Committed to innovation and growth

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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

Strategy

Launching differentiated medicines

Outlook
Q3 2016: Sales growth for fifth consecutive year

All growth rates at Constant Exchange Rates (CER)
Continued leadership in innovation
Launches at historical high

5 NME launches in a year

Performance update

Strategy

Launching differentiated medicines

Outlook
Roche strategy: Focused on medically differentiated therapies

Regulators:
Optimised benefit / risk ratio

Payors:
Optimised benefit / cost ratio
Approach towards innovation
Prioritizing rigorously

We select at late stage entry

Illustrative

Medical need

low

high

Clinical differentiation

low

high

Threshold

Greater differentiation

Sales

Time

Continued

Disqualified

…to increase sales potential
Breakthrough designation impacting cycle times

14 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>
<td>14</td>
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<tr>
<td>2</td>
<td>Novartis</td>
<td>11</td>
</tr>
<tr>
<td>3</td>
<td>BMS</td>
<td>10</td>
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<tr>
<td>4</td>
<td>Merck</td>
<td>9</td>
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<tr>
<td>5</td>
<td>AbbVie</td>
<td>7</td>
</tr>
<tr>
<td>6</td>
<td>Pfizer</td>
<td>7</td>
</tr>
</tbody>
</table>

Phase duration (years)

- 1.0 2.3 3.3 1.0 No = 7.5
- 1.0 1.9 2.3 0.7 Fast track = 5.8
- 0.9 1.7 0.7 0.5 Accelerated review = 3.8
- 1.1 1.5 0.5 0.6 Breakthrough therapy = 3.6

Source: [http://www.focr.org/breakthrough-therapies](http://www.focr.org/breakthrough-therapies) as at July 2016; PPMS=Primary Progressive Multiple Sclerosis; CLL=Chronic Lymphocytic Leukemia; NSCLC=Non-Small Cell Lung Cancer; IPF=Idiopathic Pulmonary Fibrosis
Performance update

Strategy

Launching differentiated medicines

Outlook
2016 onwards: Significant launch activities

- **2016**
  - **Venclexta**
    - R/R CLL with 17p del
  - **Cotellic + Zelboraf**
    - BRAFmut melanoma
  - **Alecensa**
    - 2L ALK+ NSCLC
  - **Tecentriq**
    - 2L+ bladder cancer
  - **Tecentriq**
    - 2/3L lung cancer
  - **Gazyva**
    - R/R iNHL (GADOLIN)

- **2017**
  - **Ocrevus**
    - RMS/ PPMS
  - **Emicizumab (ACE910)**
    - Hemophilia A
  - **Lampalizumab**
    - Geographic atrophy
  - **Perjeta + Herceptin**
    - eBC HER2+ (APHINITY)
  - **Gazyva**
    - 1L iNHL (GALLIUM)
  - **Actemra**
    - Giant cell arteritis (GiACTA)

- **2018**
  - **Tecentriq + Avastin + chemo**
    - 1L NSCLC
  - **Tecentriq + Avastin**
    - 1L RCC
  - **Alecensa**
    - 1L ALK+ NSCLC

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Outcome studies are event-driven: timelines may change. Standard approval timelines of 1 year assumed.
2016 onwards: Significant launch activities

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Outcome studies are event-driven: timelines may change. Standard approval timelines of 1 year assumed.
Tecentriq in 2L+ non-small cell lung cancer
Survival benefit regardless of PD-L1 status

HR, 0.73a
(95% CI, 0.62, 0.87)
P = 0.0003

Minimum follow up = 19 months

No. at Risk
Atezolizumab 425 407 382 363 342 326 305 279 260 248 234 223 218 205 198 188 175 163 157 141 116 74 54 41 28 15 4 1
Docetaxel 425 390 365 336 311 286 263 236 219 195 179 168 151 140 132 123 116 104 98 90 70 51 37 28 16 6 3

Barlesi et al, ESMO 2016; a Stratified HR; HR=hazard ratio; ITT=intention-to-treat
A rich pipeline: We are investigating into multifold approaches across tumour phenotypes

* Dual roles in T eff activation and T reg inhibition suggest OX40 activity in both desert and inflamed phenotypes; IND=new investigational drug application; TBA=to be announced

**DESSERT**
* Activate*

**EXCLUDED**
* Recruit / Infiltrate*

**INFLAMED**
* Kill Cancer Cells*

aCD40
aCEA-IL2v FP
aFAP-IL2v FP
aOX40*

aVEGF (Avastin)
aAng2/VEGF
MEKi (e.g., Cotellic)
TBA

aCD20/CD3 TCB 1
aCD20/CD3 TCB 2
aCEA/CD3 TCB
aPDL1 (Tecentriq)
IDOi
aCSF1R
aTIGIT
aOX40*
### Cancer Immunotherapy: 10 NMEs with near-term monotherapy and combination read-outs*

<table>
<thead>
<tr>
<th>NME** / Combinations</th>
<th>2016</th>
<th>2017</th>
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<tbody>
<tr>
<td>aCEA/CD3 TCB</td>
<td></td>
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</tr>
<tr>
<td>aCEA/CD3 TCB + Tecentriq</td>
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<tr>
<td>aOX40</td>
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<tr>
<td>aOX40 + Tecentriq</td>
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<tr>
<td>emactuzumab + Tecentriq</td>
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</tr>
<tr>
<td>aCD40 + Tecentriq</td>
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<tr>
<td>aCEA-IL2v FP + Tecentriq</td>
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<tr>
<td>vanucizumab + Tecentriq</td>
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<tr>
<td>aFAP-IL2v FP</td>
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<tr>
<td>aCD20/CD3 TCB 1</td>
<td></td>
<td></td>
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<tr>
<td>TIGIT + Tecentriq</td>
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</tbody>
</table>

** NMEs: aCD40; aOX40; aFAP-IL2v FP; aCEA-IL2v FP; vanucizumab (Ang2/VEGF); aCEA/CD3 TCB; aCD20/CD3 TCB 1; emactuzumab (aCSF-1R); IDOi (NewLink); aTIGIT

NME=new molecular entity; * Outcome studies are event driven, timelines may change
emactuzumab (aCSF-1R); cergutuzumab amunaleukin (aCEA-IL2v FP); vanucizumab (aAng2/VEGF); polatuzumab vedotin (aCD79b ADC); taselisib (PI3Ki); ipatasertib (AKTi); SERD (selective estrogen receptor degrader); idasanutlin (MDM2 antagonist); Venclexta in collaboration with AbbVie; Gazyva in collaboration with Biogen; Alecensa in collaboration with Chugai; Cotellic in collaboration with Exelixis; Zelboraf in collaboration with Plexxikon; polatuzumab in collaboration with Seattle Genetics; ipatasertib in collaboration with Array Biopharma; IDOi in collaboration with NewLink; daratumumab in collaboration with Janssen (J&J)
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Outcome studies are event-driven: timelines may change. Standard approval timelines of 1 year assumed.
OCREVUS: First drug active in both RMS & PPMS

Strong share of voice at ECTRIMS

- New endpoint analysis focusing on disease progression as treatment goal
- Regulatory review by FDA/EMA for both RMS and PPMS on-going; PDUFA date: Dec 28th

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; Giovannoni G. et al, presented at ECTRIMS 2016; Montalban X. et al, presented at ECTRIMS 2016
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Outcome studies are event-driven: timelines may change. Standard approval timelines of 1 year assumed.
Emicizumab in hemophilia A

Long term follow-on data presented at WFH

- Two year follow-on data confirm efficacy and safety profile
- Additional Phase III studies in non-inhibitors and paediatrics have started
- Phase III Inhibitor results expected in Q4

Nogami K. et al, presented at WFH 2016; ABR=annual bleeding rate; OLE=open label extension; *1 patient discontinued administration due to mild injection site erythema; **1 patient did not participate in the extension study since prior treatment was sufficiently efficacious
Performance update

Strategy

Launching differentiated medicines

Outlook
## 2016 outlook

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<tr>
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<tbody>
<tr>
<td><strong>Group sales growth</strong></td>
<td>Low to mid-single digit</td>
</tr>
<tr>
<td><strong>Core EPS growth</strong></td>
<td>Ahead of sales growth</td>
</tr>
<tr>
<td><strong>Dividend outlook</strong></td>
<td>Further increase dividend in Swiss francs</td>
</tr>
</tbody>
</table>

1 At Constant Exchange Rates (CER)
Positive outlook

Strong pipeline enabling continuous growth

NME launches
Tecentriq, Venetoclax, Alectinib, Cotellic, Ocrelizumab, ACE910, Lampalizumab

Biosimilars
MabThera, Herceptin, Avastin

Marketed products

Sales

Pipeline

Conceptual

Doing now what patients need next