Committed to innovation and growth

Roland Diggelmann, CEO Roche Diagnostics

Philadelphia, 02 August 2016
HY 2016 Group results

Diagnostics

Business model & strategy
HY 2016 overview
Investing in innovation
Outlook
HY 2016: Highlights

**Growth**

**Sales**
- Group sales +5%\(^1\)

**Profit**
- +5% Core EPS growth\(^1\)

**Portfolio progress Q2**

**Oncology**
- Cancer immunotherapy: Tecentriq launched in bladder cancer (US), filed in lung cancer (US, EU)
- Venclexta launched in US (CLL 17p del)

**Hematology**
- Gazyva: Phase III (GALLIUM) in iNHL, met primary endpoint at interim
- Gazyva: Phase III (GOYA) in aNHL, not superior to MabThera/Rituxan
- Emicizumab (ACE 910): Ph III in patients with FVIII inhibitors fully recruited

**Neuroscience**
- OCREVUS: Filings accepted in EU and US; PDUFA date Dec 28, 2016

**Immunology**
- Actemra: Ph III in giant cell arteritis met primary end point
- Xolair: Paediatric approved in US

**Diagnostics**
- Launch of cobas e801, high throughput immunodiagnostics analyser

\(^1\) All growth rates at constant exchange rates (CER)
## HY 2016: Strong sales growth in both divisions

<table>
<thead>
<tr>
<th></th>
<th>HY 2016</th>
<th>HY 2015</th>
<th>Change in %</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>CHFbn</td>
<td>CHFbn</td>
<td>CHF</td>
</tr>
<tr>
<td><strong>Pharmaceuticals Division</strong></td>
<td>19.5</td>
<td>18.4</td>
<td>6</td>
</tr>
<tr>
<td><strong>Diagnostics Division</strong></td>
<td>5.6</td>
<td>5.2</td>
<td>6</td>
</tr>
<tr>
<td><strong>Roche Group</strong></td>
<td>25.0</td>
<td>23.6</td>
<td>6</td>
</tr>
</tbody>
</table>

CER = Constant Exchange Rates
Q2 2016: Sales growth for fifth consecutive year

All growth rates at Constant Exchange Rates (CER)
HY 2016: Strong sales growth in all regions

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

CER = Constant Exchange Rates
Roche significantly advancing patient care
Recognition for innovation 2013-present

12 Breakthrough Therapy Designations

<table>
<thead>
<tr>
<th>Year</th>
<th>Molecule</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016</td>
<td><strong>Ocrelizumab</strong> (PPMS)</td>
</tr>
<tr>
<td></td>
<td><strong>Venclexta</strong> (AML)</td>
</tr>
<tr>
<td></td>
<td><strong>Venclexta + Rituxan</strong> (R/R CLL)</td>
</tr>
<tr>
<td>2015</td>
<td><strong>Actemra</strong> (Systemic sclerosis)</td>
</tr>
<tr>
<td></td>
<td><strong>Tecentriq</strong> (NSCLC)</td>
</tr>
<tr>
<td></td>
<td><strong>Venclexta</strong> (R/R CLL 17p del)</td>
</tr>
<tr>
<td></td>
<td><strong>Emicizumab</strong>/ACE 910 (Hemophilia A)</td>
</tr>
<tr>
<td>2014</td>
<td><strong>Esbriet</strong> (IPF)</td>
</tr>
<tr>
<td></td>
<td><strong>Lucentis</strong> (Diabetic retinopathy)</td>
</tr>
<tr>
<td></td>
<td><strong>Tecentriq</strong> (Bladder)</td>
</tr>
<tr>
<td>2013</td>
<td><strong>Alecensa</strong> (2L ALK+ NSCLC)</td>
</tr>
<tr>
<td></td>
<td><strong>Gazyva</strong> (1L CLL)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Rank</th>
<th>Company</th>
<th>#</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Roche</td>
<td>12</td>
</tr>
<tr>
<td>2</td>
<td>Novartis</td>
<td>10</td>
</tr>
<tr>
<td>3</td>
<td>BMS</td>
<td>9</td>
</tr>
<tr>
<td>4</td>
<td>Merck</td>
<td>6</td>
</tr>
<tr>
<td>5</td>
<td>Pfizer</td>
<td>6</td>
</tr>
<tr>
<td>6</td>
<td>Abbvie</td>
<td>6</td>
</tr>
</tbody>
</table>

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
**Significant launch activities ahead**

### Pharma

<table>
<thead>
<tr>
<th>2016</th>
<th>2017</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Venclexta</strong> R/R CLL with 17p del</td>
<td><strong>OCREVUS</strong> RMS / PPMS</td>
<td><strong>Lampalizumab</strong> Geographic atrophy</td>
</tr>
<tr>
<td><strong>Cotellic + Zelboraf</strong> BRAFmut melanoma</td>
<td><strong>Emicizumab (ACE910)</strong> Hemophilia A</td>
<td><strong>Tecentriq+Avastin+chemo</strong> 1L NSCLC</td>
</tr>
<tr>
<td><strong>Alecensa</strong> 2L ALK+ NSCLC</td>
<td><strong>Perjeta + Herceptin</strong> eBC HER2+ (APHINITY)</td>
<td><strong>Tecentriq + Avastin</strong> 1L RCC</td>
</tr>
<tr>
<td><strong>Tecentriq</strong> 2L+ bladder cancer</td>
<td><strong>Gazyva</strong> 1L iNHL (GALLIUM)</td>
<td><strong>Alecensa</strong> 1L ALK+ NSCLC</td>
</tr>
<tr>
<td><strong>Tecentriq</strong> 2L/3L lung cancer</td>
<td><strong>Actemra</strong> Giant cell arteritis</td>
<td></td>
</tr>
<tr>
<td><strong>Gazyva</strong> Refractory iNHL (GADOLIN)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Diagnostics

- **cobas e801 launch in immunodiagnostics**
- **cobas t511 cobas t711**
- **cobas 6000 (new)**

Outcome studies are event-driven: timelines may change. Standard approval timelines of 1 year assumed.
## 2016 outlook

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Group sales growth¹</strong></td>
<td>Low to mid-single digit</td>
</tr>
<tr>
<td><strong>Core EPS growth¹</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)
HY 2016 Group results

Diagnostics

Business model & strategy
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Investing in innovation
Outlook
In-Vitro Diagnostics market overview

Large and growing market; Roche is market leader

**Market size**

USD 52 bn

- Professional Diagnostics
- Molecular Diagnostics
- Tissue Diagnostics
- Diabetes Monitoring

**Market share**

- Roche: 20%
- Others: 45%
- Abbott: 11%
- Siemens: 9%
- Danaher: 8%
- Biomerieux: 4%
- J&J: 3%

Source: Roche Analysis, Company reports for 2015 validated by an independent IVD consultancy
Our business model

*Customer focus and place instruments to generate recurring revenues through reagent usage*
Roche Diagnostics
Our competitive advantage

Total solution offering
Breadth of technologies
Comprehensive menu
IT and workflow connectivity

Strong commercial presence
Active in all diagnostics segments
Large installed base worldwide
Millions of patients each day

1,383,000,000 total Elecsys tests in 2013
= 3,789,041 tests per day
= 42 tests per second
HY 2016 Group results

Diagnostics

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## HY 2016: Diagnostics Division sales

**Growth driven by laboratory businesses**

<table>
<thead>
<tr>
<th>Diagnostics Division</th>
<th>HY 2016 CHFm</th>
<th>HY 2015 CHFm</th>
<th>Change in %</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>5,562</td>
<td>5,235</td>
<td>6</td>
</tr>
<tr>
<td>Professional Diagnostics</td>
<td>3,233</td>
<td>2,972</td>
<td>9</td>
</tr>
<tr>
<td>Diabetes Care</td>
<td>998</td>
<td>1,057</td>
<td>-6</td>
</tr>
<tr>
<td>Molecular Diagnostics</td>
<td>903</td>
<td>832</td>
<td>9</td>
</tr>
<tr>
<td>Tissue Diagnostics</td>
<td>428</td>
<td>374</td>
<td>14</td>
</tr>
</tbody>
</table>

CER=Constant Exchange Rates; Underlying growth of Molecular Diagnostics excluding sequencing business: +2%
HY 2016: Diagnostics regional sales
Growth contribution by all regions

North America
+2%
26% of divisional sales

Latin America
+27%
7% of divisional sales

EMEA\(^1\)
+1%
42% of divisional sales

Japan
+2%
4% of divisional sales

Asia Pacific
+17%
21% of divisional sales

+23% growth in E7 countries\(^2\)

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\(^1\) Europe, Middle East and Africa; \(^2\) Brazil, China, India, Mexico, Russia, South Korea, Turkey
All growth rates at Constant Exchange Rates
HY 2016: Diagnostics highlights

Growth driven by immunodiagnostic products

- Driven by immunodiagnostics (+14%) and clinical chemistry (+6%)
- Spillover of US reimbursement cuts to private sector
- Virology (+12%) incl. HPV (+16%)
- Advanced staining portfolio (+9%); primary staining (+16%)

1 Underlying growth of Molecular Diagnostics excluding sequencing business: +2%

CER=Constant Exchange Rates; EMEA=Europe, Middle East and Africa
HY 2016: Diagnostics Division

Core operating profit growth impacted by new product launches, investments in R&D

<table>
<thead>
<tr>
<th></th>
<th>HY 2016</th>
<th>2016 vs. 2015</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>CHFm</td>
<td>% sales</td>
</tr>
<tr>
<td>Sales</td>
<td>5,562</td>
<td>100.0</td>
</tr>
<tr>
<td>Royalties &amp; other op. inc.</td>
<td>60</td>
<td>1.1</td>
</tr>
<tr>
<td>Cost of sales</td>
<td>-2,560</td>
<td>-46.1</td>
</tr>
<tr>
<td>M &amp; D</td>
<td>-1,270</td>
<td>-22.8</td>
</tr>
<tr>
<td>R &amp; D</td>
<td>-651</td>
<td>-11.7</td>
</tr>
<tr>
<td>G &amp; A</td>
<td>-134</td>
<td>-2.4</td>
</tr>
<tr>
<td>Core operating profit</td>
<td>1,007</td>
<td>18.1</td>
</tr>
</tbody>
</table>

CER=Constant Exchange Rates
Launch of cobas e801 immunoassay analyser
Maximising laboratory productivity and efficiency

- Double throughput with same footprint
- Fastest time to result
- Highest accuracy
- Lower blood sample volume
Serum work area and molecular diagnostics in one workflow

**TODAY**
Roche market leader in Serum Work Area

**Integrated SWA solutions:**
- Immunodiagnostics
- Clinical Chemistry

**TOMORROW**
Roche market leader in Connected Core Laboratory

**Integrating high-volume MD:**
- In a seamless workflow
- With integrated IT solutions

**FUTURE**
Integrated DIA information anywhere, anytime

**Data digitalisation**
- Central: SWA*, MD**, STS***
- Point of Care: hospital, ambulatory, home

* SWA: Serum Work Area; ** MD: Molecular Diagnostics; *** STS: Specialty Testing Solutions
Launch of CoaguChek INRange
First wireless self-testing for patients in VKA\(^1\) therapy

- **New**: connectivity to healthcare professionals improving patient convenience
- Target market: ~CHF 670m (+5% CAGR)

\(^1\) VKA: vitamin K antagonist
First liquid biopsy test approved by FDA

**cobas EGFR v2 CDx for Tarceva**

- Test can utilise plasma and tissue sample
- Leverages cobas 4800 platform
VENTANA HE 600 system
A new era of innovation in H&E* staining

• Launched November 2015
• Fully automated H&E platform with individual slide staining technology, avoids sample cross contamination
• Platform features
  – Unparalleled levels of stain consistency and reproducibility
  – Optimal workflow efficiency
  – Easy and safe to operate, no hazardous chemicals

* hematoxylin and eosin tissue staining
Immunotherapy diagnostics

**PD-L1 test approved for bladder cancer**

- FDA approved SP142 to predict bladder cancer patient response to Tecentriq
- PD-L1 IHC expression shown to correlate with and predict therapeutic outcomes
- Available on BenchMark ULTRA platform: Large global installed base

**VENTANA PD-L1 (SP142) CDx Assay**

BenchMark ULTRA
HY 2016 Group results

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Innovation: Molecular Point of Care

CLIA waiver for cobas Liat Flu A/B and Strep A tests

• Submitted for Flu A/B plus RSV
• Fast readout and easy-to-use
• Plans to extend menu in MRSA and C. difficile
• Target market: ~CHF 350m

Point of Care: e.g. physician’s office, emergency rooms, health clinics, pharmacies; MRSA=Methicillin Resistant Staphylococcus Aureus; RSV=Respiratory Syntical Virus
Acquisition of GeneWEAVE Bioscience Inc.
Enhancing Roche’s NAT microbiology portfolio

GeneWEAVE’s Smarticles™ technology:
Identifies multidrug-resistant organisms and assesses antibiotic susceptibility

- No need for sample preparation processes
- MRSA is first test to be launched; CRE¹, FRE², VRE³ in development
- Target market: ~CHF 2bn; +7%

¹ CRE: carbapenem-resistant Enterobacteriaceae; ² Fluoroquinolone-resistant Enterococci; ³ VRE: Vancomycin-resistant Enterococci
Developing a complete sequencing solution
*Invest in best-in-class technologies*

**SAMPLE PREPARATION**
- **MilliSect**: Tissue Dissection
- **Lumora**: Heat Elution
- **Kapa Biosystems**: PETE**
- **AbVitro**: PETE**

**SEQUENCING**
- **Pacific Biosciences**: SMRT** sequencing
- **Genia**: Nanopore sequencing
- **Stratos** (collaboration)

**MENU**
- **Ariosa Diagnostics**: NIPT**
- **Signature Diagnostics**: Biobank
- **CAPP Medical**: Oncology

**INFORMATICS**
- **Bina Technologies**
- **Internal development**

* 2015 acquisitions
**PETE**: primer enrichment technology; **SMRT**: Single molecule real time; **SMRT** is a registered trademark of PacBio; **NIPT**: Non invasive prenatal testing
Sequencing Investment Updates
Optimising the portfolio

Ariosa
- Technology transfer to labs in Europe
- Harmony test CE-IVD certification in Q2 2016

CAPP Medical
- Liquid biopsy for circulating tumour DNA for cancer therapy selection and monitoring
- Launch as RUO assay in 2016

Pacific Biosciences
- Launch of first Roche SMRT platform as an integrated workflow solution including assays expected in H2 2016
HY 2016 Group results

Diagnostics

- Business model & strategy
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- Investing in innovation
- Outlook
## Key launches 2016

<table>
<thead>
<tr>
<th>Area</th>
<th>Product</th>
<th>Market</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Instruments / Devices</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Central Laboratory</td>
<td>cobas 8000 &lt;e 801&gt; - high throughput immunochemistry analyzer</td>
<td>EU</td>
</tr>
<tr>
<td></td>
<td>cobas c 513 - high throughput dedicated HbA1c analyzer</td>
<td>US</td>
</tr>
<tr>
<td>Point of Care</td>
<td>CoaguChek INRange (Zenith) - modified analyzer for intuitive self testing with full blue tooth connectivity</td>
<td>EU</td>
</tr>
<tr>
<td>Sequencing</td>
<td>Roche SMRT Sequencer - single molecule sequencer for clinical research (in collaboration with Pacific Biosciences)</td>
<td>WW</td>
</tr>
<tr>
<td>Diabetes Care</td>
<td>Accu-Chek Guide - next-generation blood glucose monitoring system</td>
<td>EU</td>
</tr>
<tr>
<td></td>
<td>Accu-Chek Insight CGM - new high-performance continuous glucose monitoring system</td>
<td>EU</td>
</tr>
<tr>
<td><strong>Tests / Assays</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Virology</td>
<td>cobas 6800/8800 HIV Qual - early Infant Diagnosis and Confirmatory HIV Test</td>
<td>EU</td>
</tr>
<tr>
<td>HPV / Microbiology</td>
<td>cobas 6800/8800 CT/NG - fully automated solution for screening and diagnosis of <em>Chlamydia trachomatis</em> and <em>Neisseria gonorrhoeae</em> in symptomatic &amp; asymptomatic patients</td>
<td>EU</td>
</tr>
<tr>
<td>Point of Care</td>
<td>cobas Liat Influenza A/B plus RSV (CLIA) - automated multiplex real time RT-PCR assay for qualitative detection and discrimination of Influenza A virus, Influenza B virus and respiratory syncytial virus (RSV)</td>
<td>US</td>
</tr>
<tr>
<td>Sequencing</td>
<td>ctDNA oncology panels - liquid biopsy for circulating tumor DNA for cancer therapy selection</td>
<td>US</td>
</tr>
<tr>
<td>Companion Diagnostics</td>
<td>PD-L1 (SP142) for Bladder Cancer* - companion diagnostic for atezolizumab</td>
<td>US</td>
</tr>
<tr>
<td></td>
<td>PD-L1 (SP142) for NSCLC* - companion diagnostic for atezolizumab</td>
<td>US</td>
</tr>
</tbody>
</table>

* achieve commercial readiness, dependent on Pharma label and approval
Doing now what patients need next
Investing into a growing business

First Half 2016

• Launches off to a good start
  - Pharma: Cotellic, Alecensa, Venclexta, Tecentriq
  - Dia platforms: cobas e801, Ventana HE600

• Substantial investment into new business
  - Pharma: **5 NME launches in a year**
    - investments in cancer immunotherapies
  - Dia: Investments in molecular diagnostics solutions
  - Expansion of biologics manufacturing network

• Benefit from PSI* (CHF 426m)

Outlook

Full Year 2016

• One-off PSI* effect diluted on full year basis; positive base effect on costs H2 2015
• Ongoing productivity measures
• Core EPS growth > sales growth

* Past service income
Continued leadership in innovation
Launches at historical high


- Zelboraf
- Perjeta
- Erivedge
- Kadryla
- Gazyva
- Ocrevus
- Alecensa
- TECENTRIQ
- Venclexta

5 NME launches in a year