

## **The 20<sup>th</sup> International Union against Sexually Transmitted Infections- Asia Pacific Conference (IUSTI-AP) was successfully held**

### **October 24<sup>th</sup> first day morning: Opening ceremony and plenary sessions**

2019 October the 24<sup>th</sup>- At 8 am in the morning, The 20th International Union against Sexually Transmitted Infections- Asia Pacific Conference (IUSTI- AP ) kicked off at the Fuyue Hotel in Shanghai, China, hosted by the STD treatment and quality control center in Shanghai, Shanghai Dermatology Hospital, Tongji University Affiliated Hospital of Dermatology (Sponsor) and skin venereal disease Professional Committee of China Preventive Medicine Association.



Opening ceremony was hosted by Professor Zhou Pingyu at the Shanghai Dermatology Hospital, director of sexually transmitted diseases (left 1). This event attended by leaders and experts are: Shanghai city deputy director of the health committee Zhang Huaqiong (right 7 ), professor of Tongji University School of Medicine, Zheng Jialin (left 7 ) , the Chinese Medical Association Dermatology credits will be chairman Professor Lu Qianjin (right 6 ) , the United Nations and the United Nations Department of infectious diseases and global health infectious Disease Research Director Myron S. Cohen (left 6 ) , the IUSTI Chairman Janet D. Wilson (right 5 ) , the IUSTI the AP- Chairman of the academic Committee Christopher Fairley (left 5 ) , Professor Han Mengjie, Director of China Center for STD/AIDS Prevention and Control (right 4 ) , Professor Wang Qianqiu, Director of Sexually Transmitted Diseases Clinical Control Center of the Center for Disease Control and Prevention, Chinese Center for Disease Control and Prevention (left 4 ) , Professor Yang Bin, Dean of the Dermatology Hospital of Southern Medical University ( 3rd right ) Shanghai Medical Association branch chairman Professor of Dermatology venereal branch (left 3 ) , Shanghai Medical Association of Dermatology and Venereology branch members and team leader Professor Shi Weimin (Right 2 ) , Shanghai City Dermatology Hospital, vice president Professor Shi Yuling (left 2 ) and Shanghai City Dermatology hospital deputy party secretary Cao Hui (right- 1 ) .



(Conference hosted by Professor Zhou Pingyu, Director of Shanghai Dermatology Hospital, Department of Sexually Transmitted Diseases)



(Speech by Shanghai City, deputy director of the health committee Zhang huaqiong)  
The opening ceremony, Zhang Huaqiong deputy director of the Shanghai Municipal Health Committee greeted and welcomed experts and scholars from 15 countries and regions. He stressed that IUSTI-AP meeting in Shanghai is held to promote international exchange and collaboration and to improve the international visibility of China and its influence in the field of sexually transmitted infections and thus has far-reaching impact.





(Professor Zheng Jialin, Dean of Tongji University School of Medicine)

Then, dean of Tongji Medical College, Professor Zheng Jialin introduces Tongji University School of Medicine with English humor to the international friends regarding the School's development course. He appraised Shanghai dermatology hospital for its coalescing all the many top international experts to talk and participate in this conference. He expressed sincere joy and pride and encouraged us to enhance exchanges and strengthen cooperation.



(Professor Lu Qianjin, chairman of Chinese Medical Association of Dermatology giving a speech)  
Professor Lu Qianjin, chairman of the Chinese Society of Dermatology and Sexual Diseases Branch, said in his speech that he was very honored to be invited to speak at a high-profile conference full of academic atmosphere and gathering of many international experts. He particularly mentioned the highlight of the conference: "Syphilis Summit", where the world-famous syphilis study leading experts will all be present. Finally, he represents on behalf of the Chinese Medical Association-Dermatology all best wishes to this meeting as a success.



(Professor Myron S. Cohen, Director of the United Nations Infectious Diseases Agency and the United Nations Global Health and Infectious Diseases Research Department)



(The IUSTI Chairman Janet D. Wilson Professor of Speech)

Prof. Myron S. Cohen, Director of the United Nations Infectious Diseases Agency and the United Nations Global Health and Infectious Diseases Research Department, and Professor Janet D. Wilson, Chairman of IUSTI, introduced and reviewed the work and conferences of the International Association for the Prevention of Infectious Disorders, highlighting China's playing a vital role in the world and making the outstanding contributions in combatting against STD. Professor Cohen referred in particular to the Syphilis Summit and its great significance, and proposed October 25 named as "World Syphilis Day".



(Professor Christopher Fairley, Chairman of the IUSTI-AP Academic Committee)

Finally, Professor Christopher Fairley, Chairman of the Academic Committee of the conference, on behalf of the IUSTI-AP Academic Committee and all the participants, expressed their sincere gratitude to Professor Zhou Pingyu and his team for their hard work and organization. After the opening ceremony, Professor Zhou Pingyu, the chairman of the conference, announced the official start of the conference.



The first session of the plenary session was moderated by Professor Christopher Fairley and Bin Yang.



First started by Professor Myron S. Cohen with the theme "The STI and HIV marriage: forever evolving". In his speech, Professor Cohen emphasized the importance of STD prevention and control in controlling HIV transmission and suggested that the treatment of STD must be at the right time, in the right population and in the right place. Professor Cohen also pointed out that the compliance of pre-exposure prophylaxis for HIV is still It is a big challenge.





Professor Kyle Bernstein, director of the Center for the Prevention and Treatment of Epidemiology and Statistics of the CDC in the United States, visually showed an increase in the prevalence of syphilis in the MSM (Men who have sex with men) population in recent years and analyzed the factors that led to its increase.



Subsequently, Professor Zhou Pingyu used neurosyphilis as a starting point to introduce in detail the history of neurosyphilis and the prevalence of the disease in China. She also showed and shared her team's research results and wonderful cases of neurosyphilis for decades. Her talk made everyone have a more comprehensive understanding of the prevalence, diagnosis and research progress of neurosyphilis.



The second session of the plenary sessions was moderated by Professors Myron S. Cohen and Jinhua Xu.



First, Professor Jonathan Ross of the University of Birmingham in the United Kingdom gave a report on the theme of "Gono treatment: the future". Professor Ross reviewed the advantages and disadvantages of current treatments for gonorrhea and proposed new ideas for the future treatment of gonorrhea, including the application of new antibiotics, behavioral interventions, biomedical interventions, and vaccine development.



Dr. Tucker from the University of North Carolina in the United States, with the theme of "The pay-it-forward model to increase STI screening", led a collaborative game at the conference to invite the participation of the audience to promote the understanding of the important role of STI screening and received an excellent response.



Finally, China STD and AIDS Prevention and Control Center Director and Professor Meng-Jie Han, on the "Prevention Progress in China's AIDS epidemic situation", gave an excellent report summarizing the current situation of AIDS in China, introduced policies and measures regarding China's response to AIDS. In particular, he mentioned that the incidence of AIDS in the elderly population continued to increase, highlighted the concept of “enhancing publicity and education, highlighting the key points of testing”. The speech of the conference ended with warm applause.



After the report, the moment when the Conference issued a certificate to speakers who reported at those sessions is particularly exciting. Speakers, with the best wishes from the Conference Chairman, held their speakers' certificate and posed for pictures.



(Q&A Time)

After the discussion and the questioning session, the participants participated enthusiastically,



and they were eager to ask questions, as they were afraid that there might not be enough time for their questions.



(Participants being interactive)

Even after the tea break, the exchange and interaction atmosphere remained strong, attendees meeting old friends, exceptionally happy; New friends made, particularly pleasant.



The conference brought together more than 400 authoritative experts and young scholars at home and abroad to share and discuss the research status and development front of sexually transmitted infections. The academic exchange atmosphere was strong, and it was an academic feast for young scholars attending the conference. The plenary sessions of the 20th International Union against Sexually Transmitted Infections Conference was concluded by the report of the academic stars, which opened the curtain of subsequent parallel sessions!

**Oct the 24<sup>th</sup>, first afternoon: Session Field Report**  
**Conference Room 1 - Symposium 1: " Crowdsourcing to improve STI services. "**



The field was hosted by Professors Joseph D. Tucker, Ligang Yang, and Weiming Tang.



Fan Yang of the University of North Carolina brought a talk on "key crowds and crowdsourcing" to share. She proposed that crowdsourcing could play a leading role in HIV services and suggested developing measures to quantify the participation of key populations in HIV services. Finally, she shared the empirical experience of crowdsourcing in the field of HIV interventions; Professor Stephen W. Pan from Xi'an Jiaotong-Liverpool University introduced how to apply discrete selection experiments to evaluate crowdsourcing and showed that communication is the decisive factor affecting the image of HIV testing. China's MSM population more willing to share promotional information on HIV testing with the MSM-oriented applications, rather than on an ordinary social media or entire social network for sharing; Professor Min Zhao, from mental health center, School of Medicine, Shanghai Jiaotong University, talked about the role of comprehensive drug abuse interventions in preventing STD/AIDS. Due to the high proportion of high-risk sexual behaviors among drug users which not only promotes the spread of STD/AIDS, but also affects the patient's compliance and efficacy, she introduced China's diversified drug rehabilitation model; Professor Brian Hall from the School of Social Sciences of the University of Macau shared with us the crowdsourcing in the classroom. By organizing crowdsourcing competitions among students pursuing global health education programs, he managed to educate students from a variety of backgrounds about global health and empower students to create solutions to global health challenges.

**Conference Room 1 -Symposium 2: " Prevalence and correlation of genital chlamydia and gonococcal infections in MSM and heterosexual sex populations. "**



The session was chaired by the Professors Christopher Fairley and Weimin Shi.



From the University of Alabama at Birmingham, Professor Barbara Van Der Pol introduced the American MSM population's prevalence of chlamydia trachomatis, CT ( 21.8% ) and Neisseria gonorrhoeae NG ( 23.9% ) infection. Professor Barbara Van der Pol found that the trend of CT and NG infection remained constant over the past decade. Infection in the rectum was more common for CT compared with NG, but CT infection is less common in the throat. She suggested that we should also focus on NG throat infections. Professor Chen Xiangsheng at the Skin Hospital, China Medical College, introduced to us the Chinese Strategies to tackle CT / NG infection in high-risk populations. He pointed out that effective control of CT / NG infection can effectively improve reproductive health , and pointed out that although the detection rate of CT / NG in high-risk population in China is still very low, and it still needs attention; Professor Jason Ong of Monash University in Australia believed that MSM should be tested using specimen from oral, rectum and urethra samples to avoid missed diagnosis of CT/NG infection outside the genitalia; Professor Christopher Fairley of Monash University introduced the prevention and control of CT/ NG infection outside the genitals , and pointed out that for high-risk groups, it should be periodic in order to detect and conduct appropriate interventions targeting key points and patterns of infection.



**Conference Room 2 - Symposium 3: " Experimental research in the transformation and application of syphilis prevention and control. "**



The session was hosted by Professors Sheila A. Lukehart and Qianqiu Wang.



Professor Lorenzo Giacani at the University of Washington reported his latest research. He found that syphilis spirochete of genetic variation, recombination could be a driving important evolutionary force in the development of syphilis vaccine. Different syphilis strains should be considered with regards to the characteristics of different epitopes; Southern Medical University Professor Heping Zheng and his research team found that peripheral blood mononuclear cells microRNA-223 can be used to identify early syphilis patients from healthy people. MicroRNA-223, and of microRNA-195, of microRNA-101 joint can further improve the diagnosis of syphilis with sensitivity and specificity. Professor Li-li Liu from Zhongshan Hospital of Xiamen University questioned the detection of non-specific antibody of *Treponema pallidum* as a predictor of syphilis efficacy. The rabbit infection model showed that serum RPR negative could not be used as evidence to exclude neurosyphilis, and that the RPR titer reaction does not completely suggest syphilis treatment outcomes. There is a need to develop a new method to measure the therapeutic effect for syphilis; Professor Sheila A. Lukehart from Washington University reported on behalf of her team that the three kinds of membrane proteins of *Treponema* can be in vitro mixed to prepare a trivalent vaccine. This was tested on New Zealand rabbit animal experiments to evaluate the protective effect of the vaccine. The results showed that the trivalent vaccine can significantly delay the development of hard chancre and inhibit the spread of *treponema pallidum* to distant tissues. This research provides a new theoretical basis for the development of syphilis

vaccine.

**Conference Room 2 - Symposium 4: " The Role of Mathematical Models in the Effectiveness Evaluation of STI Interventions " , hosted by Professor Lei Zhang and Hongzhou Lu.**



Professor Lu Hongzhou from the Public Health Clinical Center affiliated to Fudan University reported “the status of HIV-TB co-infection in China”. The report pointed out that the HIV- positive population had 16 to 27 times more infections of tuberculosis when compared to HIV- negative people, and nearly 30% of HIV- infected people had tuberculosis. Tuberculosis is one of the important causes of death in AIDS patients. Therefore, the early detection of HIV-TB co-infection and early treatment is very important to improve the prognosis of AIDS patients; Professor Lei Zhang of Xi'an Jiaotong University , reported that the three pathogens of HIV , HBV and Treponema pallidum can be transmitted vertically through the placenta. In some countries, pregnant women often have to switch to multiple medical institutions to prevent mother-to-child transmission of these three diseases. Such medical measures are neither convenient nor cost-effective. Professor Lei Zhang 's proposal of a joint prevention program can significantly reduce the vertical transmission probability of these three pathogens, and it is extremely cost-effective and worthy of scale-up and application; Professor Chunhua Zou, from the School of Public Health (Shenzhen) , Sun Yat-sen University, through clinical trials , demonstrated that the HIV/STI detection rate and prevalence rate of Chinese MSM population are related to many factors, such as age, use of dating software, and religious beliefs. His findings are important for guiding the prevention of HIV/STI in MSM populations; a study by Professor William Wong of the University of Hong Kong found that for young people seeking sexual stimuli and not wanting to maintain long-term relationships, social media such as Facebook is used for sexual health. Education can significantly improve the detection rate of STI. This measure has important implications in terms of guiding the prevention and control of STI.

**Conference Room 3 - Symposium 5: " Intestinal Pathogens in the MSM Population."**



The session was chaired by Professors Marcus Chen and Yueping Yin.



Professor Danielle J. Ingle from the Australian National University introduced *Shigella enterica* in the MSM population from the perspective of genetics and epidemiology , sharing clinical diagnosis and treatment experience and received good response; Professor Marcus Chen from the Melbourne Sexual Health Center detailed the classification and sharing of cases of colorectal colitis in men who have sex with men ( MSM ), focusing on their diagnosis and treatment strategies; Professor Jason Ong from the Melbourne Sexual Health Center introduced knowledge about hepatitis A virus in MSM population, and described preventive measures to prevent their spread, providing new horizons for the development of clinicians; Professor John Saunders of the Ministry of Public Health of UK introduced the epidemiological characteristics of *Shigella* in the United Kingdom and emphasized the importance of whole-genome sequencing technology in improving the public health response to sexually transmitted *Shigella* infection, and provided new ideas for researchers in this field.

**Conference Room 3 - Symposium 6: Ways to increase HIV detection rates.**





The session was hosted by Professors Han Mengjie and Catherine C. O'Connor.



Professor Catherine C. O'Connor, the President of the Australian Sexual Health Medicine Branch, introduced strategies to improve HIV testing, emphasizing the importance of HIV self-test, and received an enthusiastic applause from the audience; Professor Ping Zhong, at Shanghai Municipal Center for Disease Control and Prevention proposed to determine the distance to construct gene clusters / networks by drug use site, and by molecular communication networks of detection and response it will enable us to get one step closer to the end of HIV spread ; Tuofu Zhu, professor at the University of Washington sexually transmitted diseases and AIDS Research Center, expressed that among chronic HIV infections, the sooner patients started antiviral therapy, the better in terms of the control of the HIV-1 DNA. The continued suppression of viral load after simplified treatment is associated with low HIV-1 DNA levels; Dr. Yan Jiang from China Center for Disease Control and Prevention reported on the current status of HIV testing in China, as well as the models and applications of HIV laboratory networks and detection technology innovations in China.



After the talks were the discussion part, where participants were actively involved in a warm atmosphere of exchange.

### Oct the 25<sup>th</sup>: Syphilis Forum and parallel sessions report

**Conference Room 1 - Symposium 7: " Chlamydia, Mycoplasma, Neisseria gonorrhoeae infection and resistance. "**



The session was chaired by Professors Xiaohong Su and Ryoichi Hamasuna.



Professor Stijn van der Veen of Zhejiang University shared with us the progress of China's increasing gonococcal resistance rate and new treatment methods. It was proposed that there is no vaccine for preventing gonococcal infection. The main difficulty in the development of vaccine is that *Neisseria gonorrhoeae* has no conservative antigen. Professor Yang Ligang of

the Southern Medical University Dermatology Hospital explained the current status of genital chlamydia diagnosis and drug resistance in China. The Chinese genital chlamydia is highly resistant to macrolides, and the threat of multi-drug resistance has emerged. Therefore, it is necessary to establish a genital chlamydia resistance surveillance system and develop treatment guidelines in China; Professor Su Xiaohong from the Dermatology Hospital of Chinese Academy of Medical Sciences shared with us the prevalence and drug resistance of genital chlamydia in men with urethritis in Nanjing. The prevalence of genital chlamydia in patients with gonococcal urethritis is 15-25%; Professor John Saunders of the United Kingdom introduced the treatment and drug resistance of Chlamydia trachomatis. Poor patient compliance, reinfection from new or untreated partners, effects of host pharmacokinetics, shortened duration of drug action due to inadequate course of treatment, and antibiotic resistance may lead to failure of chlamydia treatment. Thus, he proposed that prevention use of doxycycline can effectively prevent STI.

**Conference 1 - Symposium 8: "STI 's Clinical and Public Health Medicine Progress. "**



The session was chaired by Professors Janet Wilson and Xiuli Wang.



Professor Angelika Stary of Austria reported on the use of nucleic acid amplification assays (NAATs) for the diagnosis of sexually transmitted diseases. She suggested that only specimens shipped in the correct manner would yield good results, and threshold results could lead to misdiagnosis or missed diagnosis. For different sexually transmitted diseases, the most suitable NAATs should be selected. For the diagnosis of gonorrhea, gonococcal culture is required in addition to NAAT; Professor Janet Wilson of the United Kingdom spoke on the pathogenesis, treatment and management of uterine cavity inflammation and treatment of recurrent trichomoniasis and candida infection. Host response plays an important role in the clinical manifestations and occurrence of recurrent trichomonas and candida infections. Long-term treatment is better for the treatment of recurrent trichomoniasis and candida infections, but occasional high-resistance is still



challenging. She also recommended experiential treatment for people with high risk of PID; Professor Xiaian Lu from Huashan Hospital affiliated to Fudan University gave us a detailed explanation of the diagnosis, prevention and treatment management of female HPV infection. Professor Guang Wen Yin gave a report on the diagnosis and differential diagnosis of syphilis in local STI training.

### Conference Room 1 - Symposium 9: "Basic Science and Laboratory Research. "



The session was chaired by Professors Barbara Van Der Pol and Ma Cuiling .



Steven J. Norris Professor first introduced a long-term in vitro culture system of *Treponema pallidum*-- the system can cultivate *Treponema pallidum* in vitro for 600 or more days while maintaining its structural integrity, viability and infection resistance; Professor Yi -Wei Tang shared a method for the detection and classification of human papillomavirus isothermal amplification in formalin-fixed paraffin-embedded tissues ( AmpFire ). AmpFire can directly detect HPV from samples for HPV screening and typing detection. Professor Wenhui Lun from Beijing Ditan Hospital of Capital Medical University introduced NF-L and pNF- H in cerebrospinal fluid and blood of patients with neurosyphilis. The levels of NF-L and pNF- H in cerebrospinal fluid of patients with symptomatic neurosyphilis were significantly higher than those of patients with asymptomatic neurosyphilis and patients with latent syphilis; Professor Ryoichi Hamasuna introduced a culture-based method

for the analysis of urine samples from patients with urinary tract infection in Japanese men. fluorine quinolone-resistant genital chlamydia and tested its quinolone antibiotics sensitive and quinolone resistance genes ParC and GyrA mutation circumstances; Prof. Barbara Van Der Pol at the University of Alabama at Birmingham showed Chlamydia/ Neisseria gonorrhoeae rapid molecular detection and GeneXpert platform of applications. It is highly accurate NAAT that can be used for Chlamydia/Neisseria gonorrhoeae detection and results can be available in 30 minutes. Xpert system can yield results in 1.5 to 2 hours; Professor Xuelian Wang from China Medical University introduced cervical cancer vaccine in inducing an immune response and reversal effect of systemic immunosuppression in the tumor microenvironment. Cervical cancer therapeutic vaccine causes IFN- $\gamma$  to produce CD4 and CD8 T cells, which has strong anti-tumor immunity to cervical cancer. Prof. Jun Wang introduced the role of asymptomatic infection in the pathogenesis of chlamydia. She pointed out that traditional single-dose chlamydia infection and repeated low-dose chlamydia infections (RLDIs) trigger different immune responses and varying degrees of tissue damage.

#### Conference Room 1 - Symposium 10: " Epidemiology & Behavior & Social Sciences. "



The session was hosted by Professor Anne Robertson.



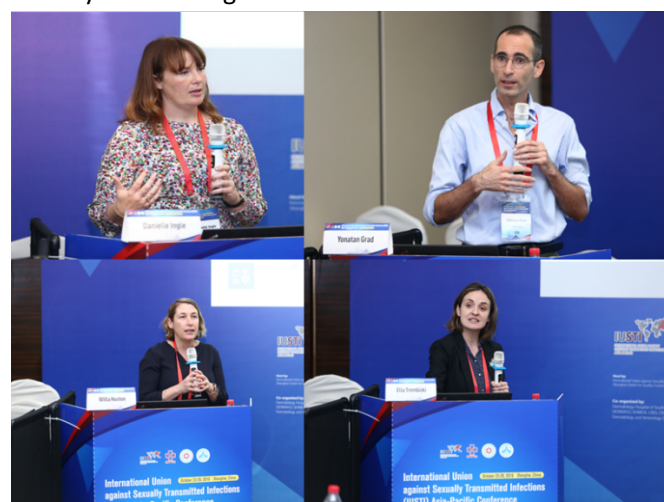
Prof. Anne Robertson introduced the development of patient information resources in Otago, New Zealand. Professor Yueping Yin introduced the Chinese gonococcal drug resistance monitoring project (GRSP). China GRSP at National STD management is web-based, covering 25 provinces, responsible for collecting data from clinical routine drug detection center; Shaochun Chen, Research Associate shared molecular epidemiology and sources of China Neisseria gonorrhoeae and the characteristics of GRSP cephalosporin-resistant strains; Dr. Kumi

Smith introduced 2006-2016 trend of Chlamydia trachomatis in Guangdong Province in time and space; Professor Yinzhong Shen introduced the 2013-2018 annual syphilis infection rate trend in Shanghai among HIV hospitalized patients. They found that 10.3% of HIV- infected hospitalized patients had syphilis, of which 93.8% were male and 6.2% were female; Xuqi Ren introduced a questionnaire survey on sexual disease-related medical seeking behaviors of MSM with HIV (+/-). It was found that most MSM did not choose the right department, which may lead to missed diagnosis and misdiagnosis of STI in MSM population. Yanping Jiang shared a new bipolar fungal infection associated with AIDS. A variety of new biphasic fungal pathogens are currently occurring worldwide, mainly among HIV patients; Dr. Tewodros Hailemariam described “first individual, then together” – the views of different stakeholders in Ethiopia on HIV testing for couples. In Ethiopia, there are policies that emphasize the addition of couples to HIV testing and counseling. However, most couples still choose to go through the initial testing alone and then go check together.

**Conference Room 2 - Symposium 11: " The Transformation of Genomics in Controlling Sexually Transmitted Infections. "**



The session was chaired by Danielle Ingle and Xin Gu.



Researcher Danielle Ingle from the University of Melbourne discussed how to enhance existing STI detection and control STI infection through improving currently available high-throughput sequencing ; Professor Yonatan Grad of Harvard University described how to use genomics to identify the genotypes of gonococcal pathogens, in order to better diagnose gonorrhea infection and analyze its drug resistance; Professor Willa Huston from



the Sydney University of Technology, used genomics to perform genomic analysis of Chlamydia trachomatis and use these results to aid the diagnosis and treatment of Chlamydia trachomatis; Ella Trembizki from the University of Queensland explained how to use molecular testing tools to quickly detect Neisseria gonorrhoeae, identify drug resistance and provide individualized treatment to patients.

## Conference Room 2 - Symposium 12: " Clinical Science"



The session was chaired by Chavalit Mangkalaviraj and Yanping Zhao.



Dr. Yanping Zhao from Huada Gene told that in Guangzhou China, decreased sensitivity to broad-spectrum cephalosporins strain of Neisseria gonorrhoeae is becoming more common and its resulting potential risk; Dr. Lei Yao from Jilin University shared a rare case of marneffeii-basket bacterial infections; Dr. Ruiqun Qi at China Medical University explained to us their experience using the infrared heat-induced human anti- HPV immune treatment of viral warts; Dr. Xiaoke Liu from Tongji University reported on the differential diagnosis of genital lesions based on morphology; Dr. Sheng Lu from Tongji University shared a retrospective analysis of paralytic clinical features of youth infected with syphilis; Professor Yuye Li from Kunming Medical University explained how to diagnose AIDS through skin mucosal damage in early stages; Professor Jun Li from Peking Union Medical College Hospital showed that how to use the probe to capture treponema conjugated cfDNA combined with high-throughput sequencing to detect and trace treponema infection in sero-fast patients; Professor Arlene C . Sena at the University of North Carolina explained the necessity to establish a network of clinical research and syphilis use.

### Conference Room 2 - Symposium 13: "Science Paper Writing Training Camp. "



The session was chaired by Mei Shi and Kumi Smith.



The theme of this session attracted a large number of scholars to come to learn, and the academic atmosphere was strong. Professor Christopher Fairley from Monash University talked about the editors' thoughts on the manuscripts and some tips and suggestions for the researchers when submitting their manuscripts; Professor Jonathan Ross from the University of Birmingham in the UK explained in detail the composition of the papers, the precautions for the writing manuscripts, and gave valuable advice to all; Professor Yonatan Grad from Harvard University shared the reviewers' expectations and evaluation criteria for manuscripts and how we should respond to the reviewers' comments.

### Conference Room 2 - Symposium 14: "Young Scholars Forum".



The session was chaired by Professors Beng Tin Goh and Li Yuye.



This session brought together a number of young scholars at home and abroad. They were grateful to give their wonderful speeches, the content of which included the route of transmission of syphilis, pathogenesis, diagnosis, vaccine design, research reports, and STI social psychology research, in addition to epidemiological studies of STI and HIV in MSM populations. The content of this session was rich and exciting. After the discussion and the Q&A session, the participants enthusiastically asked questions and the exchange atmosphere was warm.

**Conference Room 3 - " Syphilis Summit Forum "**



"Syphilis Forum" is the biggest highlight of the conference. The forum invited internationally recognized authorities in syphilis research: Professors Myron S. Cohen, Justin D. Radolf, Sheila Lukehart, and Steven J. Norris and his team, as well as scholars from our country Professors Zhou Pingyu, Wangqian Qiu, Yang Tian-ci, Wu Yimou and Zheng Heping, to discuss together the global epidemiology of neurosyphilis and congenital syphilis, frontiers in syphilis research, status of development of vaccines and the establishment of a global partnership for syphilis research platform. The forum attracted many syphilis researchers at home and abroad and represented the highest level of syphilis research.



The syphilis summit forum started with an introduction by Professor Zhou Pingyu on the purpose of the syphilis summit forum and welcome the guests from all over the world. Professor Myron S. Cohen gave the opening remarks. He highly praised the syphilis summit as it provided a platform to researchers around the world for the exchange, noting that it was a major event in the history of syphilis study, and proposed that October 25<sup>th</sup> be named "International Syphilis Day". The syphilis summit forum kicked off with warm applause from the participants.

#### **Theme 1: New developments in the field of syphilis, chaired by Prof. Myron S. Cohen and Yang Bin.**



Professor Steven J. Norris from the McGovern Medical School in the United States introduced the evolution of *Treponema pallidum* and the interaction between surface structure and host, and shared its first successful in vitro culture system of *Treponema pallidum*; Professor Sheila Lukehart from the University of Washington introduced the infection of human syphilis, including the pathogenic process, along with the persistence of syphilis infection and immune escape, which broadened the horizons for basic science researchers of *Treponema pallidum*; Professor Justin D. Radolf, director of the Medical Research at the Department of the University of Connecticut, reviewed the history of syphilis development and proposed new thoughts and blueprint for the development of syphilis vaccines. He emphasized that understanding the molecular structure of the outer membrane of syphilis spiral is the key to vaccine development!



**Theme 2: Clinical and molecular epidemiology of syphilis, chaired by Professors Chen Xiangsheng and Lun Wenhui.**



Professor Lei Zhang from the Joint Research Center for Infectious Diseases in Australia utilized public health platform data for analysis and found that China's recent rapid decline in the incidence of congenital syphilis, while the proportion of latent syphilis diagnosis increased; Professor Qian-Qiu Wang, the Director of the Chinese Center for Disease Control and Prevention, explained the status quo, challenges and countermeasures of syphilis in China from an epidemiology perspective; he suggested that there is an increasing trend of neurosyphilis in China. Professor Arlene C. Sena from the Institute of Global Health and Infectious Diseases of the University of North Carolina introduced different treatments of syphilis and the complex reaction post-treatment. She stressed the need for further research.

**Theme 3: “ Basic Research on Syphilis ”, chaired by Professors Steven J. Norris and Liu Lili .**



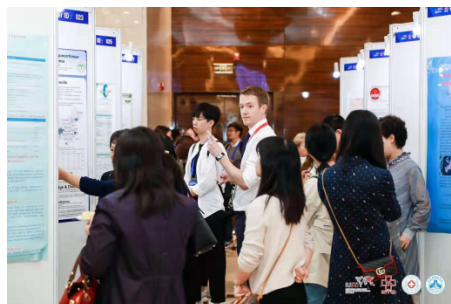
Professor Juan C. Salazar, the director of Pediatrics Health Center at the University of Connecticut noted the important role of IFN- $\gamma$  in mediating human macrophage polarization and M1 phenotype in syphilis, and introduced the bottleneck of *Treponema pallidum* in vivo clearance; Professor Lorenzo Giacani from the U.S. Institute of infectious diseases at the University of Washington introduced Tp0126 structure and function, and assessed its possibility as candidate vaccines; Professor Zheng Heping from the Southern Medical University Dermatology hospital introduced new ideas using MicRNA for the diagnosis of syphilis infection.



The development of *Treponema pallidum* vaccine is always a hot topic of discussion. Participants began to talk about the development of spiral outer membrane protein vaccine from DNA vaccine, and the atmosphere was very enthusiastic. Finally, Professors Wangqian Qiu and Zhou Pingyu chaired the discussion session on "China Syphilis Research Planning and Potential Cooperation" seminar. Professor Zhou Pingyu summarized an overview of China's research on syphilis and its outlook. During the discussion, attendees had a heated discussion around China Syphilis Research and a new direction for cooperation with international syphilis research, and finally reached a consensus on international cooperation in syphilis research.

#### **Closing ceremony**

October the 25<sup>th</sup> 2019, at 18:00, The 20<sup>th</sup> International Alliance against sexually transmitted infections Asia-Pacific Conference (IUSTI-AP) successfully concluded. The conference includes a plenary meeting, 19 thematic sessions, and 94 field academic report. A total of 478 scholars participated in this conference, including 317 academics registered, 64 special invited speakers, and attendees from 15 countries and regions. At the conference venue, the academic atmosphere is strong, discussions intense and covering topics including syphilis, mycoplasma, chlamydia, gonorrhea, HIV and MSM populations, enteric pathogens, STD epidemiology, diagnosis, drug resistance, prevention and basic research and other various fields' latest progress.



The conference received a total summary 143 abstracts, of which 40 were selected for oral

presentation. The conference commissioned a total of 62 posters. The academic committee members asked questions and based on the answers to give scores. After this rating, a final selection of 9 posters were awarded the Best Poster Award. The process had wonderful interaction and heated discussion.



At the closing ceremony, Professor Zhou Pingyu , the chairman of the conference, summarized the contents of the conference and expressed gratitude to the scholars who attended the conference. Professor Janet D. Wilson, the president of IUSTI congratulated the successful closing of the conference; Professor Jie Zheng gave the recognition and praise to Professor Zhou Pingyu's work; Professor Chen Xiang Sheng appraised conference organizers Professor Zhouping Yu and her team for their hard work and called for all the guests to stand up and salute the conference organizers and applaud the staff. So far, the 20th International Alliance against sexually transmitted infections Asia-Pacific Conference (IUSTI-AP ) came to a closure with the applause of all participants.