The Population Council’s leading microbicide gel (MZC) Kizima Kenney Hsu Kenney Richardson

LLOQ for HIV experiments HIV-1BaL and HSV-2 copy numbers in the co-challenge model. The LLOQ for 500 TCID50 HIV-1BaL and 106 pfu HSV-2 (B) per explant (vs. 3TC or 3TC/Acyclovir Ectocervical explants were challenged with 500 TCID50 HIV-1BaL (A) or co-challenged with challenge (B) are indicated (dotted line). The Viability of ectocervical tissue after immersion in medium containing diluted gels for 1h was tested by MTT assay (OD570 of the formazan product were measured in triplicate and normalized by the dry weight of the explants). Each symbol indicates an individual donor and the Mean±SEM of the Log10 OD570/g of tissue for each condition is indicated (dotted lines). Log-normal generalized linear mixed models were used for statistical analysis. Significant p-values of <0.001 (***) are indicated.

Figure 2- Diluted MZC does not decrease tissue viability.

This study aimed to test activity of MZC against HIV only and HIV-1/HIV-2 coinfection in human cervical mucosa.

RESULTS

MZC Gel Inhibits ex vivo HIV-1 and HSV-2 Infection in Human Cervical Mucosa

Guillermo Villegas1, Giulia Calenda2, Patrick Barnable2, Keith Levendosky1, Michael L. Cooney3, José A. Fernández-Romero2, Thomas M. Zydowsky1, Natalia Teleshova1

1 Population Council, New York, NY, USA

BACKGROUND

1. HSV-2 increases the risk of HIV-1 acquisition.
2. Microbicides that protect women against HIV and HSV-2 would make a major contribution to public health globally.
3. The Population Council’s leading microbicide gel (MZC) containing 50µM MIV-150 (M), 14mM Zinc acetate dihydrate and Ectocervical mucosa (cm) protect macaques against single high dose SHIV-RT challenge vaginally for up to 8h and rectally for 1h (1, 2).
4. MZC significantly reduces HSV-2 and HIV infection in murine models (2).
5. MZC reduces vaginal HSV-2 infection after single (3) or repeated HSV-2 challenge, and significantly reduces HSV-2 shedding in macaques (4).
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REFERENCES


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