

# **CHLAMYDIAL INFECTIONS**

## **Program of the Julius Schachter Fifteenth International Symposium on Human Chlamydial Infections**



**San Antonio, Texas, USA  
June 19 - 24, 2022**

# 15<sup>th</sup> JS-ISHCI

Sunday - Friday, June 19 - 24, 2022

## Sunday, June 19, 2022

3:00 - 6:00pm Registration and Poster Setup  
6:00pm Dinner and Welcome

## Monday, June 20, 2022

7:30 - 9:00am Breakfast and late Registration  
9:00am **Opening Remarks/Introduction : Guangming Zhong**

### STI Session 1

Session Chairs: Edward W Hook, III & Laura Bachmann

#### Keynote Lecture

9:15am WHY CHLAMYDIA TRACHOMATIS AND MYCOPLASMA  
GENITALIUM INFECTIONS SHOULD NOT BE MANAGED THE SAME  
Jørgen Skov Jensen

10:00am MORE SYMPTOMATIC INFECTIONS AND HIGHER BACTERIAL  
LOAD IN CHLAMYDIA TRACHOMATIS AND NEISSERIA  
GONORRHOEAE CO-INFECTIONS COMPARED TO NEISSERIA  
GONORRHOEAE SINGLE INFECTIONS  
Anne Dirks

10:15am MYCOPLASMA GENITALIUM BACTERIAL LOAD IN COINFECTIONS  
WITH CHLAMYDIA TRACHOMATIS  
Anne Dirks

#### BREAK

10:30am  
10:50am MYCOPLASMA GENITALIUM INFECTION AND ASSOCIATED  
MACROLIDE RESISTANCE IN PREGNANT WOMEN SEEN AT AN  
URBAN U.S. MEDICAL CENTER  
William Geisler

11:05am CHLAMYDIALES, MYCOPLASMA GENITALIUM AND HUMAN  
HERPESVIRUSES IN RECURRENT MISCARRIAGE  
Mirja Puolakkainen

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| 11:20am   | THE SYNERGISTIC EFFECT OF C. TRACHOMATIS AND HPV ON ADVERSE PREGNANCY OUTCOMES IN RURAL INDIAN WOMEN<br>Pierre PM Thomas  |
| 11:35am   | DOXYCYCLINE VERSUS AZITHROMYCIN FOR THE TREATMENT OF ANORECTAL CHLAMYDIA TRACHOMATIS INFECTION CONCURRENT WITH VAGINAL INFECTION: A RANDOMIZED, OPEN-LABEL, MULTICENTRE TRIAL (CHLAZIDOXY STUDY)<br>Bertille de Barbeyrac                             |
| 12:00 - 1:15pm  | <b>LUNCH</b>  |
| <b>STI Session 2</b><br>Session Chairs: Mirja Puolakkainen & Jørgen Skov Jensen |   |
| 1:15pm  | CORRELATES OF OROPHARYNGEAL CHLAMYDIAL AND GONOCOCCAL INFECTIONS FROM A MULTICENTER COMPARISON OF NUCLEIC ACID AMPLIFICATION TESTS FOR THE DIAGNOSIS OF OROPHARYNGEAL CHLAMYDIA TRACHOMATIS AND NEISSERIA GONORRHOEAE INFECTION<br>Edward W Hook, III |
| 1:30pm  | ENSURING SAFE AND QUALITY PATIENT CARE IN THE ERA OF ONLINE TESTING AND TREATMENT PROVIDERS FOR SEXUALLY TRANSMITTED INFECTIONS IN GREAT BRITAIN<br>Emma Harding-Esch   |
| 1:45pm  | CHLAMYDIA TRACHOMATIS INFECTION AND DETECTION OF CHLAMYDIA ANTIBODIES IN WOMEN REPORTING SEXUAL EXPOSURE TO A CHLAMYDIA-INFECTED PARTNER<br>Kanupriya Gupta   |
| 2:00pm  | WHOLE GENOME SEQUENCE ANALYSIS OF RECTAL CHLAMYDIA CASES IDENTIFIES POTENTIAL TREATMENT FAILURE: CASES FROM A RECTAL CHLAMYDIA TREATMENT TRIAL<br>Samuel Phillip  |
| 2:15pm  | PREVALENCE OF CHLAMYDIA TRACHOMATIS SEROVAR G STRAINS IN MSM RECTAL INFECTIONS ARE TEMPORALLY AND GLOBALLY CONSISTENT AND SHARE A PHYLOGENETIC LINEAGE<br>Robert Suchland   |
| 2:30pm  | <b>BREAK</b>  |

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## Trachoma Session

Session Chairs: Charles Knirsch & Scott Nash

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### Keynote Lecture

2:50pm

TRACHOMA: THE LAST DECADE?

Anthony Solomon

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3:35pm

TWO DECADES OF PROGRESS AND EVOLUTION OF TRACHOMA ELIMINATION SINCE JULIUS SCHACHTER'S 'AZITHROMYCIN IN CONTROL OF TRACHOMA'

Paul Emerson

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3:50pm

A SURVEY OF TRACHOMATOUS SCARRING IN A FORMERLY TRACHOMA HYPERENDEMIC DISTRICT IN TANZANIA

Meraf A Wolle

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4:05pm

**BREAK**

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4:25pm

FORECASTING THE ELIMINATION OF ACTIVE TRACHOMA: WHEN MIGHT COUNTRIES STOP MASS DRUG ADMINISTRATION?

Kristen K Renneker

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4:40pm

REGIONAL PREVALENCE OF OCULAR CHLAMYDIA TRACHOMATIS INFECTION IN AMHARA, ETHIOPIA, 2014-2021

Scott Nash

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4:55pm

SEROREVERSION IN A LONGITUDINAL STUDY OF ANTIBODIES TO C. TRACHOMATIS ANTIGEN PGP3 IN CHILDREN IN A FORMERLY TRACHOMA ENDEMIC DISTRICT

Sheila K West

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5:10pm

TOWARDS THE ELIMINATION OF BLINDING TRACHOMA IN AUSTRALIA

Hugh R Taylor

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5:30- 6:30pm

**POSTER 1 - Cellular Biology, Diagnostics, and Immunity**

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6:30pm

**DINNER**

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**Tuesday, June 21, 2022**

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7:30 - 9:00am Breakfast

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**Cell Biology Session 1**

Session Chairs: Ted Hackstadt & Fabienne Paumet

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**Keynote Lecture**

9:00am CHLAMYDIA REPROGRAMS HOST PROTEINS TO TRANSIENTLY  
DISMANTLE EPITHELIAL CELL JUNCTIONS  
Raphael Valdivia

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**BREAK**

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10:05am MUTATIONS IN THE HEXOSPHOSPHATE TRANSPORTER UHPC  
REVEALS A GLUCOSE-6-PHOSPHATE SENSING FUNCTION ACTIVE  
IN CHLAMYDIA TRACHOMATIS  
Catherine O'Connell

10:20am CELL FREE PROTEIN SYNTHESIS ENABLES RAPID  
CHARACTERIZATION OF CHLAMYDIAL TYPE THREE SECRETION  
SYSTEM COMPONENTS  
Steven Hoang-Phou

10:35am CHLAMYDIA TRACHOMATIS INCLUSION MEMBRANE PROTEIN  
INCE MULTI-TASKS TO PROMOTE CHLAMYDIA INTRACELLULAR  
SURVIVAL  
Joanne Engel

10:50am CHLAMYDIA TRACHOMATIS SUBVERTS ALPHA-ACTININ-4  
(ACTN4) TO STABILIZE ACTIN SCAFFOLDS DURING INFECTION  
Adam Haines

11:05am TWO EFFECTORS OF C. PNEUMONIAE: MEMBRANE BINDING  
AND SHAPING  
Katja Moelleken

12:00 - 1:15pm **LUNCH**

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**Cell Biology Session 2**

Session Chairs: Joanne Engel & Thomas Hiltke

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1:15pm GTPASE CROSSTALK COORDINATES THE CYTOSKELETAL  
REORGANIZATION DURING CHLAMYDIA INFECTION  
Fabienne Paumet

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| 1:30pm  | CHLAMYDIA TRACHOMATIS PROTEINS LOCALIZE TO HOST MITOCHONDRIA<br>Zoe Dimond  |
| 1:45pm  | HOMOTYPIC FUSION ALTERS THE HOST CELL RESPONSE TO INFECTION<br>Jordan Wesolowski  |
| 2:00pm  | <b>BREAK</b>  |
| <b>Genomics and Molecular Biology</b><br>Session Chairs: Ian Clarke & Li Shen |   |
| <b>Keynote Lecture</b>  |   |
| 2:20pm  | COMING OF AGE: ADVANCES IN GENETIC MANIPULATION OF CHLAMYDIA<br>Kevin Hybiske   |
| 3:05pm  | <b>BREAK</b>  |
| 3:25pm  | CONFORMATIONAL CHANGE DURING THE INTERACTION BETWEEN GRGA AND SIGMA66 OF THE RNA POLYMERASE IS INHIBITED BY THE R51G SUBSTITUTION IN GRGA AND THE SELECTIVE ANTICHLAMYDIAL SF3<br>Huizhou Fan |
| 3:40pm  | USE OF PACKAGING EXTRACTS TO IDENTIFY THE CHLAMYDIAPHAGE ORIGIN OF REPLICATION<br>Ian Clarke  |
| 3:55pm  | CHLAMYDIA CIRCUMVENTS THERMAL STRESS VIA TAIL SPECIFIC PROTEASE<br>Arkaprabha Banerjee  |
| 4:10pm  | TARGETED GENE DELETION IN C. MURIDARUM AND APPLICATION TO THE ANIMAL INFECTION MODEL<br>Ken Fields  |
| 4:25pm  | FUNCTIONAL CHARACTERIZATION OF THE NOVEL FEATURES OF $\sigma$ 66-RECOGNIZED PROMOTERS<br>Li Shen  |
| 5:30 - 6:30pm   | <b>POSTER 2 - STI, Trachoma, Genomics / Molecular Biology and Vaccine &amp; Animal Models</b>   |
| 6:30pm  | <b>DINNER</b>   |

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**Wednesday, June 22, 2022**

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7:30 - 9:00am Breakfast

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**Diagnostics**

Session Chairs: Servaas -Morre & Angelika Stary

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**Keynote Lecture**

9:00am THE CURRENT LANDSCAPE OF CHLAMYDIA DIAGNOSTICS

Barbara Van Der Pol

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9:45am IMPACT OF A POINT-OF-CARE (POC) TEST FOR CHLAMYDIA TRACHOMATIS (CT), NEISSERIA GONORRHOEAE (NG), AND TRICHOMONAS VAGINALIS (TV) ON PATIENT CLINICAL CARE IN A PRIMARY CARE CLINIC  
Charlotte Gaydos

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10:00am ALINITY M STI ASSAY FOR THE ROUTINE DIAGNOSIS OF CHLAMYDIA TRACHOMATIS AND CONCOMITANT SEXUALLY TRANSMITTED INFECTIONS: EXPERIENCE OF DAILY PRACTICE IN VIENNA DURING 2021  
Angelika Stary

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10:15am **BREAK**

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10:35am RESULTS OF 12 YEARS OF THE DUTCH CHLAMYDIA TRACHOMATIS REFERENCE LABORATORY IN THE NETHERLANDS 2010-2021: IDENTIFICATION OF C. TRACHOMATIS PLASMID FREE CLINICAL ISOLATES AND OTHER CHLAMYDIA VARIANTS  
Servaas Morre

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10:50am NEW VARIANTS OF CHLAMYDIA TRACHOMATIS (NVCT) IN 2019 AFFECTING DETECTION BY APTIMA COMBO 2: FROM EMERGENCE TO DIAGNOSTIC SOLUTIONS  
Ashley Nenninger

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11:05am PERCEPTIONS AND ADOPTION OF EVIDENCE-BASED PRENATAL CHLAMYDIA SCREENING GUIDELINES  
Stacey Griner

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11:20am META-ANALYSIS OF CT AND NG ASSAY SENSITIVITY FOR FEMALE VAGINAL SWABS VERSUS URINE  
Barbara Van Der Pol

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12:00 - 1:15pm **LUNCH**

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12:00pm FREE AFTERNOON

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6:30pm **DINNER**

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**Thursday, June 23, 2022**

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7:30 - 9:00am Breakfast

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**Immunology Session 1**

Session Chairs: William Geisler & Lin-xi Li

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**Keynote Lecture**

9:00am CHLAMYDIA TRACHOMATIS IMMUNOLOGY AND VACCINE DEVELOPMENT  
Robert Brunham

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9:45am DIFFERENTIAL IMMUNE RESPONSE IN HUMAN DENDRITIC CELLS UPON IMMUNIZATION WITH LIVE AND UV-INACTIVATED CHLAMYDIA TRACHOMATIS  
Katja Knapp

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10:00am MICRORNAs DIFFERENTIALLY MODULATE MACROPHAGE IMMUNITY FOLLOWING CHLAMYDIA TRACHOMATIS INFECTION AND VACCINE STIMULATION  
Francis Eko

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10:15am **BREAK**

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10:35am THE OVI-CHIP: BIOFABRICATION METHODS TO CREATE 3D IN VITRO OVIDUCT MODEL TO STUDY CHLAMYDIA TRACHOMATIS INFECTION  
Paul A Wieringa

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| 10:50am   | THE ROLE OF 24 SNPs IN HOST CANDIDATE GENES IN THE DEVELOPMENT OF REPRODUCTIVE TRACT COMPLICATIONS OF CHLAMYDIA TRACHOMATIS INFECTION IN WOMEN<br>Zoie Alexiou |
| 11:05am   | IMMUNOLOGICAL MARKERS OF CHLAMYDIA TRACHOMATIS INFECTION IN EPITHELIAL OVARIAN CANCER: A RETROSPECTIVE COHORT STUDY<br>Mirja Puolakkainen                      |
| 11:20am   | GAP JUNCTION-MEDIATED ANTIGEN TRANSPORT CONTRIBUTES TO MHC-I UNRESTRICTED AND BYSTANDER MEMORY CD8 T CELL ACTIVATION AND IMMUNOPATHOLOGY<br>Srikanth Manam     |
| 12:00 - 1:15pm  | <b>LUNCH</b>   |
| <b>Immunology Session 2</b><br>Session Chairs: Stephen McSorley & Bernard Arulanandam |  |
| 1:15pm  | IL-27 REGULATES ANTI-CHLAMYDIAL IMMUNITY IN THE FEMALE GENITAL TRACT<br>Halah Winner   |
| 1:30pm  | PATHOGENIC SIGNALING PATHWAYS INDUCED BY CHLAMYDIA ARE TARGETS FOR THERAPEUTIC REVERSAL OF INFECTION COMPLICATIONS<br>Joseph Igietseme                         |
| 1:45pm  | NATURAL CLEARANCE OF CHLAMYDIA TRACHOMATIS INFECTION IS ASSOCIATED WITH A GLOBAL DEPLETION IN LEVELS OF CERVICOVAGINAL AMINO ACIDS<br>Stephen J Jordan         |
| 2:00pm  | THE MODULAR IMMUNE IN VITRO CONSTRUCT (MIMIC) SYSTEM TO MEASURE C. TRACHOMATIS CELLULAR IMMUNE RESPONSES AND ASSESS VACCINE EFFICACY IN HUMAN<br>Hong Yu       |
| 2:15pm  | <b>BREAK</b>   |

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| 2:35pm  | IDENTIFICATION OF CPAF AS AN IMMUNODOMINANT ANTIGEN<br>IN HUMANS AND MICE<br>Toni Darville                                      |
| 2:50pm  | IMMUNE SCREENING WITH PREDICTED CHLAMYDIA<br>TRACHOMATIS MOMP B- AND T- CELL EPITOPES<br>Patrick D'haeseleer                    |
| 3:05pm  | BHLHE40 PLAYS A PROTECTIVE ROLE DURING INTRAVAGINAL<br>CHLAMYDIA MURIDARUM INFECTION IN MICE<br>Miguel AB Mercado               |
| 3:20pm  | EVIDENCE FOR CGAS-STING SIGNALING IN THE FEMALE GENITAL<br>TRACT RESISTANCE TO CHLAMYDIA TRACHOMATIS INFECTION<br>Maegan French |
| 3:35pm  | EFFECTOR CD4 T CELL GENERATION AND PROTECTIVE<br>IMMUNITY IN THE MURINE FRT<br>Stephen McSorley                                 |
| 5:30pm  | Banquet Cocktails at the Alamo  |
| 6:15pm  | Banquet Dinner  |
| 7:15pm  | Banquet Dinner Presentation   |
| 11:00pm | Banquet End   |

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**Friday, June 24, 2022**

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7:30 - 8:30am Breakfast

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**Vaccines & Animal Models**

Session Chairs: Xi Yang & Carolyn Deal

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**Keynote Lecture**

8:30am MOUSE MODELS FOR BOTH EVALUATING CHLAMYDIAL  
PATHOGENICITY/VACCINES AND DISSECTING HOST-MICROBE  
INTERACTIONS  
Guangming Zhong

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| 9:15am  | PROTECTIVE ANTIBODY RESPONSES TO UROGENITAL CHLAMYDIA TRACHOMATIS<br>Kathryn M Fietze   |
| 9:30am  | A NOVEL INTRANASAL VACCINE WITH PMPG+MOMP INDUCES ROBUST PROTECTIONS BOTH IN RESPIRATORY TRACT AND GENITAL SYSTEM POSTING CHLAMYDIA PSITTACI INFECTION<br>Li Qiang                |
| 9:45am  | CHLAMYDIA DEFICIENT IN PLASMID-ENCODED GLYCOPROTEIN 3 (PGP3) AS AN ATTENUATED LIVE ORAL VACCINE<br>Jianuo Zhong   |
| 10:00am | <b>BREAK</b>  |
| 10:20am | PARENTS OPINIONS ON A FUTURE ADOLESCENT CHLAMYDIA VACCINE<br>Allison Footman  |
| 10:35am | IL-23 RECEPTOR SIGNALING IN THE INDUCTION OF IFN $\gamma$ -PRODUCING GROUP 3-LIKE INNATE LYMPHOID CELLS DURING CHLAMYDIAL INFECTION IN THE COLON<br>Yihui Wang                    |
| 10:50am | EVALUATION OF IMMUNE RESPONSES INDUCED BY NANOPARTICLE-BASED MOMP VACCINES CONTAINING MULTIPLE ADJUVANTS FOR PROTECTION AGAINST CHLAMYDIA INFECTIONS<br>Abisola Abisoye-Ogunniyan |
| 11:05am | THERAPEUTIC FUNCTION OF SEMAPHORIN 3E FOR IMMUNITY TO CHLAMYDIAL LUNG INFECTION<br>Xi Yang  |
| 11:20am | <b>Closing Remarks - Guangming Zhong</b>  |
| 12:00pm | <b>DEPARTURE - BOXED LUNCH</b>  |

## Poster Session – Monday, June 20, 2022

### Cell Biology

- A1 MUTATIONS IN THE HEXOSPHOSPHATE TRANSPORTER UHPC REVEALS A GLUCOSE-6-PHOSPHATE SENSING FUNCTION ACTIVE IN *CHLAMYDIA TRACHOMATIS*  
M. Johnson, S. Omesi, C. Dequito, M. McNally, C. O'Connell
- A2 CELL FREE PROTEIN SYNTHESIS ENABLES RAPID CHARACTERIZATION OF CHLAMYDIAL TYPE THREE SECRETION SYSTEM COMPONENTS  
Steven Hoang-Phou, Abisola Abisoye-Ogunniyan, Yuliang Zhang, Megan Shelby, Feliza A. Bourguet, Mimi C. Yung, Chao Liu, Byron D. Vannest, Nikki M. Hammond, Isabella M. Carrano, Matthew J. Laurence, Alex Noy, Amy Rasley, Luis M. de la Maza, Matthew A. Coleman
- A3 *CHLAMYDIA TRACHOMATIS* INCLUSION MEMBRANE PROTEIN INCE MULTI-TASKS TO PROMOTE CHLAMYDIA INTRACELLULAR SURVIVAL  
Khavong Pha, Cherilyn Elwell, Jessica Sherry, Tina Solvik, Cuong Tran, Andrew Frando, Kathleen Mirrashidi, Danielle Swaney, Nevan Krogan, Joanne Engel
- A4 THE *CHLAMYDIA PNEUMONIAE* INCLUSION MEMBRANE PROTEIN CPN0308 INTERACTS WITH HOST PROTEIN ACBD3  
Liang Ma, Ping Li, Xiaohui Jia, Tianjun Jia
- A5 *CHLAMYDIA TRACHOMATIS* SUBVERTS ALPHA-ACTININ-4 (ACTN4) TO STABILIZE ACTIN SCAFFOLDS DURING INFECTION  
Adam Haines, Fabienne Paumet
- A6 TWO EFFECTORS OF *C. PNEUMONIAE*: MEMBRANE BINDING AND SHAPING  
D. Spona, P. Hanisch, J.H. Hegemann, K. Mölleken
- A7 GTPASE CROSSTALK COORDINATES THE CYTOSKELETAL REORGANIZATION DURING CHLAMYDIA INFECTION  
Adam Haines, Jordan Wesolowski, Fabienne Paumet

- A8 *CHLAMYDIA TRACHOMATIS* PROTEINS LOCALIZE TO HOST MITOCHONDRIA  
Zoe Dimond, Laura Bauler, Yixiang Zhang, Ted Hackstadt
- A9 POLYMORPHIC MEMBRANE 17G OF *CHLAMYDIA PSITTACI* MEDIATED THE BINDING AND INVASION TO HOST CELLS BY INTERACTING AND ACTIVATING EGFR  
X.H. Li, Z.H. Zuo, Y.H. Wang, J.H. Hegemann, C. He
- A10 HOMOTYPIC FUSION ALTERS THE HOST CELL RESPONSE TO INFECTION  
Jordan Wesolowski, Fabienne Paumet

### **Diagnostics**

- A11 IMPACT OF A POINT-OF-CARE (POC) TEST FOR *CHLAMYDIA TRACHOMATIS* (CT), *NEISSERIA GONORRHOEAE* (NG), AND *TRICHOMONAS VAGINALIS* (TV) ON PATIENT CLINICAL CARE IN A PRIMARY CARE CLINIC  
C.A. Gaydos, T.M. Abraham, J. Ying, D. Otmaskin, R. Schmidt, G. Harnett, K. DiBenedetto, G. Schoolnik
- A12 ALINITY M STI ASSAY FOR THE ROUTINE DIAGNOSIS OF *CHLAMYDIA TRACHOMATIS* AND CONCOMITANT SEXUALLY TRANSMITTED INFECTIONS: EXPERIENCE OF DAILY PRACTICE IN VIENNA DURING 2021  
A. Stary, L. Werderitsch, M. Kyska, K. Schwarz
- A13 RESULTS OF 12 YEARS OF THE DUTCH *CHLAMYDIA TRACHOMATIS* REFERENCE LABORATORY IN THE NETHERLANDS 2010-2021: IDENTIFICATION OF *C. TRACHOMATIS* PLASMID FREE CLINICAL ISOLATES AND OTHER *CHLAMYDIA* VARIANTS  
S. Ouburg, J. Pleijster, S.M. Bruisten, M.A.B. van der Sande, B.H. van Benthem, C.J.G. Kampman, David Spitaels, H.M. Götz, A. Beerens, D. Luijt, P.F Wolffs, CJPA Hoebe, A.G.M. van der Zanden, Y. Pannekoek, S.A. Morré
- A14 NEW VARIANTS OF *CHLAMYDIA TRACHOMATIS* (NVCT) IN 2019 AFFECTING DETECTION BY APTIMA COMBO 2: FROM EMERGENCE TO DIAGNOSTIC SOLUTIONS  
Ashley Nenninger, Damon Getman

- A15 PERCEPTIONS AND ADOPTION OF EVIDENCE-BASED  
PRENATAL CHLAMYDIA SCREENING GUIDELINES  
Stacey B. Griner, Kaeli C. Johnson, Ashlyn Kinard, Malinee  
Neelamegam, Nolan Kline, Barbara Van Der Pol
- A16 META-ANALYSIS OF CT AND NG ASSAY SENSITIVITY FOR  
FEMALE VAGINAL SWABS VERSUS URINE  
K.J. Aaron, S. Griner, A. Footman, A. Boutwell, B. Van Der Pol

### **Immunology**

- A17 DIFFERENTIAL IMMUNE RESPONSE IN HUMAN DENDRITIC  
CELLS UPON IMMUNIZATION WITH LIVE AND UV-  
INACTIVATED *CHLAMYDIA TRACHOMATIS*  
K. Knapp, R. Panday, R. Klasinc, M. Kranawetter, C. Grimm, H.  
Stockinger, G. Stary
- A18 MICRORNAs DIFFERENTIALLY MODULATE MACROPHAGE  
IMMUNITY FOLLOWING *CHLAMYDIA TRACHOMATIS*  
INFECTION AND VACCINE STIMULATION  
Courtnee Bell, Shakyra Richardson, Leandra Jones, Fnu  
Medhavi, Tayhlor Tanner, Yusuf Omosun, Joseph Igietseme,  
Francis Eko
- A19 THE OVI-CHIP: BIOFABRICATION METHODS TO CREATE 3D  
IN VITRO OVIDUCT MODEL TO STUDY *CHLAMYDIA*  
*TRACHOMATIS* INFECTION  
Jaehyeon Kim, Adrian Seijas Gamardo, J. Willem Voncken,  
Andrea Romano, Servaas A. Morré, Victor de la Rosa, Richard  
Hoogenboom, Lorenzo Moroni, Paul A. Wieringa
- A20 THE ROLE OF 24 SNPs IN HOST CANDIDATE GENES IN THE  
DEVELOPMENT OF REPRODUCTIVE TRACT  
COMPLICATIONS OF *CHLAMYDIA TRACHOMATIS*  
INFECTION IN WOMEN  
Zoïe W. Alexiou, Bernice M. Hoenderboom, Birgit H. van  
Benthem, Eline Op de Coul, Sander Ouburg, Servaas A. Morré
- A21 IMMUNOLOGICAL MARKERS OF *CHLAMYDIA*  
*TRACHOMATIS* INFECTION IN EPITHELIAL OVARIAN  
CANCER: A RETROSPECTIVE COHORT STUDY  
Tiina Holster, Elina Urpilainen, Jorma Paavonen, Ulla Puistola,  
Mirja Puolakkainen

- A22 GAP JUNCTION-MEDIATED ANTIGEN TRANSPORT CONTRIBUTES TO MHC-I UNRESTRICTED AND BYSTANDER MEMORY CD8 T CELL ACTIVATION AND IMMUNOPATHOLOGY  
Srikanth Manam, Bruce Nicholson, Duy-Anh Dao, Yong Zhong, Michael Holtzman, Weidang Li, Sophie La Salle, Kyle H. Ramsey, Bernard Arulanandam, Ashlesh K. Murthy
- A23 GSDMD-MEDIATED PYROPTOSIS RESTRAINS CYCTOSLIC *CHLAMYDIA TRACHOMATIS* GROWTH IN MACROPHAGES  
P. Jiang, H. Chen, D. Xu, M. Jiang, L. Tang
- A24 IL-27 REGULATES ANTI-CHLAMYDIAL IMMUNITY IN THE FEMALE GENITAL TRACT  
Yujie Zhao, Zhi Huo, Halah Winner, Zengzi Zhou, Christian Cervates, Jianlin Chen, Zhenming Xu, Guangming Zhong
- A25 A NOVEL CLEAVAGE PATTERN OF COMPLEMENT C5 INDUCED BY *CHLAMYDIA TRACHOMATIS* INFECTION  
Liang Peng, Jingping Gao, Zihao Hu, Hongbo Zhang, Lingli Tang, Fuyan Wang, Lei Cui, Shanshan Liu, Yujie Zhao, Hong Xu, Xin Su, Xiaojing Feng, Yiyuan Fang, Jianlin Chen
- A26 PATHOGENIC SIGNALING PATHWAYS INDUCED BY *CHLAMYDIA* ARE TARGETS FOR THERAPEUTIC REVERSAL OF INFECTION COMPLICATIONS  
J. Igietseme, J. Partin, D. Ellerson, Y. Omosun, F. Eko, C. Bandea, J. Pohl, T. Nagy, J. Miller, C. Black, D. Carroll
- A27 NATURAL CLEARANCE OF *CHLAMYDIA TRACHOMATIS* INFECTION IS ASSOCIATED WITH A GLOBAL DEPLETION IN LEVELS OF CERVICOVAGINAL AMINO ACIDS  
S. Jordan, S. Barnes, L. Wilson, W. Geisler
- A28 THE MODULAR IMMUNE IN VITRO CONSTRUCT (MIMIC) SYSTEM TO MEASURE *C. TRACHOMATIS* CELLULAR IMMUNE RESPONSES AND ASSESS VACCINE EFFICACY IN HUMAN  
Hong Yu, William M. Geisler, Robert C. Brunham

- A29 IDENTIFICATION OF CPAF AS AN IMMUNODOMINANT ANTIGEN IN HUMANS AND MICE  
Taylor B. Poston, Joanna Warren, Jenna Girardi, Yanli Li, Fiona Shaw, Shayla Conrad, Yinyan Xu, Xiaojing Zheng, Catherine M. O'Connell, Sharon L. Hillier, Harold C. Weisenfeld, Nilu Goonetilleke, Toni Darville
- A30 IMMUNE SCREENING WITH PREDICTED *CHLAMYDIA TRACHOMATIS* MOMP B- AND T- CELL EPITOPES  
Patrick W. Cervantes, Sean F. Gilmore, Megan L. Shelby, Byron D. Vannest, Laurel Beckett, Yueju Li, Patrik D'haeseleer, Sukumar Pal, Luis M. de la Maza, Toni Darville, Matt A. Coleman
- A31 BHLHE40 PLAYS A PROTECTIVE ROLE DURING INTRAVAGINAL *CHLAMYDIA MURIDARUM* INFECTION IN MICE  
Miguel A. B. Mercado, Lin-Xi Li
- A32 EVIDENCE FOR CGAS-STING SIGNALING IN THE FEMALE GENITAL TRACT RESISTANCE TO *CHLAMYDIA TRACHOMATIS* INFECTION  
Xin Su, Hong Xu, Maegan French, Yujie Zhao, Lingli Tang, Xiaodong Li, Jianlin Chen, Guangming Zhong
- A33 EFFECTOR CD4 T CELL GENERATION AND PROTECTIVE IMMUNITY IN THE MURINE FRT  
Jordan A. Rixon, Claire E. Depew, Stephen J. McSorley



## Poster Session – Tuesday, June 21, 2022

### Sexually Transmitted Infections

- B1 MORE SYMPTOMATIC INFECTIONS AND HIGHER BACTERIAL LOAD IN *CHLAMYDIA TRACHOMATIS* AND *NEISSERIA GONORRHOEAE* CO-INFECTIONS COMPARED TO *NEISSERIA GONORRHOEAE* SINGLE INFECTIONS  
HA Van Dessel, JAMC Dirks, IHM van Loo, BMJW van der Veer, CJPA Hoebe, NHTM Dukers-Muijrs, PHM Savelkoul, PFG Wolffs
- B2 *MYCOPLASMA GENITALIUM* BACTERIAL LOAD IN COINFECTIONS WITH *CHLAMYDIA TRACHOMATIS*  
JAMC Dirks, IHM van Loo, NHTM Dukers-Muijrs, PFG Wolffs, CJPA Hoebe
- B3 *MYCOPLASMA GENITALIUM* INFECTION AND ASSOCIATED MACROLIDE RESISTANCE IN PREGNANT WOMEN SEEN AT AN URBAN U.S. MEDICAL CENTER  
M. Hu, J. Souder, A. Subramaniam, B. Van Der Pol, L. Xiao, K. Gupta, J. Dionne-Odom, W. Geisler
- B4 CHLAMYDIALES, *MYCOPLASMA GENITALIUM* AND HUMAN HERPESVIRUSES IN RECURRENT MISCARRIAGE  
Tiina Holster, Hannamari Välimaa, Pirkko Peuranpää, Aila Tiitinen, Hanna Hautamäki, Mirja Puolakkainen
- B5 THE SYNERGISTIC EFFECT OF *C. TRACHOMATIS* AND HPV ON ADVERSE PREGNANCY OUTCOMES IN RURAL INDIAN WOMEN  
J.N. Yadav, P.P.M. Thomas, R. Heijmans, S. Srivastava, G. Batra, J. Pleijster, R. Kant, J.A. Lal, S.A. Morré

- B6 DOXYCYCLINE VERSUS AZITHROMYCIN FOR THE TREATMENT OF ANORECTAL *CHLAMYDIA TRACHOMATIS* INFECTION CONCURRENT WITH VAGINAL INFECTION: A RANDOMIZED, OPEN-LABEL, MULTICENTRE TRIAL (CHLAZIDOXY STUDY)  
O. Peuchant, E. Lhomme, P. Martinet, A. Grob, D. Baita, C. Bernier, S. A. Gibaud, I. Le Hen, E. Le Naour, N. Trignol-Viguiier, P. Lanotte, P. Lefebvre, A. Vachée, T. Girard, J. Loubinoux, C. Bébéar, B. Ghezzoul, C. Roussillon, M. Kret, B. de Barbeyrac, Chlazidoxy Study Group
- B7 CORRELATES OF OROPHARYNGEAL CHLAMYDIAL AND GONOCOCCAL INFECTIONS FROM A MULTICENTER COMPARISON OF NUCLEIC ACID AMPLIFICATION TESTS FOR THE DIAGNOSIS OF OROPHARYNGEAL *CHLAMYDIA TRACHOMATIS* AND *NEISSERIA GONORRHOEAE* INFECTION  
Hook, EW III, B. Van Der Pol, M. Chernesky, C.A. Gaydos, B.A. Boutwell, H.C. Wiesenfeld, S.N. Taylor, K.H. Mayer, M.R. Golden, J. Moncada, K.J. Aaron, J. Schachter, ExGen Study Group
- B8 ENSURING SAFE AND QUALITY PATIENT CARE IN THE ERA OF ONLINE TESTING AND TREATMENT PROVIDERS FOR SEXUALLY TRANSMITTED INFECTIONS IN GREAT BRITAIN  
E.M. Harding-Esch, C. Dewsnap, E. Clarke, P. French, P. Horner, M. Lawton, J. McSorely, E. Okecha, D. Phillips, S. Whalley, F. Keane, C. Ison, S. Soni
- B9 *CHLAMYDIA TRACHOMATIS* INFECTION AND DETECTION OF CHLAMYDIA ANTIBODIES IN WOMEN REPORTING SEXUAL EXPOSURE TO A CHLAMYDIA-INFECTED PARTNER  
K. Gupta, B. Van Der Pol, C. Press, W. Geisler
- B10 WHOLE GENOME SEQUENCE ANALYSIS OF RECTAL CHLAMYDIA CASES IDENTIFIES POTENTIAL TREATMENT FAILURE: CASES FROM A RECTAL CHLAMYDIA TREATMENT TRIAL  
S. Phillips, M. Jelocnik, J. Danielewski, A. Lau, F. Kong, G. Murray, P. Timms, J. Hocking

- B11 PREVALENCE OF *CHLAMYDIA TRACHOMATIS* SEROVAR G STRAINS IN MSM RECTAL INFECTIONS ARE TEMPORALLY AND GLOBALLY CONSISTENT AND SHARE A PHYLOGENETIC LINEAGE  
Robert J. Suchland, Steven J. Carrell, Connie L. Celum, Jorge Sanchez, Kevin Hybiske, Daniel D. Rockey
- B12 MIGRATORY ABDOMINAL PAIN AS THE FIRST MANIFESTATION OF *CHLAMYDIA TRACHOMATIS* INFECTION IN A WOMAN AFTER ORAL SEX  
Xiaobao Huang, Xiaohong Chen, Mingna Liu, Yuyan Liu, Rui Xu, Jiande Han, Chunguang Ma

### **Trachoma**

- B13 TWO DECADES OF PROGRESS AND EVOLUTION OF TRACHOMA ELIMINATION SINCE JULIUS SCHACHTER'S 'AZITHROMYCIN IN CONTROL OF TRACHOMA'  
Paul Emerson, PJ Hooper, Kristen Renneker, Chuck Knirsch
- B14 A SURVEY OF TRACHOMATOUS SCARRING IN A FORMERLY TRACHOMA HYPERENDEMIC DISTRICT IN TANZANIA  
Meraf A. Wolle, Beatriz E. Muñoz, Harran Mkocha, Sheila K. West
- B15 FORECASTING THE ELIMINATION OF ACTIVE TRACHOMA: WHEN MIGHT COUNTRIES STOP MASS DRUG ADMINISTRATION?  
Kristen K. Renneker, PJ Hooper, Jeremiah M. Ngondi, Paul M. Emerson
- B16 REGIONAL PREVALENCE OF OCULAR *CHLAMYDIA TRACHOMATIS* INFECTION IN AMHARA, ETHIOPIA, 2014-2020  
S.D. Nash, A. Chernet, A.W. Nute, M. Zerihun, E. Sata, D. Gessese, K.A. Jensen, Z. Ayele, B. Melak, M. Haile, T. Zeru, F. Siefe, Z. Tadesse, E.K. Callahan
- B17 SEROREVERSION IN A LONGITUDINAL STUDY OF ANTIBODIES TO *C. TRACHOMATIS* ANTIGEN PGP3 IN CHILDREN IN A FORMERLY TRACHOMA ENDEMIC DISTRICT  
S.K. West, B. Munoz, H. Mkocha, L. Dize, C.A. Gaydos, T.C. Quinn

B18 TOWARDS THE ELIMINATION OF BLINDING TRACHOMA IN AUSTRALIA

Hugh R. Taylor, Fiona Lange, Nick Wilson, Emma Stanford

### **Genomics and Molecular Biology**

B19 USE OF PACKAGING EXTRACTS TO IDENTIFY THE CHLAMYDIAPHAGE ORIGIN OF REPLICATION

Rachel J. Skilton, Ian N. Clarke

B20 CONFORMATIONAL CHANGE DURING THE INTERACTION BETWEEN GRGA AND SIGMA66 OF THE RNA POLYMERASE IS INHIBITED BY THE R51G SUBSTITUTION IN GRGA AND THE SELECTIVE ANTICHLAMYDIAL SF3

Malhar Desai, Wurihan Wurihan, Huizhou Fan

B21 FUNCTIONAL CHARACTERIZATION OF THE NOVEL FEATURES OF  $\sigma^{66}$ -RECOGNIZED PROMOTERS

Li Shen, L. Gao

B22 CHLAMYDIA CIRCUMVENTS THERMAL STRESS VIA TAIL SPECIFIC PROTEASE

Arkaprabha Banerjee, Julie A. Brothwell, David E. Nelson

B23 TARGETED GENE DELETION IN *C. MURIDARUM* AND APPLICATION TO THE ANIMAL INFECTION MODEL

Katerina Wolf, Kaylyn R. Scanlon, Travis J. Jewett, Kenneth A. Fields

### **Vaccines and Animal Models**

B24 PARENTS OPINIONS ON A FUTURE ADOLESCENT CHLAMYDIA VACCINE

A. Footman, L.M. Niccolai, G. Zimet, B. Van Der Pol

B25 PROTECTIVE ANTIBODY RESPONSES TO UROGENITAL *CHLAMYDIA TRACHOMATIS*

Amanda L. Collar, Tegan Clark, Susan B. Core, Kathryn M. Fietze

- B26 EVALUATION OF IMMUNE RESPONSES INDUCED BY NANOPARTICLE-BASED MOMP VACCINES CONTAINING MULTIPLE ADJUVANTS FOR PROTECTION AGAINST CHLAMYDIA INFECTIONS  
Abisola Abisoye-Ogunniyan, Isabella M. Carrano, Dina Weilhammer, Sean Gilmore, Byron D. Vannest, Nicholas O. Fischer, Sukumar Pal, Luis M. de la Maza, Matthew A. Coleman, Amy Rasley
- B27 A NOVEL INTRANASAL VACCINE WITH PMPG+MOMP INDUCES ROBUST PROTECTIONS BOTH IN RESPIRATORY TRACT AND GENITAL SYSTEM POSTING *CHLAMYDIA PSITTACI* INFECTION  
Li Qiang, Chen Siyu, Wang Zhanxin, Yan Zhuangqiang, Fang Huanxin, He Cheng
- B28 CHLAMYDIA DEFICIENT IN PLASMID-ENCODED GLYCOPROTEIN 3 (PGP3) AS AN ATTENUATED LIVE ORAL VACCINE  
Zengzi Zhou, Qi Tian, Jianuo (Jenelle) Zhong, Luying Wang, Guangming Zhong
- B29 IL-23 RECEPTOR SIGNALING IN THE INDUCTION OF IFN $\gamma$ -PRODUCING GROUP 3-LIKE INNATE LYMPHOID CELLS DURING CHLAMYDIAL INFECTION IN THE COLON  
Ying He, Yihui Wang, Chenchen Song, Huixiang Yang, Lijian Tao, Zhou Zhou, Guangming Zhong
- B30 EFFECTS OF ANTI-PGP3 MONOCLONAL ANTIBODY ON CHLAMYDIA GENITAL TRACT INFECTION IN MICE  
H. Deng, Y.X. Song, Y.Y. Liang, T.D. Chen, S.P. Hou
- B31 THERAPEUTIC FUNCTION OF SEMAPHORIN 3E FOR IMMUNITY TO CHLAMYDIAL LUNG INFECTION  
Rony Thomas, Shuhe Wang, Rasheduzzaman Rashu, Ying Peng, Abdelilah S. Gounni, Xi Yang
- B32 PHYSCION, A NOVEL ANTHRAQUINONE DERIVATIVE, EXHIBITS ANTIBIOTIC AGAINST *CHLAMYDIA PSITTACI* INFECTION  
Huiling Hu, Jun Chu, Xinyi Liu, Jiaqi Liu, Jiaqi Liu, He Cheng