostics**
- **Tissue Diagnostics**
- **Professional Diagnostics**
## Progressing in Personalised Healthcare

60% of phase 2 & 3 products have PHC component

### Phase 2
- FIXa/FX bispecific MAb
- SERD
- CSF-1R MAb
- Ang2-VEGF MAb
- ipatasertib
- polatuzumab vedotin
- lifastuzumab vedotin
- glypican-3 MAb

### Phase 3/Registration
- MAO-B inh
- GABRA5 NAM
- bitopertin
- basimglurant
- V1 receptor antag
- crenezumab
- olesoxime
- danoprevir
- Flu A MAb
- LptD antibiotic

### Marketed
- PD-L1 MAb
  - venetoclax (Bcl-2 inh)
  - alectinib (ALK inh)
  - taselisib
  - cobimetinib
  - lebrikizumab
  - etrolizumab
  - gantenerumab
  - ocrelizumab
  - lampalizumab

### Categories
- Oncology
- Immunology
- Infectious Diseases
- Neuroscience
- Ophthalmology
- Molecular Diagnostics
- Tissue Diagnostics
- Professional Diagnostics
- Professional Diagnostics

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**Roche**
The 7 steps of the Cancer-Immunity Cycle guide our prioritization framework for Atezolizumab

Step 1: Release of Cancer Cell antigens:
- ex: Atezo + chemo, Gazyva, aCD40

Step 2 & 3: Cancer antigen presentation & priming and activation
- ex: Atezo + interferon, OX40

Steps 4 & 5: Trafficking & infiltration of T cells to tumours
- ex: Atezo + Avastin, aCSF1R

Steps 6 & 7: Recognition of cancer cells by T cells & killing of cancer cells
- ex: Atezo + Meki, IDOi, aOX40

Chen and Mellman. Immunity 2013
# Atezolizumab: Pivotal programs by disease

<table>
<thead>
<tr>
<th></th>
<th>Lung</th>
<th>Bladder</th>
<th>Kidney</th>
<th>Breast</th>
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<tr>
<td><strong>FIR and BIRCH</strong></td>
<td>IMpower 130&amp;150 1L non-sq. combo</td>
<td>IMvigor 210 1L cis-inel. &amp; 2L</td>
<td>IMmotion 150 1L combo</td>
<td>IMpassion 131 1L combo</td>
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<tr>
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- **Rolling filing initiated**
- **Data in 2016**
- **Data in 2017**

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**Going deep in diseases where we have strong scientific rationale**

**cis-inel.=cisplatin ineligible patients**
**Progressing in Personalised Healthcare**

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**Legend:**
- **Oncology**
- **Immunology**
- **Infectious Diseases**
- **Neuroscience**
- **Ophthalmology**

- **Molecular Diagnostics**
- **Tissue Diagnostics**
- **Professional Diagnostics**
- **Professional Diagnostics**
Ocrelizumab: Active in both RMS & PPMS

- Selective depletion of a B cell subset leaving the ability to generate new B cells intact
- Administered IV twice yearly

**RMS**=
relapsing forms of multiple sclerosis (MS) which includes patients with RRMS and SPMS with superimposed relapses; **RRMS**=relapsing-remitting MS; **SPMS**=secondary progressive MS; **PPMS**=primary progressive MS;
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Severe asthma: High unmet need in growing market

Global asthma market 2014 vs 2020

- Approx. 300m patients worldwide and growing strongly
- 5-10% asthma patients have severe disease, and ~30% of severe disease is uncontrolled despite maximal therapy
- Over 4.5m severe asthmatics with uncontrolled disease

Note: Market shares based on value (sales); Source: Evaluate; defined by daily use of ≥500ug ICS + LABA
Lebrikizumab in severe uncontrolled asthma

High efficacy and improved convenience

Summary phase II results:

• Exacerbation reduction of 60%
• Early onset of lung function improvement (FEV1)
• Prefilled syringe and Q4W subcutaneous delivery for improved convenience

Q4W = monthly dosing; FEV = forced expiratory volume; LUTE/VERSE results presented at AAAAI 2014; Thomas NC. et al., Biologics 2012; Hanania NA. et al., Thorax 2015
Performance update

Innovation and differentiation

Improving the standard of care

Outlook
Positive outlook

Strong pipeline mitigates biosimilar impact

- NME launches: Venetoclax, Alectinib, Cotellic, Ocrelizumab, Atezolizumab, Lebrikizumab, ACE910, Lampalizumab

- Biosimilars: MabThera, Herceptin, Avastin

Sales

Conceptual

Pipeline

Marketed products

### 2015 outlook: Guidance upgraded

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<table>
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<tr>
<td><strong>Group sales growth(^1)</strong></td>
<td>Mid-single digit</td>
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<tr>
<td><strong>Core EPS growth(^1)</strong></td>
<td>Ahead of sales growth(^2)</td>
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<tr>
<td><strong>Dividend outlook</strong></td>
<td>Further increase dividend in Swiss francs</td>
</tr>
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1. At constant exchange rates (CER)
2. Excluding sale of filgrastim rights in 2014
Doing now what patients need next
**Development plan: Lebrikizumab**

*Programs in asthma, IPF, atopic dermatitis and COPD*

<table>
<thead>
<tr>
<th>Condition</th>
<th>Phase I</th>
<th>Phase II</th>
<th>Phase III</th>
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</thead>
<tbody>
<tr>
<td>Severe uncontrolled asthma Adults</td>
<td>High dose/low dose Q4W</td>
<td></td>
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<tr>
<td>Mild to moderate asthma Adults</td>
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<td></td>
<td></td>
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<tr>
<td>Severe uncontrolled asthma Adolescents</td>
<td>High/low dose Q4W</td>
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<tr>
<td>Asthma Adults (OCS-sparing)</td>
<td>High/low dose Q4W</td>
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<tr>
<td>Asthma Biomarker</td>
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<tr>
<td>IPF</td>
<td>Mono and lebrikizumab+Esbriet</td>
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<tr>
<td>Moderate to severe atopic dermatitis</td>
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<tr>
<td>COPD</td>
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Q4W=monthly dosing; PK=pharmacokinetic study; IPF=idiopathic pulmonary fibrosis; COPD=chronic obstructive pulmonary disease; OCS=oral corticosteroid
Newsflow in H2 2015

Vienna, 25 -29 Sep
• atezolizumab (+chemo)
  - NSCLC: POPLAR, BIRCH, P1b chemo combo update
  - Bladder: P2 (2L cohort)
• alectinib
  - ALK+ NSCLC: P2 update
• CEA-IL2v FP; IDOi
  - solid tumors: P1 updates

Barcelona, 7-10 Oct
• ocrelizumab
  - RMS: P3 OPERA I/II
  - PPMS: P3 ORATORIO

San Francisco, 18-21 Nov
• atezolizumab + Zelboraf
  - mM: P1
t• Cotellic + Zelboraf
  - BRAF+mM: coBRIM OS data

Orlando, 5-8 Dec
• venetoclax
  - R/R CLL 17p del: P2
• venetoclax combinations
  - AML: P1 + chemo
  - NHL: P1 + Rituxan+benda
  - CLL: P1 + Gazyva
• Gazyva + chemo
  - NHL: P3 GADOLIN update
  - CLL: P3 GREEN update

San Antonio, 8-12 Dec
• Atezolizumab + chemo
  - TNBC: P1b abraxane combo