Innovation and growth

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Performance update

Innovation: Industry in context

Building pillars of innovation and growth

Summary
2013: Targets fully achieved

<table>
<thead>
<tr>
<th>Targets for 2013</th>
<th>FY 2013</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Group sales</strong></td>
<td>In line with sales growth recorded in 2012&lt;sup&gt;1&lt;/sup&gt;</td>
</tr>
<tr>
<td><strong>Core EPS</strong></td>
<td>Ahead of sales growth&lt;sup&gt;1&lt;/sup&gt;</td>
</tr>
<tr>
<td><strong>Dividend</strong></td>
<td>Further increase dividend</td>
</tr>
</tbody>
</table>

<sup>1</sup>At constant exchange rates  
Excluding one-off Past Service Income impact of CHF 236m on core net income and excluding 340B reserve release impact of CHF 182m on sales and CHF 94m on core net income  
2013 dividend as proposed by the Board of Directors
Group: Strong sales growth sustained

All values at constant exchange rates
Group operating profit and margin

CHFbn

2009  2010  2011  2012  2013

16.3  16.6  15.1  17.2  17.9

% of sales

33.2%  34.9%  35.6%  37.7%  38.3%

+8%\(^1\)

\(^1\) At constant exchange rates
Strong operating free cash flow

% of sales

CHFbn

2009  2010  2011  2012  2013

15.7  14.2  13.8  16.1  16.4

31.9%  30.0%  32.4%  35.5%  35.0%

+5%\(^1\)

1 At constant exchange rates
2013: Dividend further increased

Pay-out ratio calculated as dividend per share divided by core earnings per share (diluted); 2013 as proposed by the Board of Directors
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Summary
An increasingly challenging environment

**Regulators**
*Medical benefit-risk ratio*
- Efficacy (clinical endpoints)
- Safety (‘zero’ tolerance)

**Payers**
*Economic benefit-cost ratio*
- Constrained funding capacity
- Demanding real outcome evidence

**Investors**
*Economic risk-return ratio*
- Declining returns
- Declining growth
Roche: Focused on innovation and access

Enabling access

- **Regulators**
  Optimised benefit / risk ratio

- **Payors**
  Optimised benefit / cost ratio
Innovation: Importance of breakthrough efficacy

Major oncology drug launches

Source: Evaluate Pharma, Decision Resources, Roche internal analysis

Note: *Market shares represent either % sales of target product relative to sales competing products in similar indications or patient shares
Access and pricing: Challenges and opportunities
Roche approach stratified in three 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)
• Stable pricing
Performance update

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Summary
A leading pipeline
15 NMEs in late-stage development

Number of NMEs

2008 2009 2010 2011 2012 2013

10
- bitopertin
- aleglitazar
- taspoglutide
- dalcetrapib
- ocrelizumab

12
- HCV
- ocrelizumab MS
- MetMAb
- Erivedge
- Zelboraf
- Kadcyla
- Gazyva
- Perjeta

12
- HCV
- ocrelizumab MS
- MetMAb
- Erivedge
- Zelboraf
- Kadcyla
- Gazyva
- Perjeta

9
- ocrelizumab MS
- MetMAb
- Gazyva
- Perjeta

15
- gantenerumab
- ocrelizumab MS
- bitopertin
- o. octreotide
- lebrikizumab
- etrolizumab
- lampalizumab

1 Phase III decision pending
2013: 15 new compounds in late stage development

- Anti-CD79b ADC\(^1\)
- Pictilisib (PI3K)\(^1\)
- Beta-sparing PI3K\(^1\) (mutant selective)
- Alectinib (ALKi)\(^1\)
- NSCLC
- Bcl-2i (GDC 0199)
  - Hem. cancers
- Anti-PDL1
  - Solid tumours
- Cobimetinib (MEKi)
  - Melanoma
- Onartuzumab (MetMAb)
  - NSCLC
- Lampalizumab
  - Geographic atrophy
- Etrolizumab
  - UC and CD
- Oral octreotide
  - Acromegaly
- Lebrikizumab
  - Asthma

Oncology

- Gantenerumab
  - Alzheimer’s
- Ocrelizumab
  - MS
- Bitopertin
  - Subopt. c. schizophrenia

Immunology / Ophthalmology

- \(1^{\text{Phase III decision pending}}\)

Neuroscience

- Hem. cancers
- Melanoma
- Acromegaly
The Onco-Immunology Portfolio and Strategy

Cancer-Immunity Cycle

**Primming and activation**
- Anti-CTLA4
- Anti-CD137 (agonist)
- Anti-OX40 (agonist)
- Anti-CD27 (agonist)
- IL-2
- IL-12

**Cancer antigen presentation**
- Vaccines
- IFN-α
- GM-CSF
- Anti-CD40 (agonist)
- TLR agonists

**Release of cancer cell antigens**
- Chemotherapy
- Radiation therapy
- Targeted therapy

** Trafficking of T cells to tumors**

**Infiltration of T cells into tumors**
- Anti-VEGF
- Neo-vascular activators

**Recognization of cancer cells by T cells**
- CARs.

**Killing of cancer cells**
- Anti-PD-L1
- Anti-PD-1
- IDO inhibitors

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Chen and Mellman. Immunity 2013
Anti-PDL1 overview

**Differentiation**
- Potential for better safety
- Potential for personalized approach
- Potential for longer response

**Development**
- NSCLC: Monotherapy
  - Tarceva combo
- Melanoma: Monotherapy
  - Zelboraf combo
- RCC: Other solid tumours
- Combo w Avastin: Solid tumours
- Multiple combos starts 2014
Sustained response in majority of responders

Histology | IHC
---|---
Nonsquamous | IHC 0
Squamous | IHC 3
Nonsquamous | IHC 0
Nonsquamous | IHC 1
Nonsquamous | IHC 0
Squamous | IHC 2
Nonsquamous | IHC 3
Squamous | IHC 3
Nonsquamous | IHC 3
Nonsquamous | IHC 0
Nonsquamous | IHC 3
Nonsquamous | IHC 1

* Patient experiencing ongoing benefit per investigator.

Patients first dosed at 1-20 mg/kg by Oct 1, 2012; data cutoff Apr 30, 2013.

Soria et al, ECCO 2013
Anti-PDL1: Development program overview

### NSCLC & RCC
- Ph II FIR: expect data 2014/15
- Ph II POPLAR: expect data 2015
- Ph II BIRCH: expect data 2015
- Ph III OAK: expect data 2016
- Ph II in 1L RCC (±Avastin vs. sunitinib)

### Ongoing combination studies
- Anti-PDL1+Avastin (±chemo) (solid tumours)
- Anti-PDL1+Tarceva (NSCLC)
- Anti-PDL1+Zelboraf (melanoma)
- Anti-PDL1+cobimetinib (solid tumours)

### 2014 outlook
- 1H: data in new tumour type
- Additional combinations, including immune doublets, starting throughout 2014
Immunology and Ophthalmology

New late-stage compounds in a well-established franchise

Growing existing franchise (CHF 6.3bn)

<table>
<thead>
<tr>
<th>Product</th>
<th>2012</th>
<th>2013</th>
<th>% Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>MabThera/Rituxan RA</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CellCept Transplant</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pulmozyme Cystic fibrosis</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Others</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Actemra/RoActemra RA</td>
<td>1,191</td>
<td>1,037</td>
<td>-12%</td>
</tr>
<tr>
<td>Xolair Asthma</td>
<td>1,037</td>
<td>874</td>
<td>-15%</td>
</tr>
<tr>
<td>Xolair Asthma</td>
<td>874</td>
<td>790</td>
<td>-10%</td>
</tr>
<tr>
<td>Lucentis Macular degeneration</td>
<td>790</td>
<td>572</td>
<td>-26%</td>
</tr>
<tr>
<td>Lucentis Macular degeneration</td>
<td>572</td>
<td>1,689</td>
<td>+215%</td>
</tr>
</tbody>
</table>

Developing pipeline

- lampalizumab
  - geographic atrophy
- etrolizumab
  - ulcerative colitis and Crohn’s disease
- lebrikizumab
  - asthma
- oral octreotide
  - acromegaly
- quilizumab (M1 prime)
  - asthma

Phase III

Phase II
Entering new therapeutic areas

Lampalizumab in Geographic Atrophy (GA)
Lampalizumab for Geographic Atrophy
High efficacy in subpopulation with exploratory biomarker

Ph II results in biomarker-positive patients

44% rate reduction in disease progression

Ph III trial to begin 2014
Performance update

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Summary
Summary: Focus on innovation and growth

1. Building on strong 2013 performance

2. Innovation and access keys for success in market environment

3. Well positioned with leading product pipeline
Doing now what patients need next
Anti-PDL1 Phase Ia in NSCLC: Best response by PD-L1 IHC Status

<table>
<thead>
<tr>
<th>Diagnostic Population&lt;sup&gt;a&lt;/sup&gt; (n = 53)</th>
<th>ORR&lt;sup&gt;b&lt;/sup&gt; % (n/n)</th>
<th>PD Rate % (n/n)</th>
</tr>
</thead>
<tbody>
<tr>
<td>IHC 3</td>
<td>83% (5/6)</td>
<td>17% (1/6)</td>
</tr>
<tr>
<td>IHC 2 and 3</td>
<td>46% (6/13)</td>
<td>23% (3/13)</td>
</tr>
<tr>
<td>IHC 1/2/3</td>
<td>31% (8/26)</td>
<td>38% (10/26)</td>
</tr>
<tr>
<td>All Patients&lt;sup&gt;c&lt;/sup&gt;</td>
<td>23% (12/53)</td>
<td>40% (21/53)</td>
</tr>
</tbody>
</table>

<sup>a</sup> IHC 3: ≥ 10% tumor immune cells positive for PD-L1 (IC+); IHC 2 and 3: ≥ 5% tumor immune cells positive for PD-L1 (IC+); IHC 1/2/3: ≥ 1% tumor immune cells positive for PD-L1 (IC+); IHC 0/1/2/3: all patients with evaluable PD-L1 tumor IC status.

<sup>b</sup> ORR includes investigator-assessed unconfirmed and confirmed PR.

<sup>c</sup> All patients includes patients with IHC 0/1/2/3 and 7 patients have an unknown diagnostic status.

Patients first dosed at 1-20 mg/kg by Oct 1, 2012; data cutoff Apr 30, 2013.

Soria et al, ECCO 2013