Recommendations The government to upgrade and accredit prison health units to offer comprehensive HIV/AIDS services. Policies that enforce the rights of inmates to health services should be rejuvenated. Increase funding to improve service delivery.

Conclusion HIV/AIDS prevention can be scaled up among the inmates.

P3.446 EXCELLENT EFFICACY OF PRITELIVIR (AIC316) IN SUPPRESSION OF GENITAL HERPES, A NOVEL DRUG AGAINST HERPES SIMPLEX VIRUS (HSV) TYPE 1 AND 2

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Genital Herpes is generally being caused by HSV-2, although genital infections with the "labial" herpes virus, HSV-1, have been increasing. Transmission of the herpes virus has become a major health concern since it also promotes transmission of other sexually transmitted diseases, e.g. HIV. Nucleoside analogues are widely used for treatment of genital herpes, but recurrences still occur after cessation of therapy and even under long-term treatment. Furthermore, genital transmission of HSV-2 cannot efficiently be prevented by existing drugs.

PRITELIVIR (AIC316) belongs to a novel class of antiviral compounds with activity against HSV-1 and HSV-2. In contrast to nucleoside analogues targeting the viral DNA polymerase PRITELIVIR (AIC316) prevents the *de novo* synthesis of viral DNA through inhibition of the viral helicase-primase complex. PRITELIVIR (AIC316) therefore does not require activation by the viral thymidine kinase and is protective for uninfected cells.

In vitro and *in vivo*, PRITELIVIR (AIC316) exhibited potent and rapid antiviral activity as well as superior efficacy against both HSV-1 and -2 compared to nucleoside analogues. In single and multiple dose phase I trials PRITELIVIR (AIC316) was safe with favourable pharmacokinetics resulting in a long half-life, indicative of efficacy with once per day dosing. In a recently completed phase II proof-of-concept and dose finding trial in subjects with genital herpes PRITELIVIR (AIC316) met the primary and secondary endpoint of the trial demonstrating excellent activity in reducing viral shedding in a dose dependent way and suppression of clinical symptoms, even with once weekly dosing. A head-to-head comparison trial with Valtrex is underway.

In conclusion, PRITELIVIR (AIC316) represents a highly active and novel treatment option for HSV-1 and -2 infections with very convenient dosing.

P3.447 LEUKOCYTE EXTRACT MODULATES CELLULAR FACTORS INVOLVED IN HIV INFECTION

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Background Despite the therapeutic advances of antiretroviral, problems of drug resistance, latent viral reservoirs, and drug induced toxic effects that compromise effective viral control point to the need for new classes of anti-HIV drugs with different modes of action. An extract from human leukocyte called Dialyzable Leukocyte Extract (DLE) delays AIDS progression. However, the molecular bases supporting this effect are not completely comprehended. We hypothesises that active molecules from DLE modulate cellular factors involved in HIV infection.

Methods Using an *in vitro* infection model on MT4 cell line we demonstrated an inhibitory effect of DLE on HIV replication in treated cells which led us to identify molecules that could mediate this and other effects observed in this preparation.

Results DLE shows a significant inhibitory effect on HIV replication ranged from 80–90% according to the viral challenge. In addition, DLE shows modulation of important endogenous factors involved in HIV immunopathogenesis like TNF α and transcription factors NF κ B and Sp1.

Conclusions DLE effect on cellular factors involved in HIV replication correlates with DLE inhibitory effect on HIV *in vitro* replication. The inhibition of HIV replication observed with DLE treatment could be mediated by TNF and transcriptions factors modulation involved in HIV infection. These finding could support the use of DLE on HIV patients and/or in health individuals to prevent the infection.

P3.448 HPV AND ANOGENITAL WARTS. NEW ORIGINAL TREATMENT WITH ANALYSE AND OVERVIEW OF THE CURRENT CLINICAL SITUATION TODAY

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Background HPV induced anogenital infections are the most common STI-s worldwide. According to WHO published data the incidence of them has dramatically raised in the past decade. Besides the high contagiosity benign epithelial lesions of the genitoanal region, the anogenital warts - HPV-s are responsible for development of most of the cervical neoplasias and other malignancies of the epithelial areas. Prevalence of HPV induced genital warts in the general population is 10% and affects 30% of sexually active young women at least 1x in their life. 65% of sexual partners of patients having condylomas will develop identical lesions in 9 months time. For the last decade no innovation has been proposed for treatment of anogenital warts. Currently available methods are based on surgical, chemical or immunological approaches.

Methods We have examined the efficacy and tolerability of an innovative cytotoxic method in the treatment of genitoanal condylomas in an international open prospective study. The cytodestructive effect is based on an innovative acid redox system (NO₂-).

Results We have histological, clinical and virological evidence of the action of this system. The product is applied topically, it acts only locally, it doesn't destroy the basal membrane and induces mummification of the condyloma tissue. We have demonstrated by histological examination the similar activity of this procedure versus cryotherapy with the advantage of easier application, it is painless and doesn't need local anaesthesia.

Conclusion The treatment has great advantage in recurrent cases of genital warts by avoiding the need of repeated surgical procedures. It is also applicable for pregnant women, it doesn't need specific technical facilities and experience. This method has direct effect on HPV DNA.

P3.449* THE PROMISE OF ESTRIOLE CREAM FOR PREVENTION OF VAGINAL INFECTION IN PREMENOPAUSAL WOMEN

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Background Vaginal epithelium thins during the luteal phase of the menstrual cycle, increasing susceptibility to vaginal infection. Exogenous oestrogen thickens vaginal epithelium in ovariectomized monkeys and protects against SIV transmission. While topical oestrogen has beneficial effects on vaginal health in postmenopausal women, its effects in pre-menopausal women are uncertain. This randomised controlled trial evaluated thickening and maturation effects of estradiol cream on vaginal epithelium and changes in microflora in premenopausal women.

Methods Eligible women made visits in follicular and luteal phases before and after randomization to estradiol cream (1mg estradiol/1ml cream) or matching placebo. Women applied 4mg cream 3 times weekly for approximately 6 weeks before follow-up visits. Vaginal biopsies were collected for analysis of epithelial thickness and cell layers. Swabs were collected for Gram stain (scored by Nugent's criteria) and for aerobic and anaerobic bacterial culture. Pearson's t-test was used to compare means, Fishers exact test to compare proportions, and generalised estimating equations to compare person-weeks of cream use to pre-cream person-weeks.

Results 102 eligible women were enrolled; 83% (85) completed the study. With estradiol, average epithelial thickness increased (27.5 μ m, 95% CI 9.7–45.4), as did transitional cell layers (1.3, 95% CI 0.6–2.0), compared to baseline, with no changes among placebo users. *E. coli* colonisation increased among placebo users compared to baseline (OR 4.9, 95% CI 2.7–8.9), but not among estradiol users (OR 0.98, 95% CI 0.4–2.2). The presence of white blood cells decreased only with estradiol cream relative to baseline (OR 0.25 95% CI 0.11–0.55). No serious adverse events were reported and adverse events did not differ by study group.

Conclusion Vaginally-applied estradiol cream safely increases epithelial thickness in luteal phase, mitigates the *E. coli* colonisation associated with use of other vaginal products, and has favourable immunological effects. Estradiol holds promise to enhance vaginal infection prevention.

P04 - Social and Behavioural Sciences Track

P4.001 GENDER DIFFERENCES IN DETERMINANTS OF HIV/AIDS TRANSMISSION IN ALBANIA: DO THEY EXIST?

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Albania is a low HIV prevalence country with a strong focus on preventing the spread of HIV/AIDS. We used the 2008–09 Albania Demographic Health Survey (DHS) to investigate if there are gender differences in determinants of knowledge about HIV transmission. The Albania DHS is a nationally representative survey of 7584 women and 3013 men. The survey showed that the vast majority of Albanians (93%) have heard of AIDS. Responses to questions assessing correct knowledge about modes of transmission (during pregnancy, delivery, breastfeeding, sexual intercourse, single partner, condom use, mosquito bites, and sharing food) were used to create a score, which was dichotomized by a median split to create a binary 'knowledge' (poor/good) variable. Men were more likely to have poor knowledge (OR = 0.66) about the correct modes of transmission compared to women. To assess if there are any difference in the predictors of this knowledge, separate logistic regression models were constructed for men and women. Higher educational level (OR = 3.37), greater media exposure (OR = 1.15), being resident in Tirana (OR = 1.49), greater wealth (OR = 2.07) having health insurance (OR = 1.18) and having a smaller number of children (OR = 0.87) were associated with good knowledge of transmission modes in women. In males, being resident in Tirana (OR = 1.69), higher educational level (OR = 2.56), greater media exposure

(OR = 1.10), having health insurance (OR = 1.58) and having a smaller number of children (OR = 0.90) were associated with good knowledge of transmission modes. In contrast to women, wealth was not a significant predictor in men. Both regression models controlled for respondent's age, marital status, employment, rural/urban location, religion, and contact with the health care system. In conclusion, with the exception of wealth, there are no significant gender differences in the determinants of knowledge about HIV transmission in Albania.

P4.002 MAJOR BARRIERS TO CONDOM USE AMONG CLIENTS RECEIVING COUNSELLING ON SEXUALLY TRANSMITTED DISEASES (STIS) PREVENTION -THE AIDS SUPPORT ORGANIZATION (TASO) OPERATIONAL RESEARCH FINDINGS, A NATIONAL NGO IN UGANDA

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Background HIV/AIDS is most common among those in long-standing stable relationships, where condom use would play preventive role on transmission of sexually transmitted infections (STIs). A study to assess STIs programme successes and major barriers to condom use among clients receiving routine counselling on STI prevention was conducted.

Methods The study was cross-sectional by design, using retrospective electronic data base review on all sexually active clients who had received at least one counselling session in the last six months by end of 31/02/2012.

Results A total of 3509 clients were sexually active, 37% were males, 1582 (45%) received counselling on STI prevention; only 36% were males. Of those counselled on STIs, 1081(68%) disclosed HIV status to partners with 60% females, 350 (22%) diagnosed and treated of STIs with 11% males and only 512(32%) reported condoms use, with 39% males.

Major barriers to condom use 546 (34%) did not use condoms, of which 297 (54%), partner refused condoms, 148(27%) were faithful to their partners and only 73(13%) reported religion as a barrier. Type of partner reporting barriers to condom use; 404(76%) spouse, 93(17%) steady, 49 (7%) casual.

Conclusions Being a spouse and faithfulness to the partner are major barriers to condom use as key STI prevention measure. People in spouse and steady partners are less likely to use condoms as opposed to those in casual sex partners. Regular counselling is a strong pillar for STI prevention, treatment success and enhancement of partner disclosure.

P4.003 THE IMPACT OF EMOTIONAL DESIGN ON THE RETRIEVAL OF INFORMATION: THE CASE OF THE BRAZILIAN MINISTRY OF HEALTH'S DEPARTMENT OF STDs, AIDS AND VIRAL HEPATITIS HOME PAGE

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Background The home page of the Department of STDs, AIDS and Viral Hepatitis is an important tool for guiding the public on prevention and treatment campaigns, reaching up to 595,097 visits per month. The development of new web technologies highlighted the relevance of the Emotional Design of information. Understanding user-centred information behaviour, the nature of users' needs, the data they expect to find, and identifying the emotional relationship between the user and the information system may impact the search and the retrieval of information positively or negatively.