Turning science into patient benefits

Severin Schwan, CEO Roche Group

New York, May 2016
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Performance update

Innovation and differentiation

Improving the standard of care

Outlook
Q1 2016: Sales growth for fifth consecutive year

All growth rates at Constant Exchange Rates (CER)
2015: Strong underlying Group Core operating profit & margin

CER=Constant Exchange Rates; * Excluding sale of filgrastim rights in 2014
Roche significantly advancing patient care
Recognition for innovation 2013-present

12 Breakthrough Therapy Designations

<table>
<thead>
<tr>
<th>Rank</th>
<th>Company</th>
<th>#</th>
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<tbody>
<tr>
<td>1</td>
<td>Roche</td>
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<td>2</td>
<td>BMS</td>
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<td>3</td>
<td>Novartis</td>
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<td>3</td>
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<tr>
<td>3</td>
<td>Pfizer</td>
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<tr>
<td>4</td>
<td>GSK</td>
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<table>
<thead>
<tr>
<th>Year</th>
<th>Molecule</th>
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<tbody>
<tr>
<td>2016</td>
<td>Ocrelizumab (PPMS)</td>
</tr>
<tr>
<td></td>
<td>Venclexta (AML)</td>
</tr>
<tr>
<td></td>
<td>Venclexta + Rituxan (R/R CLL)</td>
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<tr>
<td>2015</td>
<td>Actemra (Systemic sclerosis)</td>
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<tr>
<td></td>
<td>Atezolizumab (NSCLC)</td>
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<tr>
<td></td>
<td>Venclexta (R/R CLL 17p del)</td>
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<tr>
<td></td>
<td>Emicizumab/ACE 910 (Hemophilia A)</td>
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<tr>
<td>2014</td>
<td>Esbriet (IPF)</td>
</tr>
<tr>
<td></td>
<td>Lucentis (DR)</td>
</tr>
<tr>
<td></td>
<td>Atezolizumab (Bladder)</td>
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<tr>
<td>2013</td>
<td>Alectinib (2L ALK+ NSCLC)</td>
</tr>
<tr>
<td></td>
<td>Gazyva (1L CLL)</td>
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</table>

Source: [http://www.focr.org/breakthrough-therapies](http://www.focr.org/breakthrough-therapies) as at 22 March 2016; PPMS=Primary Progressive Multiple Sclerosis; CLL=Chronic Lymphocytic Leukemia; NSCLC=Non-Small Cell Lung Cancer; IPF=Idiopathic Pulmonary Hypertension; DR=Diabetic Retinopathy
2015: Dividend and payout ratio further increased

Payout ratio calculated as dividend per share divided by Core earnings per share (diluted); 2015 dividend as proposed by the Board of Directors; 
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
Approach towards innovation
Exploring broad …

We invest more early stage

% of budget

R & Early D 54% 60%
Late D 46% 40%

…to increase options to choose from

# of NME's entering Pre-clinical

Industry avg.

11 18 19
2012 2013 2014

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

Clinical differentiation

Threshold

Greater differentiation

Sales

Time

Continued

Disqualified
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
Performance update

Innovation and differentiation

Improving the standard of care

Outlook
New growth opportunities

NMEs

2015

alectinib
Cotellic
venetoclax

2016

ocrelizumab
atezolizumab
lebrikizumab

2017

ACE910
lampalizumab
olesoxime

Post 2017

gantenerumab
crenezumab
taselisib
etrolizumab

line extensions

Herceptin + Perjeta
Gazyva (GOYA)

atezolizumab + chemo
Gazyva (GALLIUM)

Oncology/hematology
Neuroscience
Ophthalmology
Immunology
New growth opportunities

- alectinib
- ocrelizumab
- Cotellic
- atezolizumab
- venetoclax
- lebrikizumab
- 2015
- Herceptin + Perjeta
- Gazyva (GOYA)

- 2016
- atezolizumab + chemo

- 2017
- Gazyva (GALLIUM)

- Post 2017
- gantenerumab
- crenezumab
- taselisib
- lampalizumab
- olesoxime
- etrolizumab

NMEs

- Oncology/hematology
- Neuroscience
- Ophthalmology
- Immunology
### Third positive readout for Gazyva

**GALLIUM in iNHL**

**Primary end-point:**

#### CLL11: Ph III Chronic Lymphocytic Leukemia (CLL)

- **1L CLL**
  - **n=781**
  - Gazyva + chlorambucil
  - Rituxan + chlorambucil
- chlorambucil

#### GADOLIN: Ph III Recurrent Indolent NHL (iNHL)

- **Rituxan-refractory iNHL**
  - **n=411**
  - Induction: Gazyva + bendamustine, bendamustine
  - Maintenance: Gazyva q2mo x 2 years

#### GOYA: Ph III 1L Diffuse Large B-cell Lymphoma (DLBCL)

- **Front-line DLBCL (aggressive NHL)**
  - **n=1418**
  - Gazyva + CHOP
  - Rituxan + CHOP

#### GALLIUM: Ph III 1L Indolent NHL (iNHL)

- **1L iNHL**
  - **n=1401**
  - Induction: Gazyva + CHOP or Gazyva + CVP or Gazyva + bendamustine
  - Maintenance: Gazyva q2mo x 2 years

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CHOP= Cyclophosphamide, Doxorubicin, Vincristine and Prednisone; CVP= Cyclophosphamide, Vincristine and Prednisolone
New growth opportunities

NMEs:
- alectinib
- ocrelizumab
- Cotellic
- lebrikizumab
- venetoclax
- lampalizumab
- etrolizumab
- ACE910
- olesoxime
- tasselisib
- gantenerumab
- crenezumab
- etrolizumab

Line extensions:
- 2015: Herceptin + Perjeta
- 2016: Gazyva (GOYA)
- 2017: Gazyva (GALLIUM)
- Post 2017: Gazyva (GALLIUM)

Oncology/hematology
- Neuroscience
- Ophthalmology
- Immunology
10 novel own CIT assets in clinical development

Targeting cancer through different mechanisms

**Priming & activation**
- anti-CEA-IL2v FP (cergutuzumab)
- anti-FAP-IL2v FP
- anti-OX40

**Antigen presentation**
- anti-CD40

**Antigen release**

**T cell trafficking**

**T cell infiltration**
- anti-Ang2/VEGF (vanucizumab)

**Cancer T cell recognition**
- anti-CEA/CD3 TCB
- anti-CD20/CD3 TCB

**T cell killing**
- anti-PDL1 (atezolizumab)
- anti-CSF-1R (emactuzumab)
- IDOi (NewLink)

*Chen and Mellman. Immunity 2013*

NME=new molecular entity; CIT=cancer immunotherapy; FP=fusion protein; TCB=T-cell bispecific
## Atezolizumab: Pivotal programs by disease

### Lung
- FIR and BIRCH
  - Dx+ mono
- POPLAR
  - 2L+ mono
- OAK
  - 2L mono
- IMpower 110
  - 1L non-sq. Dx+ mono

### Bladder
- IMpower 130&150
  - 1L non-sq. combo
- IMpower 111
  - 1L sq. Dx+ mono
- IMpower 131
  - 1L sq. combo
- IMpower 010
  - Adj. Dx+ mono

### Kidney
- IMvigor 210
  - 1L cis-inel. & 2L
- IMvigor 211
  - 2L mono
- IMvigor 010
  - Adj.
- IMmotion 150
  - 1L combo
- IMmotion 151
  - 1L combo

### Breast
- IMpassion 131
  - 1L combo

### Notes
- **Rolling filing initiated**
- **Data in 2016**
- **Data in 2017**
- **Approved**

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

cis-inel. = cisplatin ineligible patients
New growth opportunities

NMEs

- alectinib
- Cotellic
- venetoclax
- ocrelizumab
- ACE910
- Crenezumab
- Taselisib
- Lampalizumab
- Olesoxime
- Gantenerumab
- Etrolizumab

line extensions

- 2015: Herceptin + Perjeta, Gazyva (GOYA)
- 2016: Atezolizumab + chemo
- 2017: Gazyva (GALLIUM)
- Post 2017

Oncology/hematology
Neuroscience
Ophthalmology
Immunology
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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Outlook
Positive outlook

*Strong pipeline mitigates biosimilar impact*

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

- **Biosimilars**
  - MabThera, Herceptin, Avastin

- **Pipeline**

- **Marketed products**
## 2016 outlook

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<tbody>
<tr>
<td>Group sales growth¹</td>
<td>Mid-single digit</td>
</tr>
<tr>
<td>Core EPS growth¹</td>
<td>Ahead of sales growth</td>
</tr>
<tr>
<td>Dividend outlook</td>
<td>Further increase dividend in Swiss francs</td>
</tr>
</tbody>
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¹ At constant exchange rates (CER)
Doing now what patients need next