IAC Analyst Presentation

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July 27, 2012

ViiV Healthcare

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July 27, 2012

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- Equity split of **85%** GSK and **15%** Pfizer
- **100%** focused on HIV
- **£1.6 billion** sales in 2011
- **10** HIV medicines across **5** drug classes
- **4** compounds currently in Phase II/III
- **16** compounds under investigation for development
- **530** staff in **18** countries worldwide

A Sustainable Business

- **£1.6 bn of sales in 2011 (CER 1%)**
- **Kivexa/Epzicom (+15% in H1 2012)**
  - Reinstated as preferred initial NRTI-backbone in the IAS-USA Guidelines
- **Celsentri/Selzentry (+24% in H1 2012**)
  - Continued growth ahead of the 3rd agent market
- Selzentry + Epzicom = 57% total (H1 2012)
- Very solid cashflow

Our Partnership Approach

- With **Shionogi** on innovative development programme for integrase inhibitors **dolutegravir** and **'744 LAP** (Long Acting Formulation)

- With the **research community**
  - IAS Industry Collaborative Group on HIV Cure
  - Collaboration for HIV/AIDS Immunological Therapy (CHAIT)

- With the **Clinton Health Access Initiative** and **Mylan Inc.** on a palatable dispersible FDC for **paediatric HIV** in resource-limited settings

- With **11 generic** manufacturers for our Voluntary Licences

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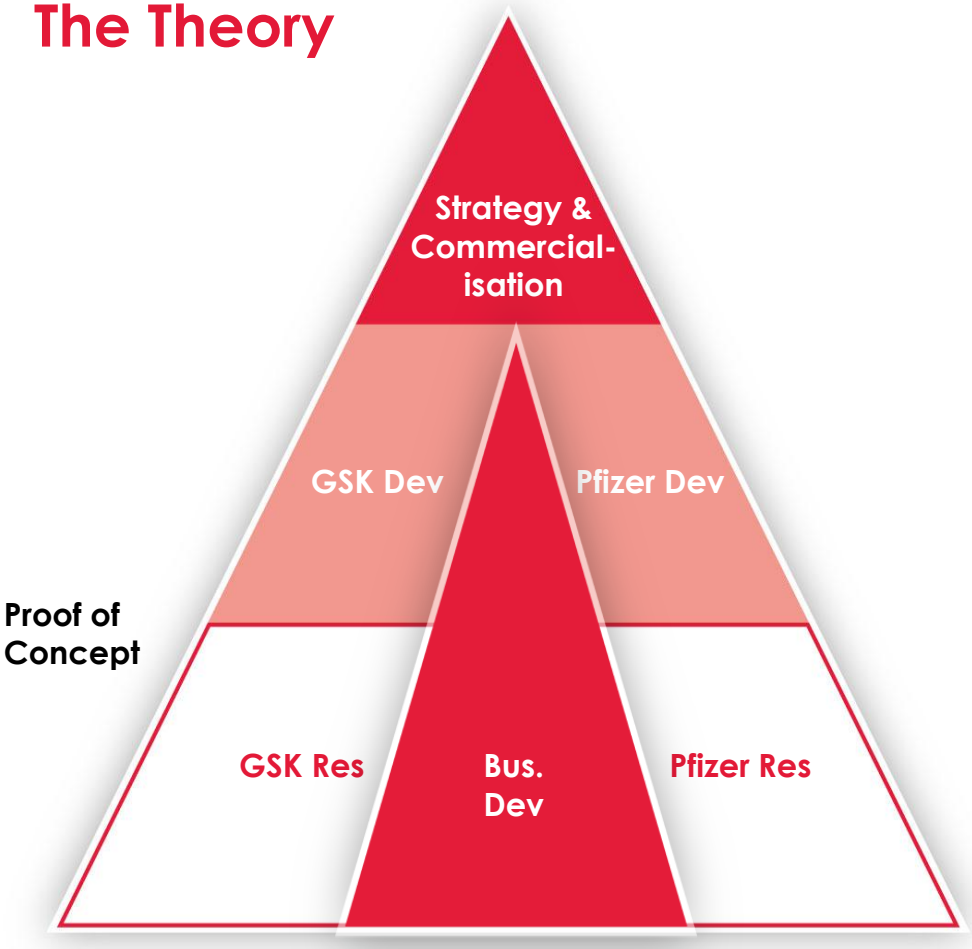
Dr John Pottage
Chief Scientific and Medical Officer
ViiV Healthcare

July 27, 2012

Our Approach to R&D

The Theory



The Practice

- More consistent flow of new medical entities (NMEs)/ fixed dose combinations (FDCs) thanks to 2 combined pipelines
- 2 R&D 'engines'
- Additional drive to build new alliances/business development opportunities in HIV
- DPU focused on 3 key areas:
  - New antiretrovirals (ARVs)
  - Immune
  - Cure

ViiV Healthcare core business ViiV Healthcare outsourced organisation

Shionogi-ViiV Healthcare
Dolutegravir Pivotal Studies

	Patient population	Headline Data	Results
SPRING-2	Treatment naive	**Reported 2 April 2012**	**DTG regimen non-inferior to RAL** Presented at IAC 2012
SINGLE	ABC/3TC FDC enabling	**Reported 11 July 2012**	**DTG regimen superior to Atripla***
VIKING-3	INI-resistant	**2012**	**N/A**
SAILING	Treatment experienced (but INI-naive)	**2012**	**N/A**

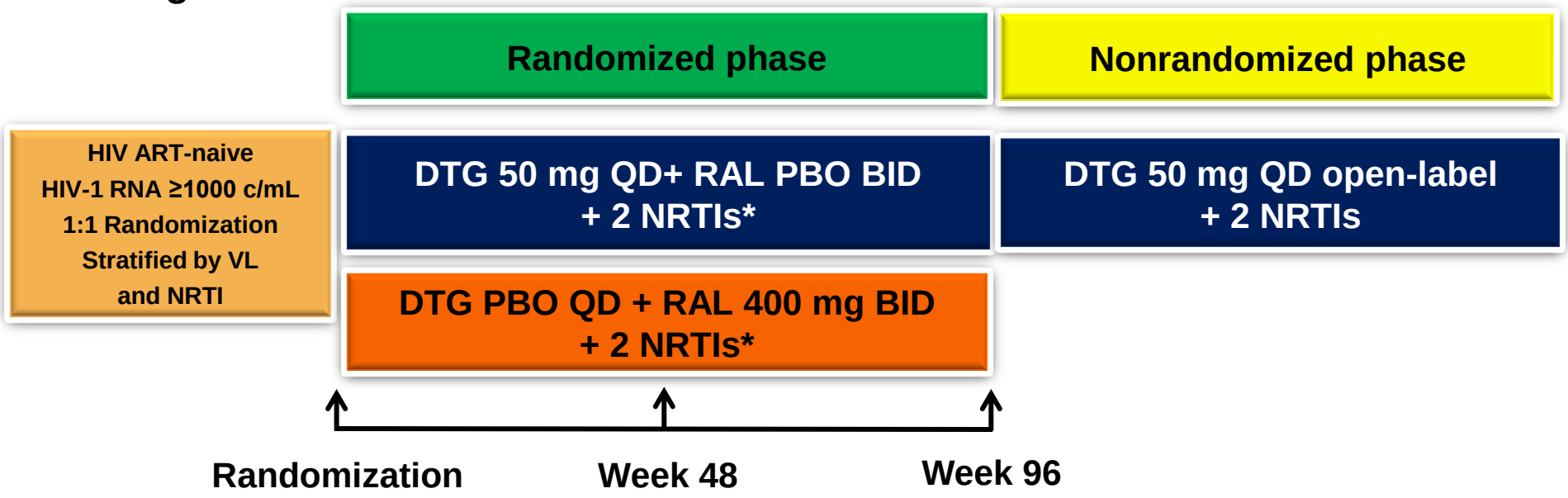
*The SINGLE study was designed to demonstrate non-inferiority of the dolutegravir-based regimen versus Atripla, and the primary analysis met this criterion. Statistical superiority was concluded as part of a subsequent, pre-specified testing procedure.

SPRING-2 data

Presented at IAC, Washington DC on 26 July 2012

SPRING-2 (ING113086) Study Design

- Phase III, randomized, double-blind, double-placebo, multicenter, parallel-group, non-inferiority study, ART-naive patients
- All arms include 2 NRTI backbone given once daily (ABC/3TC or TDF/FTC)
- Primary endpoint: % <50 c/mL at 48 weeks ("snapshot") , non-inferiority margin 10%



*Investigator's selection ABC/3TC or TDF/FTC

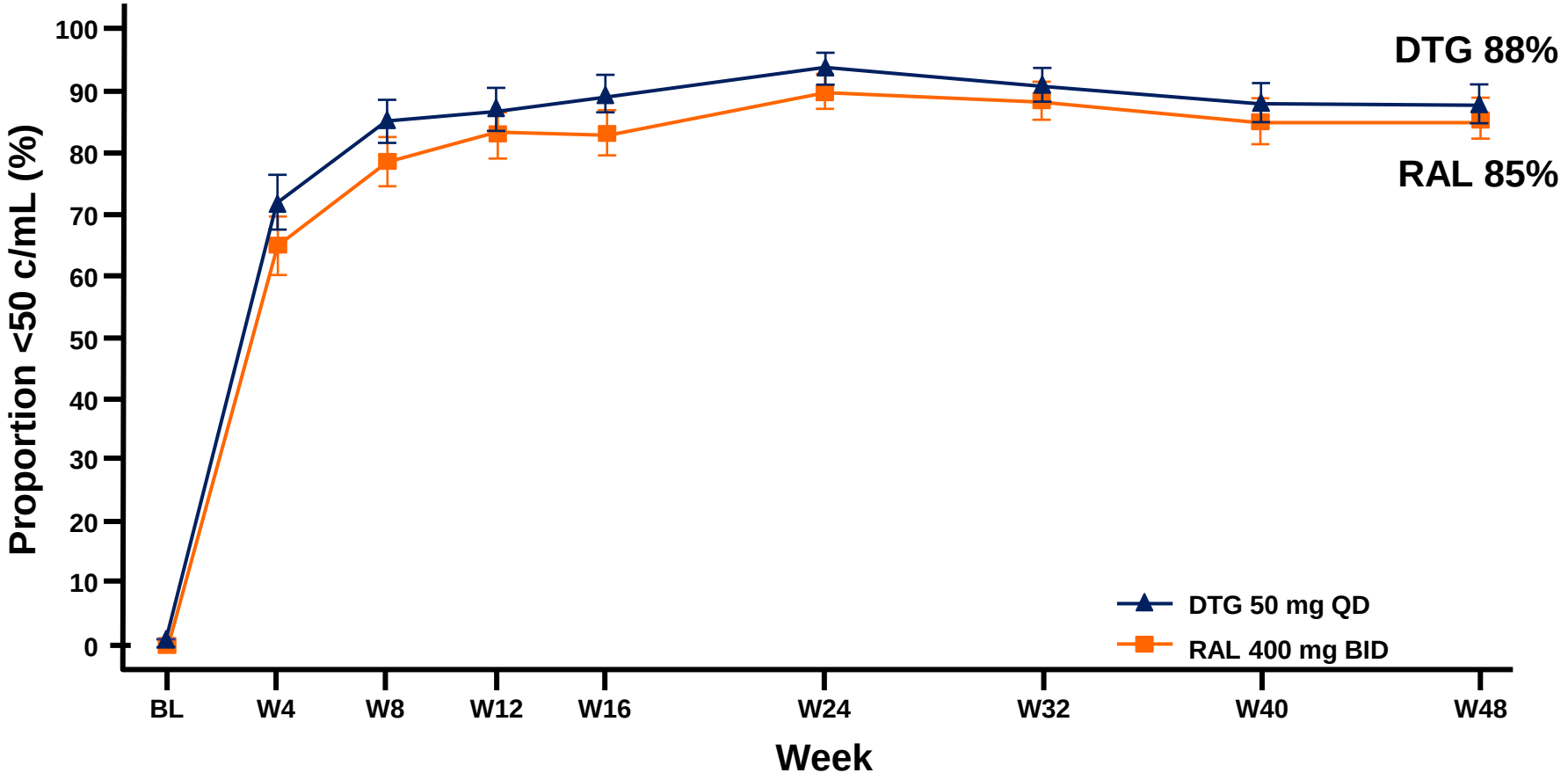
Baseline Characteristics

SPRING-2

		DTG 50 mg QD n=411	RAL 400 mg BID n=411
Age	Median (y)	37	35
Gender	Male	85%	86%
Race	White	84%	86%
	African American/African heritage	12%	9%
	Other	4%	5%
Baseline HIV-1 RNA	Median (log_{10} c/mL)	4.52	4.58
	>100,000 c/mL	28%	28%
Baseline $CD4^+$	Median (cells/mm^3)	359	362
	<200 cells/mm^3	13%	12%
Hepatitis coinfection	HBV	2%	2%
	HCV	10%	9%
Investigator-selected dual NRTIs at Day 1	TDF/FTC	59%	60%
	ABC/3TC	41%	40%

Virologic Success Over Time

SPRING-2



Median (IQR) Change From Baseline $CD4^+$ Cell Count ($cells/mm^3$)

	W4		W24		W48	
DTG 50 mg QD	87	(26, 149)	183	(100, 295)	230	(128, 338)
RAL 400 mg BID	88	(32, 163)	182	(94, 296)	230	(139, 354)

Treatment Differences (95% CI) at Week 48 by Strata
No difference between backbone treatments

SPRING-2

	DTG 50 mg QD n=411	RAL 400 mg BID n=411	Difference in Proportion (95% CI) (DTG - RAL)
	Number of Responders/Total Assessed		
Baseline Plasma HIV-1 RNA			
≤100,000 c/mL	267 / 297 (90%)	264 / 295 (89%)	**0.4 (-4.5, 5.3)**
>100,000 c/mL	94 / 114 (82%)	87 / 116 (75%)	**7.5 (-3.1, 18.0)**
			p= 0.236*
Background Dual NRTI			
ABC/3TC	145 / 169 (86%)	142 / 164 (87%)	**-0.8 (-8.2, 6.6)**
TDF/FTC	216 / 242 (89%)	209 / 247 (85%)	**4.6 (-1.3, 10.6)**
			p=0.264*

*Test for homogeneity

Protocol-Defined Virologic Failure (PDVF)
No Integrase Inhibitor nor NRTI mutations in DTG arm

SPRING-2

- **Amongst DTG-treated subjects, no integrase nor NRTI mutations were detected through Week 48**

	DTG 50 mg QD n=411	RAL 400 mg BID n=411
Subjects with PDVF	**20 (5%)**	**28 (7%)**
IN genotypic results at BL and time of PDVF	8	18
INI-r mutations	**0**	**1/18 (6%)[a]**
PR/RT genotypic results at BL and time of PDVF	12	19
NRTI-r mutations	**0**	**4/19 (21%)[a,b,c,d]**

Mutations by subject in the RAL 400 mg BID arm:

[a] T97T/A, E138E/D, V151V/I, N155H + A62A/V, K65K/R, K70K/E, M184V

[b, c, d] A62A/V (n=1), M184M/I (n=1), M184M/V (n=1)

Select Summary of Adverse Events

SPRING-2

	DTG 50 mg QD n=411 n (%)	RAL 400 mg BID n=411 n (%)
Grade 2-4 Drug-Related Events	**24 (6)**	**27 (7)**
Grade 3	**2***	**5*****
Grade 4	**2****	**0**
Serious Adverse Events	**29 (7)**	**31 (8)**
Drug related	**3**	**5**
	Arrythmia, hypersensitivity, hepatitis	**Convulsion (2), Aphasia, hypersensitivity/hepatitis#, diarrhea**
AEs Leading to Withdrawal	**10 (2)**	**7 (2)**
Events with >1 subject		
Acute Hepatitis C	**2 (<1)**	**0**
ALT increased	**2 (<1)**	**1 (<1)**
AST increased	**1 (<1)**	**1 (<1)**
Nausea	**1 (<1)**	**1 (<1)**

* Grade 3: headache, dizziness, feeling abnormal, arrhythmia
** Grade 4: Drug hypersensitivity with associated ALT/AST/ALP/BilT/LFT, hepatitis
*** Grade 3: nausea, abdominal pain, aphasia, drug eruption, fatigue, ALT increased, CPK increased, lipase increased, decreased appetite
#One subject with cytolytic hepatitis, hypersensitivity, influenza, lymphadenitis viral

Laboratory Results

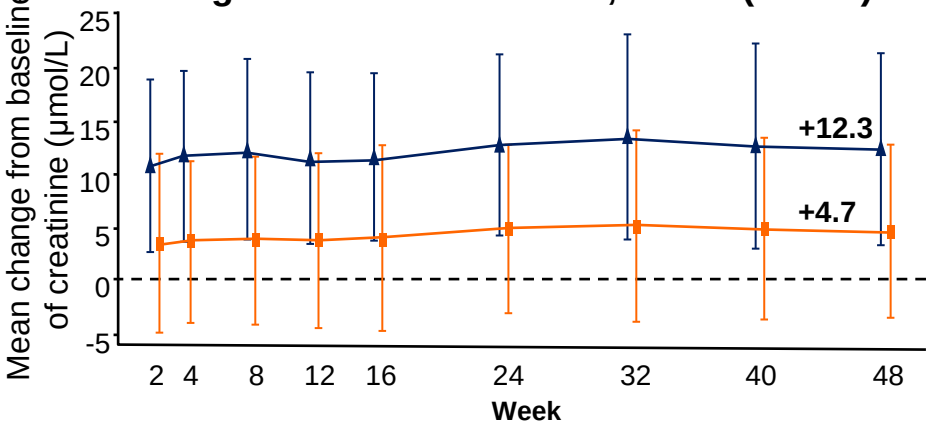
Maximum Post-Baseline Emergent Toxicity Grade 3 – 4	DTG 50 mg QD N=411 n (%)	RAL 400 mg BID N=411 n (%)
Creatine Phosphokinase (CPK)	20 (5)	14 (3)
Aspartate Aminotransferase (AST)	11 (3)	9 (2)
Alanine Amino Transferase (ALT)	9 (2)	7 (2)
Lipase	7 (2)	14 (3)
Total Bilirubin	2 (<1)	1 (<1)
Creatinine	0	0

- **Minimal changes from baseline to week 48 in total cholesterol and triglycerides in both arms**
  - **Total cholesterol median (IQR): DTG +3.9 mg/dL (-10.8, +21.3); RAL +7.7 mg/dL (-8.9, +23.6)**
  - **Triglycerides median (IQR): DTG +0.9 mg/dL (-23.9, +24.8); RAL +6.2 mg/dL (-19.5, +34.5)**

Renal Safety

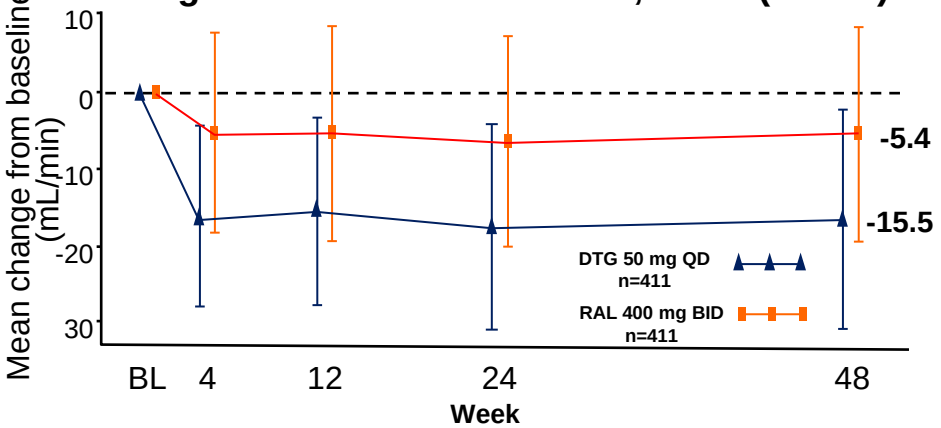
- **No withdrawals due to renal events**
- **Small increase in creatinine due to blockade of Cr secretion[1]**
- **DTG does not affect actual glomerular filtration rate (GFR)[1]**

Change in serum creatinine, Mean (+/- SD)



Baseline (µmol/L): DTG: 74.7 vs. RAL: 75.2

Change in creatinine clearance, Mean (+/- SD)



Baseline (ml/min): DTG: 125 vs. RAL: 128

		DTG 50 mg QD	RAL 400 mg BID
Creatinine			
Maximum emergent toxicity	Grade 1/2	10 (2%) / 1 (<1%)	7 (2%) / 0
Urine albumin/creatinine			
Median change (IQR) from baseline (mg/mmol CR)	Week 48	0.00 (-0.30, 0.20)	0.00 (-0.20, 0.20)

[1] Koteff J et al, 51st ICAAC, Sept 2011.

Summary

- **In this well powered, double blind-double placebo study, once daily DTG was as effective as twice daily RAL, when co-administered with 2 NRTIs over 48 weeks**
  - **88% on DTG were virologically suppressed (<50 c/mL) vs 85% on RAL**
  - **DTG is noninferior to RAL with 95% CI: -2.2% to +7.1%; lower end above prespecified -10% noninferiority limit**
  - **No INI mutations nor NRTI mutations were detected through 48 weeks on DTG**
- **Comparable safety between DTG and RAL**
  - **Similar nature and rate of AE and laboratory Grade 3-4 events**
  - **No premature discontinuation for renal events**
- **Data through 48 weeks continue to support 50 mg once daily for INI-naive subjects and provide evidence for durable efficacy and tolerability for DTG in combination therapy**

SINGLE headline data

Announced 11July 2012

Headline Data from SINGLE trial

- **SINGLE trial demonstrated superiority of the DTG-based regimen compared to Atripla at 48 weeks***
  - **88% of study participants on DTG-based regimen were virologically suppressed (<50 copies/mL) vs. 81% on the single tablet regimen Atripla® [difference and 95% CI; 7.4% (+2.5% to +12.3%)]**
- **2% of subjects on the DTG-based regimen discontinued due to adverse events vs. 10% of those receiving the Atripla regimen**
  - **Most common drug related AE on Atripla were in the nervous system organ class (reported by 41% of Atripla recipients, vs. 15% of participants receiving the DTG-based regimen)**
  - **Most common drug related AEs on DTG-based regimen were in the GI system organ class (reported by 22% of subjects receiving the DTG-based regimen and 22% of subjects receiving Atripla)**
- **Full results of this study, including key secondary endpoints, will be presented at upcoming scientific meetings**

*The SINGLE study was designed to demonstrate non-inferiority of the dolutegravir-based regimen versus Atripla, and the primary analysis met this criterion. Statistical superiority was concluded as part of a subsequent, pre-specified testing procedure.

Clinical perspective on the SPRING-2 trial

Prof. François Raffi
Professor of Infectious and Tropical Diseases,
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Principal Investigator, SPRING-2

July 27, 2012

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Q&A

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