HIV and ViiV Healthcare

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Overview

1. ViiV Healthcare vision
2. ViiV Healthcare history and operating model
3. HIV market
4. Dolutegravir (DTG)
5. R&D strategy
6. Concluding remarks
ViiV Healthcare vision
Establish ViiV Healthcare as the leading company in the HIV market in innovation, sales and reputation
ViiV Healthcare history and operating model
A rich HIV history joined under a unique model

**2009**
- GSK (85%) and Pfizer (15%) create a joint venture dedicated to HIV treatments

**2012**
- Shionogi (10%)
  - The Japanese company becomes new partner and shareholder*

**2013**
- Dolutegravir era
  - First dolutegravir (DTG) launch in the US

**2016**
- ViiV Healthcare acquires BMS’ HIV pipeline and discovery assets

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**ViiV Healthcare shareholding**

**2016**
- ViiV Healthcare acquires BMS’ HIV pipeline and discovery assets

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**Highly reliant on GSK infrastructure**

- R&D
- Manufacturing
- Distribution
- (Alliance markets)
- Administrative and functional (HR, IT, Legal, Finance)

**External support from Pfizer and Shionogi**

- Strategy
- Drug discovery and development
- Medical affairs
- Marketing
- Sales
- Public affairs
- Global operations
- Resource management
- Performance management

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*Current shareholding of ViiV Healthcare: GSK 78.3%, Pfizer 11.7%, Shionogi 10%*
End to end operation reliant on the scale and infrastructure of large Pharma shareholders

- 3 regions – North America, Europe and International
- 15 affiliates and a presence in more than 50 countries through GSK
- 900+ employees worldwide
- 150 employees working in Alliance markets*

- 244 employees working for GSK in R&D for ViiV Healthcare
- 222 employees working for ViiV Healthcare through shared service agreements
- 450+ planned, concluded and active clinical trials since creation, including BMS acquisitions

*Alliance markets: Agreement with GSK in markets were ViiV Healthcare is not a legal entity
ViiV Healthcare success to date has evolved in two phases – First Phase: 2009 - 2013

2009
Re-energised commercial operation and R&D

1. Led the Epzicom/Kivexa turnaround

2013

2. Created an unprecedented development programme to catapult DTG's success

Source: GSK reported financial results
ViiV Healthcare success to date has evolved in two phases – Second Phase: 2013 - Today

1) DTG success fuelling ViiV Healthcare growth

2) Commitment to true innovation that delivers real patient benefit

Source: Reported Financial Results
* Note, therapies denoted with an (*) are investigational; safety and efficacy in treating/preventing HIV has not been established
The HIV market
The HIV epidemic remains a substantial challenge of our time

36.7m people living with HIV worldwide¹

2.1m infections and 1.1m AIDS-related deaths per year globally¹

2.4m people living with HIV in Western and Central Europe and North America¹

Patients are living longer and infection rates have begun to rise again
Treatment rate in developed markets is only 50-70%²,³
IAS July 2016 recommends that all people living with HIV should receive treatment

Source: 1. UNAIDS. Core epidemiology slides. June 2016; 2. IMS World Model Dec’15; 3. IMS local monthly model (Mar’16)
A highly dynamic market

HIV market valued at £16 billion in 2015

Dynamic Segment
~15-35% of the market per year

Initiation (naive) ~5-10%

Switch ~10-25%

Stable segment ~65-85%

Reported reason for patients switching to a new therapy as reported by physicians (N=246)

- Simplification: 32%
- Toxicity: 31%
- Clinical trial inclusion: 13%
- Virological failure: 6%
- Drug-drug interaction: 4%
- Patient decision: 3%
- Lack of adherence: 2%
- Pregnancy: 1%
- Other: 1%

The market has been receptive to innovation and remains a strong opportunity for growth.

Source: IMS MIDAS Database
Guideline updates drive market evolution

<table>
<thead>
<tr>
<th>Year</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013</td>
<td>October 2013 DHHS recommends integrase inhibitor-based regimens including DTG + Epzicom or + Truvada as preferred for ART naive patients.</td>
</tr>
<tr>
<td>2014</td>
<td>November 2014 EACS added DTG + Epzicom/Kivexa or + Truvada for ART naive patients.</td>
</tr>
<tr>
<td>2016</td>
<td>July 2016 IAS recommends initial regimens consisting of an integrase inhibitor plus two NRTIs.</td>
</tr>
</tbody>
</table>
We have now entered the integrase inhibitor era

INIs represent 46% of the TRx market, a figure that will continue to grow

Source: IMS NPA Monthly Jul 2016
Dolutegravir
Amongst integrase inhibitors, DTG stands out

Unprecedented and unmatched clinical trial results

<table>
<thead>
<tr>
<th>efavirenz</th>
<th>raltegravir</th>
<th>darunavir</th>
<th>atazanavir</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SUPERIOR</strong> (naive)</td>
<td><strong>SUPERIOR</strong> (naive)</td>
<td><strong>SUPERIOR</strong> (women / naive)</td>
<td><strong>SUPERIOR</strong> (naive)</td>
</tr>
<tr>
<td><strong>NON INFERIOR</strong> (naive)</td>
<td><strong>NON INFERIOR</strong> (naive)</td>
<td><strong>SUPERIOR</strong> (women / naive)</td>
<td><strong>NON INFERIOR</strong> (naive)</td>
</tr>
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</table>

SINGLE, FLAMINGO, SPRING 2, SAILING and ARIA were non-inferiority studies with a pre-specified analysis for superiority. Chart shows primary endpoint outcomes.

Unmatched and unmatched clinical trial results

DTG (50 mg QD) exposures 19-fold above IC90
Long 'tail' - drug plasma concentrations up to 216h post dose

References:
Dolutegravir leads the market as the #1 core agent

Weekly US TRx market share (STR + core agent) – since Tivicay launch

Source: IMS data to 2 September 2016
#1 meaning most prescribed
And the #1 agent in dynamic share in the US

New* Patient Shares by Product (STR+Core agent)

Switch/Add Patient Shares by Product (STR+Core agent)

EXCLUDING conversions

1 Conversions = switches from Truvada+Sustiva to Atripla, Truvada+Edurant to Complera, Tivicay+Epzicom to Triumeq, Prezista to Prezcobix, Reyataz to Evotaz, Stribild to Genvoya, Complera to Odefsey. ** IMS “New” metric is a proxy for naïve patients. It represents a longitudinal IMS panel of patients with no prior HIV therapy RX in the last 12 months, and overstates true naïve volume slightly.

Source: IMS NBRX Custom HIV Report 26 August 2016. #1 meaning most prescribed.
Already #1 agent in dynamic share in many other key markets

<table>
<thead>
<tr>
<th>Country</th>
<th># 1 in Naïve</th>
<th># 1 in Switch</th>
</tr>
</thead>
<tbody>
<tr>
<td>France</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Germany</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Italy</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Spain</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>UK</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Canada</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Japan</td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>

Sources: IMS NBRX Custom HIV Report 08/19/2016 (US), Ipsos Scope Aug 2016 (FR, IT, SP, UK, JP), Lemon Wave 4 - June-July 2016 (GER), IMS Rx Dynamics (CA)

#1 meaning most prescribed
ViiV Healthcare is the only company with increasing growth in HIV over the past 12 months (from +34% to +53%).

Global HIV market by value

Source: IMS Health MAT June 2016
R&D strategy
Committed to innovation and leadership in HIV

Prevention
- cabotegravir long-acting*

Long-acting Treatment Regimens
- cabotegravir + rilpivirine*

Dolutegravir-based Regimens
- Tivicay and Triumeq

Legacy ARV Drug Portfolio
- abacavir/lamivudine, maraviroc & others

DTG 2-Drug Regimens
- dolutegravir/rilpivirine*
- dolutegravir/lamivudine*

New MOA
- GSK3684934* previously BMS-663068; attachment inhibitor
- Maturation Inhibitors*
- Allosteric Integrase Inhibitors*
- Combinectin*

*Note, therapies denoted with an (*) are investigational; safety and efficacy in treating/preventing HIV has not been established.
Our belief in the market evolution

PAST

2 NRTI backbone

3rd agent

PRESENT

Core Agent

2 NRTI backbone

FUTURE

Core Agent

1 partner agent
Why can 2-drug regimens (2DR) succeed?

<table>
<thead>
<tr>
<th>Scientifically viable</th>
<th>DTG/CAB uniquely positioned for 2DRs</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>Encouraging clinical data</td>
</tr>
<tr>
<td>Unmet medical need</td>
<td>Long term treatments with improved adverse event profile</td>
</tr>
<tr>
<td></td>
<td>Ageing HIV patient population with co-morbidities</td>
</tr>
<tr>
<td>Market demand</td>
<td>Persistent interest in 2DR research</td>
</tr>
<tr>
<td></td>
<td>Market receptive to new treatment advances</td>
</tr>
</tbody>
</table>

2DRs have the potential to challenge therapy standard
ViiV Healthcare integrase inhibitors at the forefront of the 2DR paradigm shift

Establish DTG as the leading core agent in the market

Challenge the three drug paradigm

- DTG+ 3TC
- DTG+ RPV
- CAB+ RPV LA
Cabotegravir LATTE and LATTE-2 Studies

Durable virologic suppression with oral and long-acting (LA) 2DR

LATTE (oral CAB+RPV)
Week 96 Virologic Outcomes

LATTE-2 (LA inj. CAB+RPV)
Week 48 Virologic Outcomes


*Cabotegravir + abacavir + lamivudine oral
Investigator initiated 2DR studies

LPV/r = lopinavir boosted with ritonavir; DRV/r = darunavir boosted with ritonavir; ATV/r = atazanavir boosted with ritonavir
## SWORD 1 and 2

<table>
<thead>
<tr>
<th><strong>Indication</strong></th>
<th>Maintenance therapy for adult patients with HIV-1 infection</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Number of patients</strong></td>
<td>1,000 virologically suppressed patients</td>
</tr>
<tr>
<td><strong>Study design</strong></td>
<td>Phase III, randomised, open-label study to assess the safety and efficacy of switching to DTG + RPV versus continuing current antiretroviral regimen</td>
</tr>
<tr>
<td><strong>Primary endpoint</strong></td>
<td>The primary endpoint is proportion of patients with plasma HIV-1 RNA &lt;50 copies per milliliter (c/mL) at week 48. Key secondary endpoints include evaluation of the development of viral resistance, measurements of safety and tolerability, and changes in renal, bone and cardiovascular biomarkers</td>
</tr>
<tr>
<td><strong>Expected readout date</strong></td>
<td>End of 2016</td>
</tr>
<tr>
<td><strong>Expected launch date</strong></td>
<td>H1 2018</td>
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</tbody>
</table>
### DTG + 3TC

**Phase III started August 2016**

<table>
<thead>
<tr>
<th>GEMINI 1 and 2</th>
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<tbody>
<tr>
<td>Indication</td>
<td>Treatment for HIV-1 infection in adults who have not received prior antiretroviral therapy</td>
</tr>
<tr>
<td>Number of patients</td>
<td>1,400 naive patients</td>
</tr>
<tr>
<td>Study design</td>
<td>Phase III, randomised, multicentre, non-inferiority studies to evaluate the efficacy, safety, and tolerability of DTG + 3TC QD versus DTG + TDF/FTC FDC over 148 weeks</td>
</tr>
<tr>
<td>Primary endpoint</td>
<td>The primary endpoint for these studies is non-inferior antiviral activity measured by the proportion of participants with plasma HIV-1 RNA &lt;50 copies/mL (c/ML) at week 48</td>
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<td>2018</td>
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A growing body of evidence to support 2DR

Forward-looking, dependant on data availability
*ISS abstract are best estimates only and subject to change based on investigator decision

INTERNAL STUDIES
SWORD 1 & 2
GEMINI 1 & 2

ISS STUDIES*
PADDLE 96 weeks
ACTG 5353
ASPIRE
DUALIS
LAMIDOL
DOLATAV

Next available congress presentation = ▲
Why innovation should remain a priority in HIV

Reference: Lataillade et al. CROI 2015, Abstract 114LB
Concluding remarks
Our strategic priorities to ensure near and long term success

Continue to drive share in traditional 3 drug regimens through strength of DTG

Create a new paradigm in oral treatment through 2DR

Create a new paradigm in treatment through long-acting therapy

Continue to lead HIV innovation with research that delivers new mechanisms offering new options for patients most in need