

Abstracts of papers presented
at the 2026 Cold Spring Harbor Asia Conference

BACTERIAL INFECTION & HOST DEFENSE

May 11–May 15, 2026

Arranged by

Elizabeth Hartland, *Hudson Institute of Medical Research*
Thomas Rudel, *University of Würzburg*
Feng Shao, *National Institute of Biological Sciences*
Sunny Shin, *University of Pennsylvania*



Cold Spring Harbor Conferences Asia
Cold Spring Harbor Laboratory



BACTERIAL INFECTION & HOST DEFENSE

Monday, May 11 – Friday, May 15, 2026

Monday	7:00 pm	1 Opening / Keynote Session
Tuesday	9:00 am	2 Innate Immune Sensing and Inflammasome Activation
Tuesday	2:00 pm	Poster Session
Tuesday	7:00 pm	3 Bacterial Effectors and Secretion Systems
Wednesday	9:00 am	4 Host Cell Biology and Intracellular Defense Mechanisms
Wednesday	1:30 pm	<i>Visit to Old Suzhou*</i>
Wednesday	7:00 pm	5 Microbiota, Metabolism and Cross-Kingdom Interactions
Thursday	9:00 am	6 Disease Progression and Host Responses
Thursday	2:00 pm	7 Emerging Concepts and Non-Canonical Mechanisms in Host-Pathogen Interactions
Thursday	5:00 pm	Cocktails and Banquet
Friday		<i>Departure</i>

Oral presentation sessions are located in the CSHA Auditorium
Poster session and Chinese Tea & Beer Tasting are in the Lake Front Hall.

Cocktail social hour is held outside in the Suz Garden.

Old Suzhou visits depart from the CSHA lobby

**optional tour requires additional fee.*

Meal locations and times are as follows:

Lunch: Main Cafeteria 12:00pm - 1:30pm

Dinner: Main Cafeteria 6:00pm - 7:30pm

Banquet: Suz Garden 6:00pm

More information will be available at CSHA office.

(Map at the end of this abstract book)

PROGRAM

MONDAY, May 11—7:00 PM

SESSION 1 OPENING KEYNOTE SESSION

Chairperson: **Elizabeth Hartland**, Hudson Institute of Medical Research, Melbourne, Australia

KEYNOTE SPEAKER

Transcriptional signatures reveal the immune response underlying progression and pathogenesis in tuberculosis

Anne O'Garra [45'+10']

Presenter affiliation: The Francis Crick Institute, London, United Kingdom.

1

A novel molecular mechanism for effector protein wrapping and delivery by the bacterial type VI secretion system

Alain Filloux [20'+10']

Presenter affiliation: Nanyang Technological University, Singapore.

2

A rice resistance protein is a calcium channel receptor sensing effector proteolytic activity to activate plant immunity

Dongdong Ge, Yang He, Lin Wang, Zhifu Han, Jijie Chai [20'+10']

Presenter affiliation: Westlake University, Hangzhou, China.

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TUESDAY, May 12—9:00 AM

SESSION 2 INNATE IMMUNE SENSING AND INFLAMMASOME ACTIVATION

Chairpersons: **Petr Broz**, University of Lausanne, Epalinges, Switzerland
Sunny Shin, University of Pennsylvania Perelman School of Medicine, Philadelphia, Pennsylvania, USA

Detection of bacterial pathogens by inflammasomes

Petr Broz [20'+10']

Presenter affiliation: University of Lausanne, Epalinges, Switzerland.

4

Host metabolites regulate the function of key toxins of *Staphylococcus aureus* during ecological niche colonization and invasive infections

Min Li [20'+10']

Presenter affiliation: Shanghai Jiaotong University, Shanghai, China.

5

The NLRP3 inflammasome is the primary driver of cell death in human macrophages during *Salmonella* Typhimurium infection

Emily A. O'Rourke, Dylan Luce, Talia Smith, Sunny Shin [10'+5']

Presenter affiliation: University of Pennsylvania Perelman School of Medicine, Philadelphia, Pennsylvania.

6

Evasion of inflammasome signaling by *Staphylococcus aureus* facilitates deep-seated infection

Weiting Mao, Mingru Yu, Yunxin Shi, Yongqun Zhu [10'+5']

Presenter affiliation: Zhejiang University, Hangzhou, China.

7

Break

ESX-5 component targets GSDMD to drive pyroptosis and promote Mtb dissemination

Yajie Shen, Jixi Li [10'+5']

Presenter affiliation: Fudan University, Shanghai, China.

8

Macrophage-derived dendrite-like pseudopods enhance bacterial ingestion in response to massive gram-negative bacterial infections

Yaming Jiu [10'+5']

Presenter affiliation: Chinese Academy of Sciences, Shanghai, China.

9

Nutrient sensing licenses NLRP3 inflammasome assembly and IL-1 cytokine release

Sunny Shin [20'+10']

Presenter affiliation: University of Pennsylvania Perelman School of Medicine, Philadelphia, Pennsylvania.

10

Cross-kingdom regulation of host immune and metabolic homeostasis by gut microbial enzymes and metabolites

Changtao Jiang [20'+10']

Presenter affiliation: Peking University, Beijing, China.

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POSTER SESSION

Cryo-EM structure of the TLR2-TLR1-TIRAP-MyD88 signalosome reveals unconventional NADase activity driven complex formation

Canxi Chen, Zhongjian Bai, Zhifu Han, Yixiao Zhang, Zehan Hu
Presenter affiliation: Shanghai Jiao Tong University, China.

12

Ecological complexity reshapes metabolic trajectory topology in the gut commensal *Collinsella aerofaciens*

Zheng Chen, Beatrice Engelmann, Nico Jehmlich, Ulrike Rolle-Kampczyk, Martin von Bergen
Presenter affiliation: Helmholtz Centre for Environmental Research - UFZ, Leipzig, Delaware.

13

Bacteria–phage co-evolution in the developing infant oral microbiome—Insights from a pilot metagenomic study of saliva

Zhiheng Fang, Holger Schulze, Hugo Samano, Susan Welburn, Debby Bogaert, Till Bachmann
Presenter affiliation: The University of Edinburgh, Edinburgh, United Kingdom; Zhejiang University-University of Edinburgh (ZJU-UoE) Institute, Zhejiang University School of Medicine, Zhejiang University, Hangzhou, China.

14

Fighting inside the human gut

Xiang Gao
Presenter affiliation: Shandong University, Qingdao, China.

15

T7SS is ubiquitous in Clostridia for interspecies competition

Qiankun Bai, Jinzhu Geng, Yuna Peng, Yihan Gong, Yao Zhou, Jianhua Luo, Liang Tao
Presenter affiliation: Westlake University, Hangzhou, China.

16

A T6SS-secreted DNase drives *Acinetobacter baumannii* immune evasion by dismantling NETs and silencing TLR9 signaling

Lei Song, Sanwei Gu, Jing Jie, Zhaoqing Luo
Presenter affiliation: The First Hospital of Jilin University, Changchun, China.

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Capsular polysaccharide determines serotype-specific Kupffer cell clearance of group B <i>Streptococcus</i> <u>Ping He</u> , Jing-Ren Zhang Presenter affiliation: Tsinghua University, Beijing, China.	18
CircSlc7a11-mediated riboregulation of YB-1 exacerbates acute lung injury by promoting M1 macrophage polarization Honglei Zhang, Wei Song, Liqun Yu, Li Mo, Changhai Qi, <u>Hua Jin</u> Presenter affiliation: Beijing Institute of Technology, Beijing, China.	19
Serum amyloid P-component is a capsule receptor mediating bacterial clearance in the bloodstream <u>Kunpeng Li</u> , Jing-Ren Zhang Presenter affiliation: Tsinghua University, Beijing, China.	20
Conserved adaptor-mediated co-secretion of T6SS synergistic effectors in gut Bacteroidota <u>Weixun Li</u> , Shuaining Zheng, Feng Shao, Xiang Gao Presenter affiliation: Shandong University, Qingdao, China.	21
The association between aging-related immune dysregulation and increased susceptibility to secondary bacterial infections following COVID-19—A multi-omics study <u>Yanhua Li</u> , Shijie Qin, Jiani Zhou, Yueyun Ma Presenter affiliation: Air Force Medical Center, Air Force Medical University, Beijing, China.	22
A carboxylic acid reductase (CAR)-driven signaling axis regulates microbiome defense and host protection against bacterial infection <u>Xiaoqian Lin</u> , Yong-Xin Li Presenter affiliation: The University of Hong Kong, Hong Kong, China.	23
Catalytic ADP-ribose production by TLR4's TIR domain licenses hierarchical assembly of the innate immune signalosome <u>Tianyi Liu</u> , Qi Liu, Zhongjian Bai, Chenlu Zhang, Zhifu Han, Yixiao Zhang, Zehan Hu Presenter affiliation: Shanghai Jiao Tong University, Shanghai, China.	24
IGHV structural variations in B-1 cells govern infant susceptibility to bacteria driven by maternal natural antibodies <u>Yanni Liu</u> , Xianbin Tian, Yang Li, Danyu Chen, Sai Luo, Jing-Ren Zhang Presenter affiliation: Tsinghua University, Beijing, China.	25

- Influenza suppresses capsule receptor-mediated pathogen-specific immunity of neutrophils against lung bacteria**
 Yujie Fang, Wenxia Ma, Chenyun Qian, Jiao Hu, Xianbin Tian, Xueting Huang, Wenlong Lai, Li Wu, Wenwen Zeng, Haoran An, Jing-Ren Zhang
 Presenter affiliation: Tsinghua University, Beijing, China. 26
- Untapping prophages' role in antibiotic resistance across the Pseudomonadota human pathogens**
Daniel O. Plaza, Samuel K. Sheppard
 Presenter affiliation: The Ineos Oxford Institute for Antimicrobial Research (IOI), Oxford, United Kingdom. 27
- An inner coat protein was spatially partitioned to form a scaffold for bacterial spore coat assembly**
 Ziqi Gong, Zhenyu Qi, Lei Rao, Bing Zhou
 Presenter affiliation: Shanghai Institute of Materia Medica, CAS, Shanghai, China. 28
- Functional characterization and pathogenic mechanism of intra-host mutations in the PhoR two-component regulatory system of nontypeable *Haemophilus influenzae***
Luyao Shen, Yanhua Li
 Presenter affiliation: Air Force Medical Center, Beijing, China. 29
- Human gut microbiome-derived class II bacteriocins attenuate LPS-induced inflammation and ameliorate inflammatory bowel disease**
Yuqi Shi, Xiang Fang
 Presenter affiliation: The University of Hong Kong, Hong Kong, China. 30
- Mechanistic insights into *plcA-2*-mediated retinal dysfunction in *Bacillus cereus* endophthalmitis**
Bianjin Sun, Yongliang Lou, Meiqin Zheng
 Presenter affiliation: Wenzhou Medical University, WenZhou, China. 31
- Ca²⁺ differentially regulates myosin II and VI during rupture of the *Shigella* containing vacuole**
Chunhui Sun, Jost Enninga, Guy Tran Van Nhieu
 Presenter affiliation: The Seventh Affiliated Hospital of Sun Yat-Sen University, Paris, China; Collège de France, Paris, France. 32

- Whole-genome sequencing and machine learning reveal candidate genomic features associated with *Listeria monocytogenes* persistence in two ice cream facilities**
Lang Sun, Jun Zhou, You Shen, Xinyi Du, Jinjun Liang, Shuai Chen, Huayun Jia
 Presenter affiliation: Central South University, Changsha, China. 33
- NLRP6 inflammasome activation by streptolysin S from *Streptococcus pyogenes***
 Tianye Niu, Di Tang, Yue Xu
 Presenter affiliation: Shanghai Jiao Tong University School of Medicine, Shanghai, China. 34
- Beclin1 restrains the protective immunity against hypervirulent *K. pneumoniae* infection through suppressing IFN- γ -mediated splenic myelopoiesis**
Chenhui Wang, Xiaoyan Cui, Yating Wang
 Presenter affiliation: Tsinghua University, Beijing, China. 35
- Spatiotemporal proximity proteomics reveals endocytic and vesicular trafficking networks orchestrating NLRP3 inflammasome assembly**
Haiying Wang, Jiayi Shen, Ji Ji, Zhewen Shen, Wenguang Shao, Zehan Hu
 Presenter affiliation: Shanghai Jiao Tong University, Shanghai, China. 36
- Structural basis of *Mycobacterium tuberculosis* urease catalysis, maturation, and inhibition**
Haofeng Wang, Jie Chen, Yujia He, Yinkai Duan, Haitao Yang, Zihe Rao
 Presenter affiliation: ShanghaiTech University, Shanghai, China. 37
- Complement-dependent killing by liver sinusoidal endothelial cells supports vaccine-induced protection against bacteria**
 Qi Wu, Jing-Ren Zhang, Juanjuan Wang
 Presenter affiliation: College of Veterinary Medicine, Beijing, China. 38
- Oxacillin-susceptible mecA-positive staphylococcus aureus with hypervirulent phenotypes—An emerging problem**
Qing Wang, Jie Yu, Kaihu Yao
 Presenter affiliation: Beijing Pediatric Research Institute, Beijing Children's Hospital, Beijing, China. 39

Understanding the global transcriptional response to enteropathogenic *Escherichia coli* in a human intestinal organoid-derived monolayer infection model

Ruo Wang, Jiaxing Yang, Cristina Giogha, Eva Chan, Elizabeth Hartland

Presenter affiliation: Hudson Institute of Medical Research, Clayton, Australia; Monash University, Clayton, Australia.

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***Fusobacterium nucleatum*-derived asparagine accelerates colorectal carcinogenesis by inducing histone lactylation**

Bingjie Wen, Tao Zhou, Danni Wang, Yu-Feng Yao

Presenter affiliation: Shanghai Jiao Tong University School of Medicine, Shanghai, China.

41

Complement lectin pathway restrains mycobacterial infection in vivo by suppressing ferroptosis

Hao Wang, Bo Yan

Presenter affiliation: Shanghai Public Health Clinical Center, Fudan University, Shanghai, China.

42

Mycobacterial peptide-driven NLRP3-ASC reprogramming for microbiota-colorectal cancer therapy

Chanjin Yoon, Hyo Keun Kim, Seungbin Han, Woo Jin Gil, Yu Seong Ham, Chul-Su Yang

Presenter affiliation: Hanyang University, Ansan, South Korea; Biopeptics Inc., Gyeonggi-do, South Korea.

43

The *Burkholderia* T6SS-5 suppresses oxidative stress responses during infection

Jiaxing Yang, Ruo Wang, Eva Chan, Garrett Ng, Elizabeth Hartland

Presenter affiliation: Hudson Institute of Medical Research, Melbourne, Australia; Monash University, Melbourne, Australia.

44

***Veillonella* intestinal colonization promotes *C. difficile* infection in Crohn's disease**

Ziyu Yang, Min Li

Presenter affiliation: Shanghai Jiao Tong University, Shanghai, China.

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GABARAP subfamily activates ESCRT-III via CC2D1B to mediate endomembrane repair

Yuanyuan Hang, Huimin Yin, Yue Xu

Presenter affiliation: Shanghai Jiao Tong University, Shanghai, China.

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**Structural diversity of teichoic acids in *Listeria monocytogenes*—
Implications for bacterial fitness**

Yuelan Yin

Presenter affiliation: Yangzhou University, Yangzhou, China.

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**Elucidating the role of histidine in *Salmonella* pathogenicity in
murine and human primary macrophages**

Maxime Zamba-Campero, Beatrice Herrmann, Igor Brodsky

Presenter affiliation: University of Pennsylvania, Philadelphia,
Pennsylvania.

48

**z-VAD-FMK triggers macrophage necroptosis during
mycobacterial infection via a non-canonical off-target mechanism**

Rong Hu, Pei Li, Jie Han, Jiamin Huang, Guoyi Huang, Xiuju Jiang,
Daniel Pfau, Guobao Li, Yi-Nan Gong, Carl F. Nathan, Li Zhang

Presenter affiliation: Southern University of Science and Technology,
Shenzhen, China.

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**Recognition and transport mechanism of Galactan, a cell wall
virulence factor in *Mycobacterium tuberculosis***

Chuancun Wei, Lu Zhang

Presenter affiliation: ShanghaiTech University, Shanghai, China.

50

**Effector conformational plasticity enables lineage-specific
secretion via Hcp heterohexamers in gut symbionts**

Shuaining Zheng, Weixun Li, Xiang Gao

Presenter affiliation: State Key Laboratory of Microbial Technology,
Qingdao, China.

51

**Intestinal *Prevotella* enhances anti-tuberculosis immunity by
driving iBALT formation in the lung via the gut-lung axis**

Jiani Zhou, Ranli Lu, Hwei Song, Yanhua Li, Yueyun Ma

Presenter affiliation: Air Force Medical Center, Beijing, China.

52

**Structural dynamics of the CROPs domain control stability and
toxicity of *paeniclostridium sordellii* lethal toxin**

Yao Zhou, Xiechao Zhan, Jianhua Luo, Liang Tao

Presenter affiliation: School of Medicine, HangZhou, China.

53

**Hemoglobin inhibits bacterial growth by targeting guanosine
monophosphate metabolism**

Mengran Zhu, Jing-Ren Zhang

Presenter affiliation: Tsinghua University, Beijing, China.

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Development of a first-in-human challenge model using two *Salmonella Typhimurium* pathovariants in healthy adults

Christopher Smith, Xiaojun Zhu, Anna Rydlova, Lijuan Luo, Jay Hinton, Malick Gibani

Presenter affiliation: University of Liverpool, Liverpool, United Kingdom.

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TUESDAY, May 12—7:00 PM

SESSION 3 BACTERIAL EFFECTORS AND SECRETION SYSTEMS

Chairpersons: **Thomas Rudel**, University of Würzburg, Würzburg, Germany
Yue Xu, Shanghai Jiao Tong University School of Medicine, Shanghai, China

***Legionella* Dot/Icm effectors as host mRNA binding proteins**

Elizabeth L. Hartland [20'+10']

Presenter affiliation: Hudson Institute of Medical Research, Melbourne, Australia; Monash University, Melbourne, Australia.

56

Temporal control of chlamydial effectors at the host-pathogen interface

Haolin Zhang, Sofie Hügelschäffer, Elmar Wolf, Thomas Rudel [20'+10']

Presenter affiliation: University of Würzburg, Würzburg, Germany.

57

A bacterial network of T3SS effectors counteracts host pro-inflammatory responses and cell death to promote infection

Hui Wen Yeap, Ghin Ray Goh, Safwah Nasuha Rosli, Hai Shin Pung, Cristina Giogha, Vik Ven Eng, Jaclyn S Pearson, Elizabeth L Hartland, Kaiwen W Chen [10'+5']

Presenter affiliation: Life Sciences Institute, National University of Singapore, Singapore.

58

Minute-scale control of ubiquitin-mediated degradation reveals dynamics of bacterial secreted effector-functions

Haolin Zhang, Yongxia Guo, Bikash Adhikari, Elmar Wolf, Thomas Rudel [10'+5']

Presenter affiliation: University of Würzburg, Würzburg, Germany.

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Break

***Shigella flexneri* evades septin-mediated cell-autonomous immunity via protein ADP-ribosylation**

Zhiheng Tang, Xiaoyun Liu [10'+5']

Presenter affiliation: Peking University Health Science Center, Beijing, China.

60

Deciphering the role of bacterial secreted effectors—Why is *Brucella* going nuclear?

Lison Cancade-Veyre, Suzana P. Salcedo [20'+10']

Presenter affiliation: University of Wisconsin-Madison, Madison, Wisconsin.

61

***Shigella* effector OspB suppresses apoptosis by remodeling BCL-2 family proteins via peptide-bond recombination**

Yue Xu [20'+10']

Presenter affiliation: Shanghai Jiao Tong University School of Medicine, Shanghai, China.

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WEDNESDAY, May 13—9:00 AM

SESSION 4 HOST CELL BIOLOGY AND INTRACELLULAR DEFENSE MECHANISMS

Chairpersons: **Elizabeth Hartland**, Hudson Institute of Medical Research, Melbourne, Australia
Liang Tao, Westlake University, Hangzhou, China

V-ATPase V1H recruitment of ATG16L1 as a cell-autonomous immune mechanism

Rupert Beale [20'+10']

Presenter affiliation: The Francis Crick Institute, London, United Kingdom.

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Autophagy at the host-microbe interface

Ken Cadwell [20'+10']

Presenter affiliation: University of Pennsylvania Perelman School of Medicine, Philadelphia, Pennsylvania; University of Pennsylvania Perelman School of Veterinary Medicine, Philadelphia, Pennsylvania.

64

Autophagy in macrophages curtails IL-1 mediated immune priming against lung infections

Yating Wang [10'+5']

Presenter affiliation: Tsinghua University, Beijing, China.

65

Phosphoproteomic profiling identifies the lipid transporter VPS13C as a novel regulator of *Coxiella*-containing vacuole remodeling

Genevieve R. Samuel, Alex Krausz, Terry Lim Kam Sian, Ralf B. Schittenhelm, David R. Thomas, Hayley J. Newton [10'+5']

Presenter affiliation: Monash Biomedicine Discovery Institute, Monash University, Clayton, VIC, Australia.

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Break

Infection-induced ferroptosis of splenic macrophages exhausts anti-bacterial immunity in sepsis

Kailing Wang, Yijia Huang, Kunpeng Li, Jing-Ren Zhang, Haoran An [10'+5']

Presenter affiliation: Peking University Health Science Center, Beijing, China; Beijing Key Laboratory of Innovative & Transformable Warning and Intervention Technologies for Drug-Resistant Pathogens, Beijing, China.

67

Bacteria-derived heme inhibits macrophage phagocytosis and promotes infection in mice

Zuoqiang Wang, Huang Tang, Wanqiu Huang, Jie Lu, Yu-Feng Yao [10'+5']

Presenter affiliation: Shanghai Jiao Tong University School of Medicine, Shanghai, China.

68

Lysosome Interrupted—*Coxiella burnetii* manipulation of the human recycling centre.

Hayley J. Newton [20'+10']

Presenter affiliation: Monash University, Clayton, Australia.

69

Bacterial toxins trigger non-canonical migracytosis and affect pathogen clearance

Liang Tao [20'+10']

Presenter affiliation: Westlake University, Hangzhou, China.

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WEDNESDAY, May 13—1:30 PM

Visit to Old Suzhou

SESSION 5 MICROBIOTA, METABOLISM AND CROSS-KINGDOM INTERACTIONS

Chairpersons: **Wolf-Dietrich Hardt**, ETH Zürich, Zürich, Switzerland
Feng Shao, National Institute of Biological Sciences, Beijing, China

Species-specific innate immune sensing and inflammatory signaling during Legionella Infection

Danielle P. Mascarenhas, Rhanoica O. Guerra, Pedro M. Camara, Dario S. Zamboni [20'+10']

Presenter affiliation: University of São Paulo, Ribeirao Preto, School of Medicine, Brazil. 71

Multilayered pathogen-microbiota-host interactions control Salmonella Typhimurium diarrhea

Wolf-Dietrich Hardt [20'+10']

Presenter affiliation: ETH Zurich, Zurich, Switzerland. 72

Two SLC transporters mediate itaconate transport across the plasma membrane and salmonella-containing vacuole

Meixin Chen, Qingcai Meng, Chengxi Li, Yuping Cai [10'+5']

Presenter affiliation: Shenzhen Bay Laboratory, Shenzhen, China. 73

Amino acid breakdown by Acinetobacter baumannii outer membrane vesicles couples host cell metabolic disruptions to bacterial nutrient utilization

Chun Kew, Ivan Dikic [10'+5']

Presenter affiliation: Goethe University Frankfurt, Frankfurt, Germany. 74

Break

A point mutation drives tripartite symbiosis of bacterium with parasitic Saccharibacteria and lytic phage in oral

Yuhao Zhu, Shuai Le [10'+5']

Presenter affiliation: Army Medical University, Chongqing, China. 75

Beyond immunity—A native type I-F CRISPR spacer tunes respiratory physiology by transcriptional interference at a conserved respiratory/redox locus in Pseudomonas aeruginosa

Aixin Yan [10'+5']

Presenter affiliation: The University of Hong Kong, Hong Kong, China. 76

Overcoming itaconate-mediated host restriction enables oral *Salmonella enterica* serovar Typhi infection in mice

Renee M. Tsolis [20'+10']

Presenter affiliation: University of California, Davis, California.

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THURSDAY, May 14—9:00 AM

SESSION 6 DISEASE PROGRESSION AND HOST RESPONSES

Chairpersons: **Melanie Hamon**, Institut Pasteur, Université Paris Cité, Paris, France

Marc Lecuit, Institut Pasteur, Université Paris Cité, Paris, France

Host–pathogen dynamics in invasive group A streptococcal infection

Anna Norrby-Teglund [20'+10']

Presenter affiliation: Karolinska Institutet, Stockholm, Sweden.

78

Inflammation as a driver of *Mycobacterium tuberculosis* pathogenesis

Christina L. Stallings [20'+10']

Presenter affiliation: Washington University School of Medicine, St. Louis, Missouri.

79

Early metabolic reprogramming licenses *Streptococcus pneumoniae* for Influenza-driven superinfection

Marion Lagune, Niccolo Bianchi, Julien Prados, Matthieu Colpaert, Matthew S. Gentry, Jan-Willem Veening, Joachim Kloehn, Mirco Schmolke, Simone Becattini [10'+5']

Presenter affiliation: University of Geneva, Geneva, Switzerland.

80

Capsular polysaccharide determines serotype-specific Kupffer cell clearance of group B *Streptococcus*

Ping He, Jing-Ren Zhang [10'+5']

Presenter affiliation: Tsinghua University, Beijing, China.

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Break

Siglec F- expressing nasal resident myeloid cells protect against airway infection by hypervirulent *Klebsiella pneumoniae*

Kai Yi E. Lim, Aaron Y. Koh, Wilson Chu, Stacey-Ann Lee, Woon-Shuan Chong, Xue-Ting S. Tan, Sean K. J. Chua, Pablo Bifani, Teck-Hui Teo [10'+5']

Presenter affiliation: Agency for Science, Technology and Research (ASTAR), Singapore.

82

***Streptococcus pneumoniae* induces an epigenetic scar in host epithelial cells**

Christine Chevalier, Leonardo Gonzalez-Smith, Melanie Hamon [20'+10']

Presenter affiliation: Institut Pasteur, Université Paris Cité, Chromatin and Infection Laboratory, Paris, France.

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A tale of invasion and evasion

Marc Lecuit [20'+10']

Presenter affiliation: Institut Pasteur, Paris, France; Université Paris Cité, Paris, France.

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THURSDAY, May 14—2:00 PM

SESSION 7 EMERGING CONCEPTS AND NON-CANONICAL MECHANISMS IN HOST-PATHOGEN INTERACTIONS

Chairpersons: **Christopher Dehio**, University of Basel, Basel, Switzerland
Zhao-Qing Luo, The First Hospital of Jilin University, Changchun, China

Modeling uropathogenic *E. coli* infection and treatment dynamics in the human urothelium

Isabel Sorg, Amanzhol Kurmachev, Lara Grassi, Benjamin Sellner, Andreas Hierlemann, Christoph Dehio [20'+10']

Presenter affiliation: University of Basel, Basel, Switzerland.

85

The ADP-heptose/ALPK1 innate immune pathway—From antibacterial defense to antitumor immunity

Feng Shao [20'+10']

Presenter affiliation: National Institute of Biological Sciences, Beijing, China.

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Dynamic and quantitative tracking of single-cell infections using a novel microfluidic device

Dominik Brokatzky, Laura Barrio Cano, Julie Mabon, Samy Gobaa, Florian Mueller, Jost Enninga [10'+5']

Presenter affiliation: Institut Pasteur, Paris, France.

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Break

T(AHR)getting rickettsial pathogenesis—The aryl hydrocarbon receptor as a new player in rickettsioses

Pedro Curto, Miguel Mateus, Juan J. Martinez, Pedro Moura-Alves
[10'+5']

Presenter affiliation: IBMC - Instituto de Biologia Molecular e Celular, Universidade do Porto, Oporto, Portugal; i3S - Instituto de Investigação e Inovação em Saúde, Universidade do Porto, Oporto, Portugal.

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Decoding the cryptic chemistry of microbiota for drug discovery

Yong-Xin Li [10'+5']

Presenter affiliation: The University of Hong Kong, Hong Kong, China.

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Microbial bioactivation of dietary phytochemicals mediates colonization resistance against *Clostridioides difficile*

Gavin A. Kuziel [10'+5']

Presenter affiliation: NUS Medicine; National Center for Engineering Biology, NUS, Singapore.

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Killing by a sweet kiss—Metabolic signals at the interface of stress, infection, and disease

Zhao-Qing Luo [20'+10']

Presenter affiliation: The First Hospital of Jilin University, Changchun, China.

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THURSDAY, May 14—5:00 PM

COCKTAILS and BANQUET

FRIDAY, May 15

Departure