

# Prevention Field Landscaping: Update on 3<sup>rd</sup> Desktop Review – 1 Jan-30 June 2023

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# Desktop Review

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- Why:
  - ✓ MATRIX Prime required to monitor R&D activities in the HIV prevention and microbicide research space : Partners Calls + Desktop Review
  - ✓ Desktop prevention landscape review (excluding vaccines and antibody mediated approaches) : formal report submitted to USAID biannually
- How:
  - ✓ Publications/abstracts reviews via PubMed, Bio and Medrxiv, conferences websites/attendance, listserves and database review.
  - ✓ Published reviews, reports and media releases on relevant topics
  - ✓ Current NIH-funded projects (via NIH RePorter)

# Key Points

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- Third biannual landscaping (Jan 1-June 30, 2023) submitted to USAID July 10, 2023.
- No significant overlap with current MATRIX CP projects identified.
- 64 projects total/ 41 active (HIV prevention and MPTs)
  - 6 new projects identified this round
    - 1 new NIAID award (MPT refillable implant, PIs: Grattoni & Stayton)
- 37 publications/presentations in first half of 2023.

# Highlights of Projects

# and types of projects	N	Active/ Ongoing	Currently not active/unknown status
HIV Prevention only	34	23*	11
MPTs	30	18**	12
<b>TOTAL</b>	<b>64</b>	<b>41</b>	<b>23</b>

(\*) 3 new entries for HIV Prevention only

(\*\*) 3 new entries for MPTs

# HIV prevention projects (N=34)

- Projects stopped/completed/of unknown status (N=11)
  - 5 projects stopped due to safety signals/ API development abandoned
- **Active Projects (n=23)**

## 3 new entries:

- New Publication on MAP+ bicitegravir (QUB)
- New Publication on ISFI+ model drug zidovudine+ D-peptide (QUB) [covalently conjugation for rapid hydrogel formation + long-acting drug release achieved via hydrolysis of the covalent bond under physiologic conditions]
- NIAID funded *Lactobacillus* vaginal tablet with mCV-N (Osel)\*

## Drugs investigated (highlights)

- Repurposed ARVs approved for treatment (e.g., bicitegravir, lenacapavir),
- New unapproved ARVs for prevention usage (e.g., MK8527)
- Non-ARVS: small molecule HIV entry inhibitor

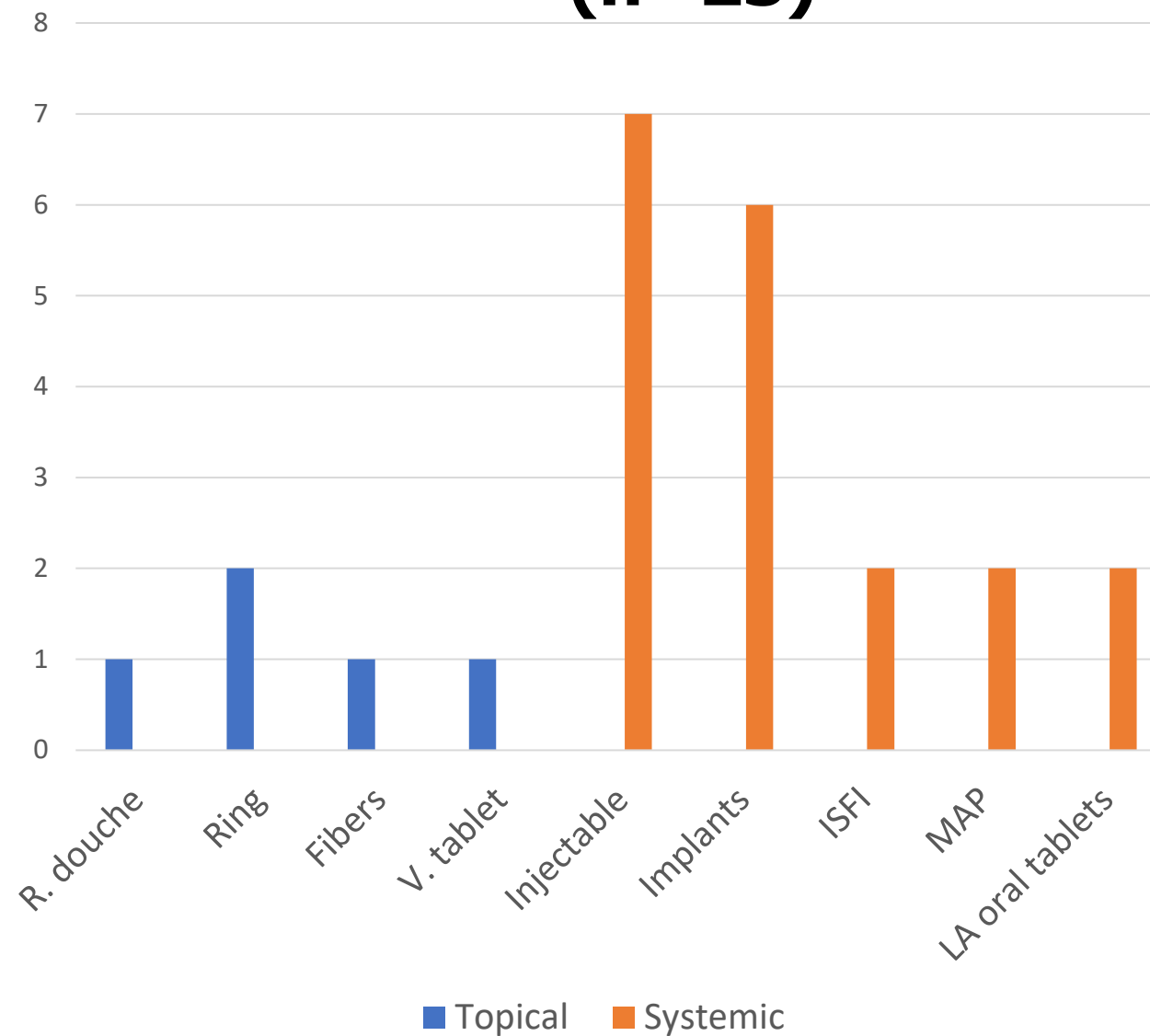
\* Primary indication is for vaginal health



## HIV Prevention only

- Majority of LA DDS
- Majority of systemic DDS (19)
- 8 projects at clinical stage (FIH to phase III)
- 4 projects use non-ARV drugs

## Active projects- distribution (n=23)



# MPT projects (N=30)

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- Projects stopped/completed/of unknown status (N=12)
- **Active Projects (n=18)**

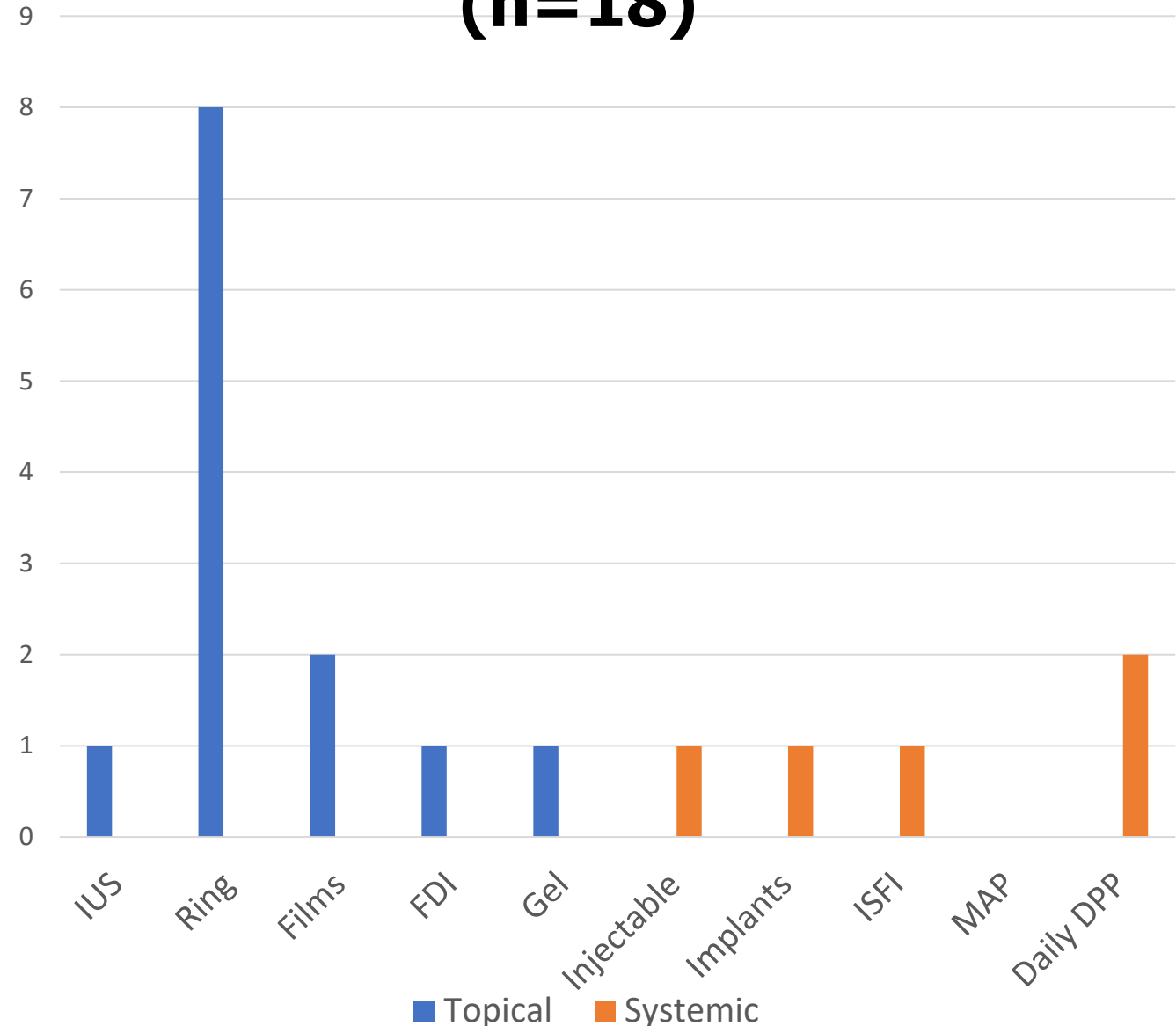
## 3 new entries:

- nanoMPI: Newly funded NIAID R01 for a refillable implant with ISL+ENG drugamer (HMRI + UW)
- HIV+GC prevention ring: Ongoing NIAID funding for dual purpose ring with TDF (for HIV PrEP) and a monoclonal antibody to prevent GC (U.Mass)-
- DPP with with TAF/FTC (for HIV PrEP) and LNG/EE (for contraception) – (PopC + Medicines360 funding)-
- Drugs investigated (highlights)
  - ARVs (e.g. TFV/TDF/TAF, ISL, DLG) & non-ARV (e.g., Q-GRFT, mAB for HIV prevention)
  - Hormonal (e.g., LNG, EE, ENG) & non-hormonal (e.g., AB, copper) for contraception
  - ISL-ENG drugamer

# MPT projects

- Majority are topical products (13)
  - 8 ring projects
- 5 projects at (early) clinical stage
- 3 systemic LA-DDS
  
- 12 **dual purpose** prevention projects
  - 11 projects HIV+ PREG
  - 1 project HIV+GC/NG
  
- **Prevention indications:**
  - HIV- all 18 (by definition)
  - Pregnancy: 17 projects
  - HSV: 5 projects
  - GC/NG: 3 projects
  - HPV: 2 projects

## Active MPT projects distribution (n=18)





# 37 publications/presentations thru 6/30

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- LA-DDS :

- Preclinical (NHP) efficacy of 2 ISL implants, CAB-ISFI and LEN injectables
- Assessment of toxicity/safety issues with novel ARVs/DDS: TAF/implants; oral ISL for PrEP
- Extended (3-month) duration of protection of Cab-LA in CGW
- Safety/acceptability of 3-month MPT rings (TFV and TFV/LNG) & 1 month Dapi ring in Pregnant/BF women

- On demand DDS:

- Safety& PK of TAF/EVG FDI (rectal/vaginal) in males and females-
- Extended vaginal protection of TAF/EVG FDI as PEP in NHP model
- Safety of Q-GRFT rectal douche

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*The contents in this presentation are those of the presenter and do not necessarily reflect the view of the U.S. President's Emergency Plan for AIDS Relief, the U.S. Agency for International Development or the U.S. Government.*

