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
Continuing to drive innovation

Daniel O’Day, CEO
Roche Pharmaceuticals

New York, May 2017
Performance update

Portfolio rejuvenation

Outlook
Clear strategy to maintain leadership position

Innovation & productivity supported by data analytics

Pipeline & commercial delivery

• Differentiated molecules
• Competitive fitness

Data & analytics

• Smart, more efficient R&D
• Access & personalised patient care

Increased efficiency & productivity

• Innovative ways of working
• Prioritisation and focus

Outstanding talent that drives innovation & execution
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

- **Breakthrough therapy**: 3.6 years
- **Accelerated review**: 3.8 years
- **Fast track**: 5.8 years
- **No**: 7.5 years

Source: [http://www.focr.org/breakthrough-therapies](http://www.focr.org/breakthrough-therapies) as of March 2017; BTD=breakthrough therapy designation
Launch of new medicines at a record high

Innovative medicines driving growth

Pipeline & commercial delivery

Sales growth for the sixth consecutive year
Q1 2017 Sales Update

All growth rates at Constant Exchange Rates (CER)
Increasing contribution from new launches

Q1 2017 Sales Update

Absolute values and growth rates at Constant Exchange Rates (CER)
Executing on comprehensive productivity program

Costs and headcount growing less than sales

Increased efficiency & productivity

5 year CAGR: Sales = 4.9%, Costs = 3.6%, Headcount = 2.7%

1. G&A includes 2016 Past Service Income of CHF -310m; G&A CAGR excl. PSI, FMI and shift from Corporate at 1.9%

Cost bn CHF

2011 2016

7.2 8.6
7.0 8.2
5.3 6.4
20.6 24.1

COS 3.1% Capacity investments, Lean, End-to-End lead-time and inventory optimisation

M&D 3.8% Strict re-prioritisation, commercial reorganisations

R&D 3.5% Strict re-prioritisation, efficiency gains

G&A¹ -0.8%
MORPHEUS: Novel CIT platform
*Fast & efficient combo development*

- **MULTI-INDICATION**
- **MULTI-BASKET**
- **RANDOMIZED**
- **LONGLITUDINAL**
- **ADAPTABLE**

Increased efficiency & productivity

**NSCLC**
- Pancreatic
- Gastric
- HR+ BC
- TNBC
- CRC
- UBC

**1L**
- **2L**
- Biomarker

**Combo 1**
- **Combo 2**
- **Combo 3**
- **SOC control**

**Combo 4**
- **Combo 5**
- **Combo 6**

Faster and more confident decisions
Potential for accelerated approval
**Strong focus on data analytics**

*Accelerate R&D productivity & personalised patient care*

---

**Access meaningful data**

- Clinical Trial Data: 4%
- Real World Data: 96%

---

**Create insights**

Infrastructure & novel technologies to analyse integrated data

---

**Realise value from insights**

- Smarter, more efficient R&D
- Improved access & personalised patient care
Data & analytics driving innovation & productivity
Strong progress made in our focus areas

Smarter, more efficient R&D
- Hypothesis generation

Improved access & personalised patient care
- Novel diagnostics

Efficient trial design & recruitment
- Clinical decision support

Improved regulatory & safety processes
- Value proof, pricing & PRM

PRM=personalised reimbursement model
Performance update

Portfolio rejuvenation

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**

- **HER2**
  - Kadcyla, Perjeta in metastatic setting
  - Perjeta in the adjuvant setting (APHINITY)
  - Sub-cut co-formulation

- **CD20**
  - Gazyva in front-line iNHL, R/R iNHL, CLL
  - Venclexta, Polatuzumab vedotin, aCD20/CD3 TCB, Tecentriq
  - Sub-cut

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

TCB=T-cell bispecific; NHL=non-hodgkin’s lymphoma; CLL=chronic lymphoid leukemia
Herceptin+Perjeta: Positive results in adjuvant BC
Improving own SoC & keeping HER2 growing

- Phase III study (APHINITY) met primary endpoint (improvement in invasive disease-free survival)
- Results to be presented at ASCO on June 5th and to be filed in the US/EU
- SC co-formulation of Herceptin + Perjeta in development

BC=breast cancer; mBC=metastatic breast cancer; L=line of treatment; SoC=standard of care; SC=subcutaneous
MabThera/Rituxan SC in hematologic cancers
FDA advisory committee recommends approval

- ODAC voted unanimously (11:0) that the benefit-risk of rituximab/hyaluronidase for SC injection was favorable for the treatment of certain blood cancers
- Approved in the EU in NHL and CLL
- Encouraging initial uptake in the EU markets, comparable to Herceptin SC

MabThera/Rituxan SC partnered with Halozyme; SC=subcutaneous; ODAC=Oncologic Drug Advisory Committee of the FDA; NHL=non-hodgkin’s lymphoma; CLL=chronic lymphoid leukemia
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
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
Ocrevus: New data presented at AAN
Rapid and sustained strong disease control

- Findings support early treatment with Ocrevus in RMS due to rapid onset of disease control after 8 weeks
- Strong sustained benefit of Ocrevus in RMS after three years with no new safety findings
- Findings support switching from Rebif® (interferon beta-1a) to Ocrevus in RMS

IFN β-1a=interferon beta-1a; OLE=open-label extension; Naismith RT. et al, presented at AAN 2017; Hauser SL. et al, presented at AAN 2017
## 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
Substantial focus on Cancer Immunotherapy

Several NMEs with first read-outs in 2017

CIT=cancer immunotherapy; 1) Dual roles in T eff activation and T reg inhibition suggest aOX40 activity in both desert and inflamed phenotypes; IND=new investigational drug application; *PCV=personalised cancer vaccine in collaboration with BioNTech; tba=to be announced
Tecentriq + chemo in 1L NSCLC
Phase 1 chemo combo update at ASCO

Study read-out*  Endpoints

<table>
<thead>
<tr>
<th>Study</th>
<th>Disease</th>
<th>Treatment</th>
<th>Year</th>
<th>Endpoints</th>
</tr>
</thead>
<tbody>
<tr>
<td>IMpower150</td>
<td>1L NSCLC (non-sq)</td>
<td>Tecentriq + carbo/pac +/- Avastin</td>
<td>2017</td>
<td>PFS and OS</td>
</tr>
<tr>
<td>IMpower130</td>
<td>1L NSCLC (non-sq)</td>
<td>Tecentriq + carbo + nab-pac</td>
<td>2018</td>
<td>PFS and OS</td>
</tr>
<tr>
<td>IMpower131</td>
<td>1L NSCLC (sq)</td>
<td>Tecentriq + carbo + pac/nab-pac</td>
<td>2018</td>
<td>PFS and OS</td>
</tr>
<tr>
<td>IMpower132</td>
<td>1L NSCLC (non-sq)</td>
<td>Tecentriq + cis/carbo + pem</td>
<td>2018</td>
<td>PFS and OS</td>
</tr>
<tr>
<td>IMpower133</td>
<td>1L SCLC</td>
<td>Tecentriq + carbo + etoposide</td>
<td>2018</td>
<td>PFS and OS</td>
</tr>
<tr>
<td>IMpower110</td>
<td>1L Dx+ NSCLC</td>
<td>Tecentriq</td>
<td>2019</td>
<td>PFS and OS</td>
</tr>
<tr>
<td>IMpower010</td>
<td>Adj NSCLC</td>
<td>Tecentriq</td>
<td>2020</td>
<td>DFS</td>
</tr>
</tbody>
</table>

CIT=cancer immunotherapy; *Note: Outcome studies are event driven, timelines may change; carbo=carboplatin; pac=paclitaxel; nab-pac=nab-paclitaxel; cis=cisplatin; pem=pemetrexed; PFS=progression free survival; OS=overall survival; Pao & Girard. Lancet Oncol 2011; Johnson, et al. ASCO 2013
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

**Status**
- Phase I study, FPI 4Q 2014
- Phase Ib combo with Tecentriq in multiple CEA-expressing tumors ongoing
- Data in 3L CRC at ASCO 2017

<table>
<thead>
<tr>
<th>Tumor Type</th>
<th>Engagement Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>CRC</td>
<td>91%</td>
</tr>
<tr>
<td>Pancreatic</td>
<td>74%</td>
</tr>
<tr>
<td>Gastric</td>
<td>64%</td>
</tr>
<tr>
<td>NSCLC (adenocarcinoma)</td>
<td>65%</td>
</tr>
<tr>
<td>NSCLC (squamous)</td>
<td>30%</td>
</tr>
<tr>
<td>Breast</td>
<td>30%</td>
</tr>
</tbody>
</table>

*Additional CEA expressing tumors*

CRC=colorectal cancer; NSCLC=non-small cell lung cancer; FPI=first-patient-in; CEA=carcinoembryonic antigen
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
Performance update

Portfolio rejuvenation

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
2017 is another important year for our pipeline

**Key read-outs**

<table>
<thead>
<tr>
<th>2017</th>
<th>Q1</th>
<th>Q2</th>
<th>Q3</th>
<th>Q4</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></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
# ASCO 2017: Major oral presentations

<table>
<thead>
<tr>
<th>Tumor type</th>
<th>Trials</th>
</tr>
</thead>
<tbody>
<tr>
<td>Breast</td>
<td>• Herceptin + Perjeta: Ph III (APHINITY) in adjuvant HER2+ BC</td>
</tr>
<tr>
<td>Lung</td>
<td>• Alecensa: Ph III (ALEX) in 1L ALK+ NSCLC</td>
</tr>
<tr>
<td></td>
<td>• Tecentriq: Ph III (OAK) in 2L NSCLC</td>
</tr>
<tr>
<td>Colorectal</td>
<td>• aCEA/CD3 TCB +/- Tecentriq: Ph I in 3L CRC</td>
</tr>
<tr>
<td>Solid tumors</td>
<td>• Tecentriq + IDOi: Ph I</td>
</tr>
<tr>
<td>Renal</td>
<td>• Tecentriq + Avastin: Update Ph II (IMmotion150) in 1L RCC</td>
</tr>
</tbody>
</table>

IDOi in collaboration with NewLink Genetics; Alecensa in collaboration with Chugai
<table>
<thead>
<tr>
<th><strong>2017 outlook</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Group sales growth</strong>&lt;sup&gt;1&lt;/sup&gt;</td>
</tr>
<tr>
<td><strong>Core EPS growth</strong>&lt;sup&gt;1&lt;/sup&gt;</td>
</tr>
<tr>
<td><strong>Dividend outlook</strong></td>
</tr>
</tbody>
</table>

<sup>1</sup> At Constant Exchange Rates (CER)
Doing now what patients need next