

higher likelihood of Syphilis was significantly associated with having anal sex (OR = 3.14, 95% CI: 1.25–7.85,  $p = 0.010$ ).

**Conclusion** The prevalence of STIs is high among FSWs in Ba Ria–Vung Tau, Vietnam. Therefore, the existing STIs treatment and intervention programs should be reviewed and if necessary modified or strengthened to reduce the risk of infection. Health education, especially relevant to the risk-related factors observed in the study should be improved and 100% condom use program should be implemented.

**P14.29 ESTABLISHMENT OF HEALTH RESEARCH ETHICS AND CAPACITY BUILDING OF HUMAN RESOURCES AND INFRASTRUCTURE IN NIGERIA**

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**Background** The purpose of this project was to train Health Personnel and Biomedical researchers to design protocols with ethical integrity and to approve the conduct of protocols with scientific merit.

**Methodology** Forty eight (48) biomedical researchers comprising of biomedical researchers and health professionals, legal officers, clergy, community representative were trained on Human subject protection and ethical review of research protocols. This comprises of Basic principles and international guidelines on bioethics, Basics of Research and Clinical Trials, Ethical review of research protocols. Other slides that were presented included: Standard of care and prevention, research protocol, GPP, GCP, Informed consent, HIV treatment, monitoring of research conduct etc. The training modules used for this training was approved by the National Health Research Ethics Committee according to the International Ethical Guidelines for Biomedical Research Involving human subjects. A Pre and Post-test was used to evaluate participants' performance. The HREC office infrastructure was strengthened and they are now registering with NHREC. Stata 12 statistical software was used for data analysis.

**Results** The pre- and post-test evaluation indicated that participants' knowledge improved significantly in conduct of ethically sound research (30.3% vs 65.0%,  $p = 0.001$ ). A 15 membership HREC was constituted by the NHREC and officially handed over to the management of Ambrose Alli University.

**Conclusion** Training of biomedical researchers, increased their knowledge and skill in reviewing research protocols, and conduct research that is ethically regulated and of international standard. This would maintain public confidence that individuals' autonomy would be respected.

## P15 - HIV basic sciences

**P15.01 INNATE MUCOSAL SERPIN INHIBITS LATE STAGES OF HIV LIFE CYCLE AND REDUCES CELLULAR PROLIFERATION**

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**Background** Antiproteases, specifically serpins, are up-regulated within cervicovaginal fluid (CVF), of highly-exposed sero-negative women (HESN), within the Pumwani cohort in Nairobi, Kenya. These proteins are presumed to contribute to the overall susceptibility of a woman to HIV-1. We hypothesise that CVF from HESN women will exhibit stronger HIV neutralisation activity, compared to HIV susceptible women. We believe that overabundant serpins within CVF are capable of neutralising HIV infection and will do so through both direct and indirect anti-HIV mechanisms and are potential novel microbicide candidates.

**Methodology** HIV-1 neutralisation assays were performed with individual CVL samples from HESN and HIV-susceptible women. Real time-PCR was utilised to determine the level of viral DNA as well as viral mRNA following treatment with the serpin of interest. ACH2 cells, determined the effect of the anti-protease on late stages of the viral life cycle and confocal microscopy revealed levels of cellular entry and specific localization of the exogenously added serpin. Lastly, flow cytometry was employed to determine the effect of the protein on cellular proliferation.

**Results** No significant difference was observed in the neutralisation capacity of CVF between HESN and HIV-susceptible women. However, various serpins within the CVF, when isolated and added exogenously to cell cultures, did exhibit significant HIV-neutralising effects. Following numerous mechanistic studies on one such serpin, it was apparent that it not only interferes with proper cellular proliferation but also directly in late stages of the virus lifecycle, (post-transcriptionally) likely during translation or assembly/budding of the virion.

**Conclusion** Cervical vaginal fluid contains a myriad of immunomodulatory proteins that may contribute to a woman's overall susceptibility to HIV infection. The serpin studied within this project demonstrates both broad (cellular proliferation) and narrow (HIV specific) mechanisms of action, making it a potentially effective microbicide candidate.

**Disclosure of interest statement** Nothing to declare.