

# MATRIX: Product landscape analysis January-May 2022

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SC meeting  
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# Product/technology R&D landscape

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- **Goals:**

- Ensure CP R&D work in MATRIX *complements* other prevention work in the field and does not have significant overlap with work being conducted by others
- Monitor R&D activities in the HIV Prevention research space.

- **Activities:**

- Annual meeting with pharma & funders (NIH, BMGF, etc) to share the MATRIX research agenda and hear what they are doing which could impact MATRIX R&D.
- Desktop review of funded R&D prevention activities and publications (biannually).

# Procedure for Desktop Review

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- Desktop research of:
  - Publications/abstracts: PubMed, Medrxiv, Int'l conferences, **list serves** (AVAC, PrEP watch, CHOICE, IMPT, Fierce pharma)
  - Published reviews/reports and media release on relevant topics (HIV PrEP, MPTs... )
  - NIH funded projects (NIH RePorter)

# First review (Jan-May 26 2022)

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- HIV prevention: N=19 (11 projects active)
- MPTs: N= 28 (20 projects active)
- 10 recent (2022) publications
- 2 media release (May 2022):
  - FDA hold on injectable Len glass vials lifted
  - Viiv reached agreement with Medicine Patent Pool for generic manufacturing of Apretude

# HIV prevention projects-(highlights)

Drug delivery system (DDS)	API(s)	Preclinical stage	PD	duration
Drug eluting fibers	INSTI (RAL) pro-drug	Early preclinical (PC)	UW	On demand- 2 weeks
In situ forming implant (ISFI)	ISL (EfdA)	PC	UNC	??
Bioresorbable implant	Maturation inhibitor	Early PC	OCIS	0.5-1 year
PCL biodegradable implant	TAF, ISL others	Late PC	RTI	0.5-1 year
Refillable nanofluidic implant	TAF, FTC	Late PC	HMRI	> 60 days
3D printed implant (PEO+PCL)	Hydrophobic drug (olanzapine)	Early PC	QUB	6 months
Microarray Patch	RPV, Others?	PC	PATH/ QUB	7 days- 1 month
Ring	DTG, nucleocapsid protein inhibitor	early PC	Tulane	3 months

# HIV prevention project con't- CLINICAL

DDS	API(s)	Stage	PD	duration
Rectal enema	TFV	Phase II (HPTN 106)	JHU	On demand
injection	Lenacapavir	Phase III	Gilead/HPTN	6 months
Injection	Elsufavirine (VM1500A)	Phase I (for Rx)	Viriom	? 1 month
Removable silicone +PVA implant	TAF	Phase I/II (CAPRISA 018)	OCIS	? 1 year

# MPT (HIV+) projects- Preclinical (highlights)

Drug delivery system (DDS)	API(s)	Indications (in addition to HIV)	PD	duration
Film	EFV+TFV	HSV	U of Porto	24h/on demand
Long acting film	(pro)ISL+ progestin	pregnancy	MWRIF/UPitt	1 month
Vaginal FDI	Amphora+GrFT	BV, CT, GC, Preg	Evoform+ Pop C.	On demand
Injectable (Hydrogel)	DTG+ LNG	Pregnancy	CONRAD/EVMS	3 months
PCL biodeg. implant	TAF or ISL + LNG or EE	Pregnancy	RTI	0.5-1 year
MAP	Cab+ progestin	Pregnancy	PATH/ QUB	7 days- 1 month
(2) Rings- non hormonal	ARVs/ antibodies, small peptides	pregnancy	1. OCIS/UNC.. 2. Mucomune	1 month
(5) Rings-hormonal	ARVs+ progestins	(HSV) pregnancy	Auritech; UNC; Pop C. OCIS	1 month- 3 month

# MPT (HIV+) projects- clinical (highlights)

Drug delivery system (DDS)	API(s)	Indications (in addition to HIV)	PD	duration	Stage
Dual prevention pill	TDF/FTC,+ LNG/EE	pregnancy	Viatrix/Pop C.	daily	Bioequivalence -> (HPTN 104)
Enema	Q-GRFT	Hepatitis, HSV	U of Louisville	Pre-sex	Phase I
ISFI	DTG, RPV, progestins	pregnancy	UNC	6 months	FIH/phase I
Ring-silicone (reformulated)	DPV+ LNG	pregnancy	IPM	3 months	Phase I/II
Ring-polyurethane	TFV (+/-) LNG	HSV + pregnancy	CONRAD	3 months	Phase II



# Conclusion/Next Steps

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- Landscape analysis shows no significant overlap with current MATRIX CP products
- First call with Pharma and funders will be held on July 11, 2022
- Next review: end of 2022

# Thank you!

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