Innovation and differentiation

Severin Schwan, CEO
Roche Group

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Performance update

Innovation matters: Industry in context

Building pillars of innovation and growth

Summary
Roche: Continued strong sales growth

All values at constant exchange rates
Roche: Sustainable growth in major emerging markets

**E7 countries**

Absolute amounts at 2012 exchange rates, growth at CER=Constant Exchange Rates

E7: Brazil, China, Mexico, India, South Korea, Russia, Turkey
Roche: Increase in operating profit & margin

Group core operating profit (CHF bn) and margin

<table>
<thead>
<tr>
<th>Year</th>
<th>Operating Profit (CHF bn)</th>
<th>Margin</th>
</tr>
</thead>
<tbody>
<tr>
<td>HY 2009</td>
<td>8.40</td>
<td>35.0%</td>
</tr>
<tr>
<td>HY 2010</td>
<td>9.16</td>
<td>37.2%</td>
</tr>
<tr>
<td>HY 2011</td>
<td>8.25</td>
<td>38.1%</td>
</tr>
<tr>
<td>HY 2012</td>
<td>8.64</td>
<td>38.5%</td>
</tr>
<tr>
<td>HY 2013</td>
<td>9.49</td>
<td>40.7%</td>
</tr>
</tbody>
</table>

+CER=Constant Exchange Rates
Roche strategy: Focused on medically differentiated therapies

Regulators:
Optimised benefit / risk ratio

Payors:
Optimised benefit / cost ratio
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Summary
Pharma market drivers and constraints

Balance of these factors will determine future growth

- Major advances in science and medicine
- Growth and aging of world population
- Increasing wealth and access in Emerging Markets

- Patent expirations
- Global economic slowdown
  - Slower expansion of budgets in emerging markets
  - Increased pricing hurdles in developed world
Access and pricing: Challenges and opportunities

Behavior stratified into 3 geographic clusters

**Developed world ex-US**
(37% of world market, 10% of population)
- Payers determine price

**Emerging Markets**
(28% of world market, 85% of population)
- Spend limited by GDP per capita

**United States**
(35% of world market, 5% of pop)
- Free, stable pricing
UK: Innovation recognized for products with high medical benefit

Medical benefit rating derived from outcomes of other European countries, eg. France, where medical benefit measure is established

Indications: Rheumatoid Arthritis, Schizophrenia, Depression and Alzheimer’s
Segregation will continue as only true innovation will be rewarded
Performance update

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Summary
Roche: R&D well balanced from a risk & disease point of view

Roche budget trends

Industry average probability of success – Phase I to Registration

Source: Bernstein Equity Research, Tufts University and Roche analysis
## Oncology

- **9 drugs launched**
  - Avastin
  - MabThera
  - Herceptin
  - Xeloda
  - Tarceva
  - Zelboraf
  - Erivedge
  - Perjeta
  - Kadcyla
  - MetMab

- **5 Phase III**
  - Mabthera RA
  - Actemra
  - Lucentis
  - Xolair

- **Phase III**
  - anti-PDL1
  - BCL2i
  - GA101
  - cobimetinib (MEKi)

- **Phase II**
  - 10 phase II

### Strong and growing

## Immunology/Inflammation

- **4 drugs launched**
  - lebrikizumab
  - etrolizumab\(^1\)
  - lampalizumab\(^2\)

- **1 Phase III**

### Strongly emerging

## Neuroscience

- **3 Phase III**
  - bitopertin
  - ocrelizumab
  - gantenerumab

- **4 phase II**

### Earlier stage

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\(^1\) FPI expected 1H 2014; \(^2\) Phase III decision pending
Personalized Healthcare to optimize treatment
Emerging in non-oncology indications

- **gantenerumab**
  Alzheimer (CSF1 β-amyloid)

- **bitopertin**
  Schizophrenia (CFHR12)

- **crenezumab**
  Alzheimer (multiple targets)

- **lampalizumab**
  Geographic atrophy (not disclosed)

- **lebrikizumab**
  Asthma (periostin level)

- **etrolizumab**
  Inflammatory bowel disease (not disclosed)

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1. CSF=cerebrospinal fluid; 2. CFHR1=Complement factor H-related protein 1
Oncology sales evolution 1997-2012

Note: Sales at 2011 FX rates
Anti-PDL1: Disease control rate

**Phase I**

**Overall disease control rate**

![Bar chart showing disease control rate by tumor type]

**Disease control rate by tumor type**

<table>
<thead>
<tr>
<th>Disease Control Rate (ORR(^1) + SD)</th>
<th>All comers(^1)</th>
<th>Dx-positive(^2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall Phase I experience</td>
<td>61% (86/140)</td>
<td>86% (31/36)</td>
</tr>
<tr>
<td>Metastatic NSCLC</td>
<td>54% (22/41)</td>
<td>100% (5/5)</td>
</tr>
<tr>
<td>Metastatic Melanoma</td>
<td>58% (22/38)</td>
<td>87% (13/15)</td>
</tr>
<tr>
<td>Metastatic RCC</td>
<td>72% (34/47)</td>
<td>80% (8/10)</td>
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**Updated data to be presented at ECCO/ESMO 2013**

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1 All patients include PD-L1-positive, PD-L1-negative and patients with unknown tumor PD-L1 status; 2 Diagnostic positivity based on Roche PD-L1 IHC
Lampalizumab

High medical need - Geographic Atrophy (GA)

AMD (Drusen) → Extrafoveal GA → Advanced GA
Lampalizumab: Anti-factor D

High efficacy in subpopulation with exploratory biomarker

- GA progression rate decreased by 44% at 18 months.
- In the subset of patients with better vision (20/50 to 20/100), progression was reduced by 54%.
- All comers: 20.4% reduction rate at 18 months.

Safety

- No unexpected or unmanageable SAEs.
- Intraocular inflammation AE rates and intraocular pressure elevation AE rates were consistent with Lucentis rates in wAMD.
Performance up-date

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Summary: Focus on innovation and growth

1. Strategic focus on innovation and driving Personalised Healthcare

2. Strong growth in Emerging Markets facilitated by tailored access models

3. Leading product pipeline providing value for the future
Doing now what patients need next