

Plenary Sessions

Congress Keynote Lecture

Sunday 13 September 2015

6.00pm – 7.00pm

KL VACCINES AGAINST STIS: WHERE HAVE WE GOT TO?Ian Frazer. *Translational Research Institute, Queensland, Australia*

10.1136/sextrans-2015-052270.1

STIs are an increasing global challenge for public health. Infections with HSV and with drug resistant gonococci are endemic, and chlamydial infection contributes extensively to reproductive problems, while immunosuppression from HIV infection has resulted in epidemic spread of XDR Tuberculosis. Antivirals have converted HIV to a chronic disease, and have helped to control HSV. However, the underlying infections are no less frequent. Immunisation is the single most effective public health measure after safe food and water, and has resulted in control of many previously epidemic viral infections, and eradication of smallpox. The universal HPV prophylactic immunisation program in Australia, has over eight years dramatically reduced the incidence of genital warts, and of cervical pre-cancer, amongst immunised and unimmunized young Australians. However, 60 years of effort have failed to produce an effective prophylactic or therapeutic vaccine against herpes viruses, despite genetic stability and multiple immunogenic viral protein antigens. Similarly, 20 years of efforts have produced vaccines with only limited impact on prevention of HIV infection. Recent successes with vaccines effective against systemic bacterial infections offer some prospects of success for bacterial STIs, while novel vaccine technologies offer similar promise for viral STIs, though the value proposition for industry will need to be developed. The health community will need to accept vaccine programs that are not so much for individual protection as strategies to reduce the community burden of disease, and to develop effective education strategies to encourage uptake of new vaccines as they are developed.

Plenary Session PL01

Monday 14 September 2015

9.15am – 10.45am

PL01.1 GOLLOW LECTURE – STI AND SUSTAINABLE DEVELOPMENT IN 2015 AND BEYONDHelen Rees. *Wits Reproductive Health & HIV Institute and Professor of Obstetrics and Gynaecology, University of Witwatersrand, Johannesburg, South Africa, and Honorary Professor, London School of Hygiene and Tropical Medicine, London, UK*

10.1136/sextrans-2015-052270.2

The Millennium Development Goals will expire in 2015 and the world is reshaping its vision towards a new set of Sustainable Development Goals (SDGs). Under the MDGs there were measurable targets focusing on reducing child mortality, improving maternal health and combating HIV/AIDS, malaria and other

diseases. The MDGs provided an opportunity for a continued focus on the prevention and control of STIs, given the considerable burden of morbidity and mortality associated with STIs, and the relationship with HIV, particularly among women and child in low and middle income countries. Even with this focus, the STI field has struggled to achieve significant changes in disease burden, although there have been some notable achievements e.g. eradication of congenital syphilis in Cuba. Unlike the MDGs, the SDG has only one health goal to “Ensure healthy lives and promote wellbeing for all ages”. This loss of specificity presents a challenge to the STI field, and is contrary to notions of targeted interventions for populations most at risk. In addition, new global commitments have steered funding agencies towards topic specific funding pledges. The GAVI refurbishment, the London Summit on Family Planning, and the international response to Ebola and to global health emergencies, means that both bilateral and national health funding are being spread across a wider range of priority issues. So where does this leave STIs and has the world ceased to prioritise this field? Has the status of STIs become more aligned to the definition of Neglected Tropical Diseases i.e. infectious diseases that principally impact the world's poorest people. This talk will explore the status of the STI field and make suggestions about how we can reinvigorate its importance within a changing global context.

PL01.2 STI AND THE OPEN ACCESS REVOLUTION IN PUBLISHINGVirginia Barbour. *Australian Open Access Support Group, Brisbane, Australia, Founding Co-Editor of PLOS Medicine and Chair of the Committee on Publication Ethics*

10.1136/sextrans-2015-052270.3

Sexually transmitted infections (STI) and HIV researchers publish in scholarly journals to disseminate their work. The scholarly publishing industry has transformed beyond recognition in the past 20 years with the advent of the Internet. Not only have methods of dissemination of scholarly work changed, in addition there has been a proliferation of many different aspects of publishing, with innovations in the types of material considered as academic output, changes in peer review, and business models and new opportunities for engagement post publication. At the same time there have been fundamental changes in much of the infrastructure of publishing, including author identity, versioning of articles and linking within and between articles.

We are at a critical point in the opening up of access to the literature and what happens next will determine whether it really does become a global, and not just a developed world, public good. Skirmishes around some of these innovations have distracted from this vital debate. It is crucial for the next phase in scholarly publishing that everyone involved – be it authors, reviewers or editors – engages with this exciting debate to ensure that publishing STI and HIV research serves their needs.

PL01.3 THE GENOMICS OF CHLAMYDIA TRACHOMATIS: A CONSTANT SURPRISENick Thomson. *Pathogen Genetics, Wellcome Trust Sanger Institute, Cambridge and Professor of Bacterial Genomics and Evolution, Department of Pathogen Molecular Biology, London School of Hygiene & Tropical Medicine, London, UK*

10.1136/sextrans-2015-052270.4

Chlamydia trachomatis is an important human pathogen, responsible for diseases ranging from trachoma to sexually transmitted infections that cause substantial morbidity in developed as well as developing countries. In the UK alone Chlamydia is estimated to cost the National Health System up to 100 million pounds every year (www.chlamydia-screening.nhs.uk). OmpA genotyping is the most widely used typing scheme for Chlamydia with the ocular genotypes represented by A to C, urogenital genotypes D to K and for LGV its L1-L3. Studies from all over the world show that the most common urogenital genotypes are E, F and D. This has led to the pervasive view that that during the last few decades, the overall distributions urogenital of *C. trachomatis* genovars throughout the world has been relatively stable. Moreover, there are a large number of epidemiological studies that have used ompA-type as a marker to infer relatedness between isolates and compare disease presentations between genotypes. Looking across them all there is almost an equal number of epidemiological studies that have shown an association between genotype and the hosts: age, gender, number of sexual partners, or clinical symptoms, compared to the number of studies that have not.

However, recently whole genome sequence has challenged much of our evidence, hypothesis, views and preconceptions about many bacterial pathogens, but especially Chlamydia. We now have accurate phylogenies that reveal how the different 'types' of *C. trachomatis* actually relate to each other showing us the typing protocols based on a single region or small number of genomic loci that we have been using should be treated with caution. Why? Because *C. trachomatis* has been shown to be a highly dynamic bacterium exchanging huge portions of its DNA with members of its own species regardless of what body site we think those isolates are restricted to or have a tropism for. This may not only explain why there is such a disparity in studies looking for correlations between ompA-genotype and disease presentation but also shows us that there are in fact still real opportunities to discover features of the basic biology of this fascinating bacterium. But perhaps more than this, through a combination of the ever-increasing burden of disease, recent advances in technology and molecular tools for chlamydial research, it shows us that there has never been a better time to be a Chlamydiologist.

Plenary Session PL02

Monday 14 September 2015

3.45pm – 5.15pm

PL02.1 FALLING BETWEEN THE GAPS: AN OVERVIEW OF ISSUES FOR ABORIGINAL AND TORRES STRAIT ISLANDER WOMEN WHO WANT TO BE SEXUALLY HEALTHY

Kerry Arabena. *Indigenous Health Equity Unit, Centre for Health Equity, Melbourne School of Population and Global Health, University of Melbourne, Melbourne, Australia*

10.1136/sextrans-2015-052270.5

The family life of Aboriginal and Torres Strait Islander people is predominantly structured around complex kinship systems, which locate each person within a clan structure, with clear lines of rights and obligations to others within the family, the clan

and ultimately the linguistic group. Children are highly valued by their families and clans. Until the recent past the education and socialisation of young children took place within the rhythms of family life with an emphasis on observation, imitation and interaction with extended family and their country. These ideals of family life have been radically disrupted for some families, particularly those that have suffered separation of children from their families, the destruction of extended family networks and the decades' worth of living in oppressive circumstances, evidenced by poor health, early deaths, poor housing, poor educational outcomes, high unemployment and high numbers of Aboriginal people in custody. Despite these hardships, the Aboriginal and Torres Strait Islander family remains the primary and preferred site for developing and protecting culture and identity. In this context, sexual and reproductive health should be highly valued by Aboriginal and Torres Strait Islander women and health service settings that set priorities, specify outcomes, design appropriate services, allocate resources and evaluate the effectiveness and efficiency of the services delivered. In the absence of a coordinated national sexual health or Aboriginal and Torres Strait Islander women's health strategy; the most vulnerable and marginalised community in Australian society is falling through the gaps in sexual and reproductive health, rather than closing the gap. This presentation will present issues for First Nations women in Australia and reflect on what we need to do to improve sexual health and wellbeing.

PL02.2 REPRODUCTIVE TRACT INFECTIONS IN WOMEN

Scott McClelland. *Professor of Allergy and Infectious Diseases, School of Medicine, University of Washington, Seattle, USA*

10.1136/sextrans-2015-052270.6

Numerous prospective studies have demonstrated that bacterial vaginosis (BV) is associated with increased risk for acquiring sexually transmitted infections (STIs) including *Neisseria gonorrhoeae*, *Chlamydia trachomatis*, *Trichomonas vaginalis*, HSV-2, HPV, and HIV. Because unprotected sex is a risk factor for both BV and other genital tract infections, it has been difficult to determine whether BV mediates susceptibility to STIs. This presentation will examine the strength of the evidence, emphasising recent clinical trials and epidemiological studies. Additionally, we will explore advances in our understanding of mechanisms through which BV-associated bacteria could influence women's susceptibility to other genital tract infections. Possible approaches for testing the hypothesis that BV increases the risk of STIs will be considered.

PL02.3 SYPHILIS ELIMINATION IN CHINA

Yang Bin. *Dean of Guangdong Provincial Dermatology Hospital/Director of Guangdong Provincial Centers for Skin Diseases and STI Control, and Professor, Jinan University, Guangdong Medical College, and Anhui Medical University, China*

10.1136/sextrans-2015-052270.7

This presentation is mainly about the history, present situation and challenges of syphilis prevention and control in China. With the trend of syphilis prevalence in Guangdong province and the challenges, we discuss the important role and the impact of the control of syphilis in Guangdong province to the whole country,