

# Pre-Exposure Prophylaxis – Not Just Oral PrEP

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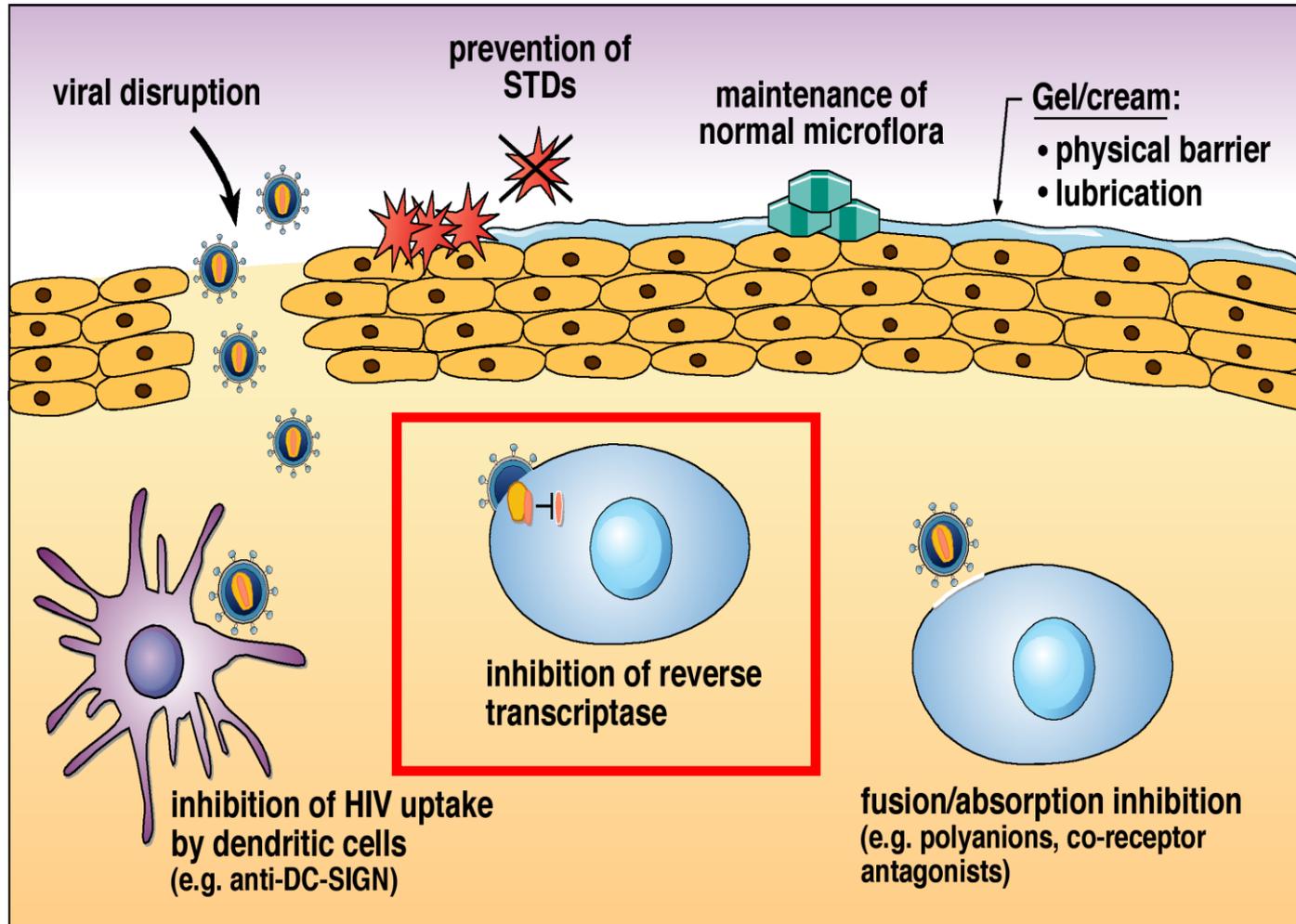
Controlling the HIV Epidemic with Antiretrovirals

London

11<sup>th</sup>-12<sup>th</sup> June, 2012



# PrEP Mechanism of Action





# Non-Oral PrEP

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- Microbicide gels
  - Vaginal
  - Rectal
- Intravaginal rings
  - Antiretroviral
  - Multipurpose
- Films
  - Tenofovir
  - Dapivirine
- Depot injections
  - TMC278 LA
  - S/GSK1265744



# Vaginal Microbicides

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- Tenofovir 1% Gel
- Evidence of efficacy
  - CAPRISA 004
- Evidence of futility
  - MTN-003 (VOICE Trial)
- Tie breaker
  - FACTS-001 study



# Rectal Microbicides

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- Lead candidate tenofovir 1% gel
- Phase 1 safety, acceptability, PK/PD studies completed
  - RMP-02/MTN-006
  - MTN-007
- Phase 2 study to start in Q3 2012
  - MTN-017
- Rectal specific combination products in development

# MTN-017

	8 weeks		8 weeks		8 weeks	
BL	TNF Gel Daily		TNF Gel With sex		Oral Truvada	
BL	TNF Gel With sex		TNF Gel Daily		Oral Truvada	
BL	Oral Truvada		TNF Gel With sex		TNF Gel Daily	



# Intravaginal Rings

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- Phase 1/2 development ongoing
- Dapivirine ± maraviroc
  - MTN-013
- Phase 3 starting Q3 2012
  - MTN-020
  - IPM-027
- Multipurpose technology
  - Antiretroviral + contraceptive



# TMC278LA

- Rilpivirine NNRTI
- IM nanosuspension
- Potential for 1-3 month delivery
- Single dose Phase 1 PK/PD studies ongoing at SSAT, London
- Multiple dose PK/PD to start Q3 2012 in Pittsburgh (MWRI-01\*)
  - Colorectal explants
  - Cervicovaginal explants



\*Funded by the Bill and Melinda Gates Foundation

# MWRI-01



Screen	Baseline	+1	+2	+3	+4	+5
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Arm 1

1200mg

Arm 2

1200mg

900mg

900mg



Possible Arm 5

1200mg + 900mg/ 3 monthly

Arm 3

600mg

Arm 4

600mg

600mg

600mg



Possible Arm 5/6

300mg/ 1 monthly  
600mg/2 monthly

Initial Enrollment

Secondary Enrollment

# Combination Prevention

## Conventional HIV Prevention Package + PrEP



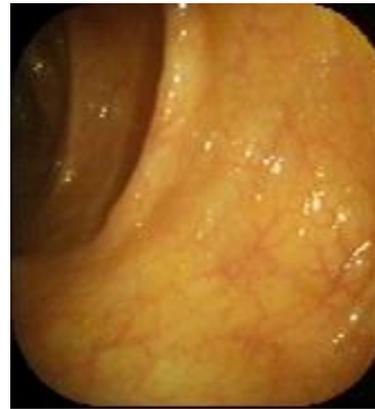
SC

±



Oral

±



Rectal

±



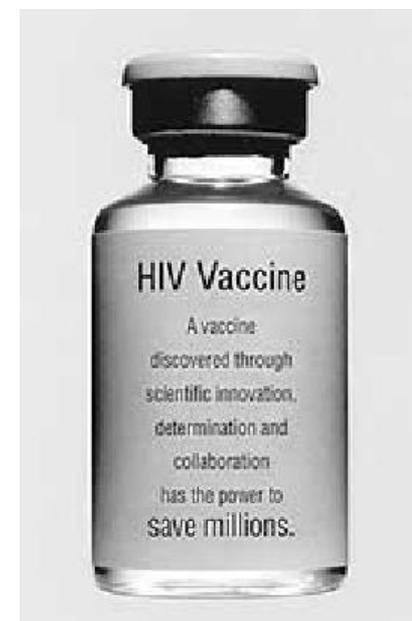
Vaginal

± HIV Vaccine

# Vaccine PrEP Interactions

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- MTN-022 / HVTN-095
- Exploration of potential interactions between oral/topical PrEP and HIV vaccine
  - DNA NYVAC prime boost
  - Truvada
  - Vaginal tenofovir gel
- Primary objectives
  - Safety
  - Acceptability
  - Systemic immunogenicity





# Summary

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- Development of safe and effective PrEP agents including microbicides remains a critical focus for HIV prevention research
- Increased interest in sustained delivery products
- Rectal microbicide development important for both domestic and international MSM and others at risk of infection through RAI
- Innovative trial design will be needed to sustain prevention research agenda