Committed to innovation, productivity and growth

Alan Hippe, CFO
Roche Group

New York, Jefferies
June 2017
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:

1. pricing and product initiatives of competitors;
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.

Any statements regarding earnings per share growth is not a profit forecast and should not be interpreted to mean that Roche’s earnings or earnings per share for this year or any subsequent period will necessarily match or exceed the historical published earnings or earnings per share of Roche.

For marketed products discussed in this presentation, please see full prescribing information on our website – www.roche.com

All mentioned trademarks are legally protected
Performance update

Portfolio rejuvenation

Resource allocation

Outlook
Launch of new medicines at a record high
Innovation: Leading industry with 15 BTDs
Designations allowing us to accelerate time to market

Roche leading with 15 BTDs

<table>
<thead>
<tr>
<th>Rank</th>
<th>Company</th>
<th>#</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Roche</td>
<td>15</td>
</tr>
<tr>
<td>2</td>
<td>Novartis</td>
<td>11</td>
</tr>
<tr>
<td>3</td>
<td>BMS</td>
<td>10</td>
</tr>
<tr>
<td>3</td>
<td>Merck</td>
<td>9</td>
</tr>
<tr>
<td>4</td>
<td>AbbVie</td>
<td>7</td>
</tr>
<tr>
<td>4</td>
<td>Pfizer</td>
<td>7</td>
</tr>
</tbody>
</table>

Average years from Phase 1 to Filing

<table>
<thead>
<tr>
<th></th>
<th>Average years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Breakthrough therapy</td>
<td>3.6</td>
</tr>
<tr>
<td>Accelerated review</td>
<td>3.8</td>
</tr>
<tr>
<td>Fast track</td>
<td>5.8</td>
</tr>
<tr>
<td>No</td>
<td>7.5</td>
</tr>
</tbody>
</table>

Source: [http://www.focr.org/breakthrough-therapies](http://www.focr.org/breakthrough-therapies) as of March 2017; BTD=breakthrough therapy designation
Q1 2017: Sales growth for the sixth consecutive year

All growth rates at Constant Exchange Rates (CER)
2016: Strong Core operating profit & stable margin

CHFbn

17.2  17.9  17.6  17.5  18.4

% of sales

37.7%  38.3%  37.2%  36.4%  36.4%

+4% at CER

CER=Constant Exchange Rates
Performance update

Portfolio rejuvenation

Resource allocation

Outlook
Development activities across the portfolio

**Growth through innovation & strategic LCM**

Growing the existing business by improving our own Standard of Care

- **HER2**: Sub-cut, Perjeta in eBC (APHINITY) and mBC; Kadcyla
- **CD20**: Sub-cut, Gazyva, Venclexta, Polatuzumab vedotin, T-cell bispecific
- **Avastin**: Tecentriq combo

Expanding the business through differentiated medicines in areas with high unmet need

- **Ocrevus**: RMS, PPMS
- **Alecensa**: Alk+ lung cancer
- **Tecentriq**: Lung and Bladder
- **Emicizumab**: adult & pediatric inhibitor and non-inhibitor patients
- **Lampalizumab**: Geographic atrophy

LCM=life cycle management; RMS=relapsing forms of multiple sclerosis; PPMS=primary progressive multiple sclerosis
‘Big three’: Enhancing our own standard of care
Accomplished to stabilise and grow the ‘big three’

News flow

- Kadcyla, Perjeta in metastatic setting
- Perjeta in the adjuvant setting (APHINITY)
- Sub-cut co-formulation

- Gazyva in front-line iNHL, R/R iNHL, CLL
- Venclexta, Polatuzumab vedotin, aCD20/CD3 TCB, Tecentriq
- Sub-cut

- No direct successor
- Combinations with Tecentriq (lung, renal)

TCB=T-cell bispecific; NHL=non-hodgkin’s lymphoma; CLL=chronic lymphoid leukemia
Breast: Raising the bar in HER2+

**Herceptin SC, Kadcyla & Herceptin/Perjeta combo**

**BC incidence rate**

- 66% HR+/HER2-
- 21% HER2+
- 13% TNBC

1L mBC

- Herceptin + chemo

2 L mBC

- Xeloda + lapatinib
- Kadcyla (EMILIA)

Adjuvant BC

- Herceptin + chemo
- Herceptin SC + chemo (HannaH)
- Herceptin & Perjeta + chemo (APHINITY)

Neoadj. BC

- Herceptin + chemo (NOAH)
- Herceptin & Perjeta + chemo (Neosphere, Tryphaena)

... and we will go further: combinations with Tecentriq in Phase I & II

1. Source: Datamonitor and internal estimates, US & EU5; SC=subcutaneous; BC=breast cancer
APHINITY to grow HER2 franchise

Strong value proposition in higher risk eBC patients

BC incidence rate\(^1\)

\[
\text{HER2+ eBC (adj) 72k}\^{1,2}
\]

\[
\sim 75\% \\
\text{Higher risk (Node+ ~55%, HR- ~15%, other higher risk ~5%)}
\]

New standard of care for higher risk patients

1. Source: Datamonitor and internal estimates, US & EU5; 2. Target population for Herceptin in adjuvant breast cancer (US & EU5), current Herceptin penetration ~95%; eBC=early breast cancer; adj=adjuvant
Development activities across the portfolio

**Growth through innovation & strategic LCM**

Growing the existing business by improving our own Standard of Care

- **HER2**: Sub-cut, Perjeta in eBC (APHINITY) and mBC; Kadcyla
- **CD20**: Sub-cut, Gazyva, Venclextra, Polatuzumab vedotin, T-cell bispecific
- **Avastin**: Tecentriq combo

Expanding the business through differentiated medicines in areas with high unmet need

- **Ocrevus**: RMS, PPMS
- **Alecensa**: Alk+ lung cancer
- **Tecentriq**: Lung and Bladder
- **Emicizumab**: adult & pediatric inhibitor and non-inhibitor patients
- **Lampalizumab**: Geographic atrophy

LCM=life cycle management; RMS=relapsing forms of multiple sclerosis; PPMS=primary progressive multiple sclerosis
Ocrevus approved in the US
First treatment for both RMS and PPMS

• Broad label includes RMS (RRMS, relapsing SPMS) and PPMS without any limitations
• No black box warning, no additional screening or monitoring

RMS=relapsing forms of multiple sclerosis (MS) including patients with RRMS and SPMS with superimposed relapses; RRMS=relapsing-remitting MS; SPMS=secondary progressive MS; PPMS=primary progressive MS; Adapted from Lublin 1996, Arnold 2004; *=relapsing SPMS included in the label
Alecensa in 1L ALK+ NSCLC

Results establish Alecensa as new standard of care

Ph III ALEX results

- Compared to crizotinib, Alecensa significantly prolonged PFS, delayed time to CNS progression, improved intracranial ORR and DOR and had a more favorable AE profile

Shaw A. et al, ASCO 2017; Alecensa (alectinib) in collaboration with Chugai
12 cancer immunotherapy NMEs in the clinic

Multiple approaches across three tumor phenotypes

---

PCV* = personalised cancer vaccine in collaboration with BioNTech; 1 = in early development at Chugai; NME = new molecular entity; IND = new investigational drug application; TCB = T-cell bispecific; tba = to be announced.
Lung: Expanding to areas with high medical need

Multiple solutions for a fragmented market

<table>
<thead>
<tr>
<th>Lung cancer incidence rate¹</th>
<th>Target</th>
<th>Combo</th>
<th>Trial</th>
<th>Results²</th>
</tr>
</thead>
<tbody>
<tr>
<td>SCLC (SCLC)</td>
<td>1L ALK+</td>
<td>Alecensa</td>
<td>ALEX</td>
<td>✓</td>
</tr>
<tr>
<td>Squamous cell carcinoma (NSCLC)</td>
<td>2/3L</td>
<td>Tecentriq</td>
<td>OAK</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>1L non-sq</td>
<td>Tecentriq+carbo/pac+/-Avastin</td>
<td>IMpower150</td>
<td>2017</td>
</tr>
<tr>
<td></td>
<td>1L non-sq</td>
<td>Tecentriq+carbo+nab-pac</td>
<td>IMpower130</td>
<td>2018</td>
</tr>
<tr>
<td></td>
<td>1L non-sq</td>
<td>Tecentriq+cis/carbo+pem</td>
<td>IMpower132</td>
<td>2018</td>
</tr>
<tr>
<td></td>
<td>1L Dx+</td>
<td>Tecentriq</td>
<td>IMpower110</td>
<td>2019</td>
</tr>
<tr>
<td></td>
<td>Adj</td>
<td>Tecentriq</td>
<td>IMpower010</td>
<td>2020</td>
</tr>
<tr>
<td>Non-squam. cell carcinoma (NSCLC)</td>
<td>1L sq</td>
<td>Tecentriq+carbo+nab/pac</td>
<td>IMpower131</td>
<td>2018</td>
</tr>
<tr>
<td>EGFR+ adeno (NSCLC)</td>
<td>1L SCLC</td>
<td>Tecentriq+carbo+etoposide</td>
<td>IMpower133</td>
<td>2018</td>
</tr>
<tr>
<td>BRAF+ adeno (NSCLC)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ALK+ adeno (NSCLC)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1. Source: Datamonitor and internal estimates, US & EU5; 2. Timelines may change
aCEA/CD3 T-cell bispecific antibody
A new mode of action

**Novel mode of action:**
Simultaneous binding to tumor and T cells results in:

- T cell engagement, activation and killing of tumor cells by delivery of cytotoxic granules
- T-cell engagement independent of specificity and activation status

<table>
<thead>
<tr>
<th>Status</th>
<th>Phase I study, FPI 4Q 2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tecentriq combo</td>
<td>Phase Ib combo with Tecentriq in multiple CEA-expressing tumors ongoing</td>
</tr>
<tr>
<td>Data in 3L CRC</td>
<td>ASCO 2017</td>
</tr>
</tbody>
</table>

CRC=colorectal cancer; NSCLC=non-small cell lung cancer; FPI=first-patient-in; CEA=carcinoembryonic antigen
CEA-TCB + Tecentriq: promising clinical activity vs monotherapy in 3L+ MSS mCRC at high dose

Change in target lesions from baseline [%]
High dose only, N=11, 80 or 160 mg

<table>
<thead>
<tr>
<th></th>
<th>Best change in target lesions from baseline [%]</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>80 mg</td>
</tr>
<tr>
<td>0</td>
<td><img src="image" alt="Graph showing change in target lesions from baseline for 80 mg and 160 mg." /></td>
</tr>
<tr>
<td>-50</td>
<td><img src="image" alt="Graph showing change in target lesions from baseline for 80 mg and 160 mg." /></td>
</tr>
<tr>
<td>-100</td>
<td><img src="image" alt="Graph showing change in target lesions from baseline for 80 mg and 160 mg." /></td>
</tr>
</tbody>
</table>

Change in target lesion over time

<table>
<thead>
<tr>
<th></th>
<th>Week completed after treatment start</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0</td>
</tr>
<tr>
<td><img src="image" alt="Graph showing change in target lesions over time." /></td>
<td></td>
</tr>
<tr>
<td><em>Withdrawal</em></td>
<td><img src="image" alt="Graph showing change in target lesions over time." /></td>
</tr>
<tr>
<td>p Progression &gt;Ongoing</td>
<td><img src="image" alt="Graph showing change in target lesions over time." /></td>
</tr>
<tr>
<td>▲ First new lesion</td>
<td><img src="image" alt="Graph showing change in target lesions over time." /></td>
</tr>
</tbody>
</table>

Confirmed Best Overall Response RECIST v1.1

<table>
<thead>
<tr>
<th></th>
<th>N=25, 5 - 160 mg</th>
<th>N = 11&lt;sup&gt;a&lt;/sup&gt;, 80 or 160 mg</th>
</tr>
</thead>
<tbody>
<tr>
<td>MSS n=23; (92%)</td>
<td>MSS n = 11; (100%)</td>
<td></td>
</tr>
<tr>
<td>PR</td>
<td>3&lt;sup&gt;b&lt;/sup&gt; (12%)</td>
<td>2&lt;sup&gt;b&lt;/sup&gt; (18%)</td>
</tr>
<tr>
<td>SD</td>
<td>10 (40%)</td>
<td>7 (64%)</td>
</tr>
<tr>
<td>DCR</td>
<td>13 (52%)</td>
<td>9 (82%)</td>
</tr>
<tr>
<td>PD</td>
<td>12 (48%)</td>
<td>2 (18%)</td>
</tr>
</tbody>
</table>

Conclusions phase I studies:

- Encouraging anti-tumor activity in heavily pre-treated patients with MSS mCRC
- Clinical activity seen with monotherapy; further enhanced in combo with atezolizumab
- Safety profile manageable in both monotherapy and in combination

Data reported by investigators, cutoff: March 3, 2017. <sup>a</sup>Sub-group of the column to the left (N = 25 CEA-TCB + atezolizumab patients, treated at doses 5 - 160 mg). <sup>b</sup>One patient had the confirmatory CT scan on March 23, 2017.
Tabernero J, et al. ASCO 2017, abstract #3002
Emicizumab: Second positive result
Positive read out in adult & pediatric inh patients

- Positive phase III results in inhibitor patients ≥12 years (HAVEN 1) to be presented at ISTH
- Positive phase III interim results in inhibitor pediatrics (HAVEN 2) to be presented at ISTH
- Global filing based on HAVEN1 and HAVEN2 interim results and launch preparations on track

Emicizumab (ACE910) in collaboration with Chugai; QW=weekly dosing; Q2W=dosing every 2 weeks; Q4W=dosing every 4 weeks; OLE=open label extension; BTD=breakthrough therapy designation
Lampalizumab in geographic atrophy (GA)
High unmet medical need - Phase III read-outs in H2

- GA causes irreversible retinal cell death
- Today, over 5 million people suffer from GA worldwide
Development activities across the portfolio

**Growth through innovation & strategic LCM**

Growing the existing business by improving our own Standard of Care

- **HER2**: Sub-cut, Perjeta in eBC (APHINITY) and mBC; Kadcyla
- **CD20**: Sub-cut, Gazyva, Venclexta, Polatuzumab vedotin, T-cell bispecific
  - **Avastin**: Tecentriq combo

Expanding the business through differentiated medicines in areas with high unmet need

- **Ocrevus**: RMS, PPMS
- **Alecensa**: Alk+ lung cancer
- **Tecentriq**: Lung and Bladder
  - **Emicizumab**: adult & pediatric inhibitor and non-inhibitor patients
  - **Lampalizumab**: Geographic atrophy

LCM=life cycle management; RMS=relapsing forms of multiple sclerosis; PPMS=primary progressive multiple sclerosis
Performance update

Portfolio rejuvenation

Resource allocation

Outlook
## Comprehensive productivity program in place

<table>
<thead>
<tr>
<th>Strict prioritisation</th>
<th>Process innovation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>COGS</strong></td>
<td></td>
</tr>
<tr>
<td>Small molecule restructuring</td>
<td>Process improvement</td>
</tr>
<tr>
<td>Biologics asset utilisation</td>
<td>Productivity levers</td>
</tr>
<tr>
<td><strong>M&amp;D</strong></td>
<td></td>
</tr>
<tr>
<td>M&amp;D portfolio prioritisation</td>
<td>Commercial restructuring</td>
</tr>
<tr>
<td><strong>R&amp;D</strong></td>
<td></td>
</tr>
<tr>
<td>R&amp;D portfolio prioritisation</td>
<td>Functional productivity programs</td>
</tr>
</tbody>
</table>

**Examples**

- Procurement
- Shared Service Center
2012 - 2016: Continuous reduction of interest expenses

- **2012**: Interest expense: CHF 1.43bn, Effective interest rate: 5.4%
- **2013**: Interest expense: CHF 1.08bn, Effective interest rate: 5.1%
- **2014**: Interest expense: CHF 0.95bn, Effective interest rate: 4.4%
- **2015**: Interest expense: CHF 0.89bn, Effective interest rate: 3.7%
- **2016**: Interest expense: CHF 0.71bn, Effective interest rate: 2.9%
Performance update

Portfolio rejuvenation

Resource allocation

Outlook
2017: Another important year for our pipeline

**Key read-outs**

<table>
<thead>
<tr>
<th>Year</th>
<th>Q1</th>
<th>Q2</th>
<th>Q3</th>
<th>Q4</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017</td>
<td><img src="image" alt="APHINITY" /></td>
<td><img src="image" alt="IMpower150" /></td>
<td><img src="image" alt="SPECTRI &amp; CHROMA" /></td>
<td><img src="image" alt="HAVEN 3" /></td>
</tr>
</tbody>
</table>

- **APHINITY** (Perjeta early BC, Her2+)
- **IMpower150** (Tecentriq 1L Lung)
- **SPECTRI & CHROMA** (Lampalizumab GA)
- **HAVEN 3** (Emicizumab in non-inh.)

Outcome studies are event-driven: timelines may change
Positive outlook

Strong pipeline enabling continuous growth

NME launches
Tecentriq, Venetoclax, Alectinib, Cotellc, Ocrelizumab, emicizumab, Lampalizumab

Biosimilars
MabThera, Herceptin, Avastin

Conceptual

Pipeline

Marketed products
### 2017 outlook

<table>
<thead>
<tr>
<th><strong>Group sales growth(^1)</strong></th>
<th>Low to mid-single digit</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Core EPS growth(^1)</strong></td>
<td>Broadly in line with 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)
Doing now what patients need next
Launch excellence: Get it right the first time - recovery from a poor launch is difficult

Frequency distribution of US market share variation from L+6 to L+24 (percentage of launches)

- Market share increases by more than 10%: 6
- Market share remains within 10% range: 83
- Market share decreases by more than 10%: 11

For 80% of launches, market share does not vary by over 10% after the first 6 months of launch

Example: MS launch price premiums have moderated, but price increases erode value

(USD per year; launch premiums relative to share-weighted category average in the month prior to launch;)

- **Weighted Category Average**
  - CAGR: 16%

- **Tysabri**: Launch Premium: 59%
- **Gilenya**: Launch Premium: 33%
- **Tecfidera**: Launch Premium: 1%
- **Aubagio**: Launch Premium: -8%
- **Glatopa**: Launch Premium: -6%
OCREVUS: Average price for best-in-class drug

Current MS pricing landscape

Tecfidera Positioning Comparator
$76,833

Rebif Trial Comparator
$81,686

Tysabri Infused Comparator
$75,361

Gilenya
$82,043

OCREVUS: Launch Price
$65,000

Current Category Average
~$76,000

Notes:
1 Annual WAC prices range from $63,193 to $82,043. 2 Annual average NET prices range from $51,385 to $69,456. 3 NET price averages were calculated using payer-reported, lives-weighted rebate data collected by Health Strategies Group from commercial health plans.
Alecensa: Positive results in 1L ALK+ NSCLC
ALKi with proven strong activity in the brain

Phase III ALEX

- Second Phase III head-to-head study showed Alecensa was superior to crizotinib in 1L ALK+ lung cancer
- Patients receiving Alecensa lived significantly longer without their disease progressing (PFS)
- Safety profile was consistent with previous studies
- Results to be presented at ASCO

1L lung
- Phase III data (ALEX) to be filed in the US/EU
- Breakthrough therapy designation
- Japanese market share >60%

2L lung
- Positive Phase III study ALUR supports use in chemo/crizotinib failed patients
- EU approval achieved in Q1
- US market share of 50% after 12 months

Alecensa in collaboration with Chugai; NSCLC=non-small cell lung cancer; Xalkori® (crizotinib); PFS=progression free survival; BTD=breakthrough therapy designation
Freeing up resources through productivity programs

### Commercial
- Resource shift to support launches
- Commercial productivity program

### Product Development
- Decision making: Putting all projects into portfolio context

### Production
- Shift from small to large molecule capacity

---

**Pharma examples**

**Shared service centres:** Kuala Lumpur, Budapest
Performance update

Portfolio rejuvenation

Outlook
Stable to slightly declining portion of GDP spending allocated to Pharma

**Spend growth – 1995-2001**

**Slight increase – 2002-2008**

**Stable – 2009-2015**

**Global GDP (% real change per annum):**

- **US**: Increases partly due to Sovaldi
- **EU5**: Relative increase due to drop in GDP
- **RoW**: Stable, 1.3% throughout

Source: Economist Intelligence Unit, BCG analysis
Innovation driving growth

Oncology as an example

Oncology share in total Pharma spend (%)

Global growth in Oncology spend from 2010 to 2015 (in USD bn)

NMEs  Volume  Price  LoE  Total growth

19  14  5  -8  30

US: Increase by 6.3 bn
Ex-US: Decrease by 1.4 bn

1. Defined by spend on L1 (ANTINEOPLASTICS) in ATC classification system
2. Hospital market only
3. Non retail market only

Source: IMS MIDAS; Global Oncology Trend Report (A Review of 2015 and Outlook to 2020); BCG analysis
Room for further growth

Oncology spending not reflected in disease burden

Source: WHO for "DALYs 2004 and 2012"; IMS MIDAS for "Pharma spending" and "Oncology spending"