Sino-Micro 2026 Symposium (Circulation 3 and Final**)**
(2026 Annual Meeting of Overseas Chinese Society of Microbiology)
2026 海外华人微生物学会年会

June 4 (Thursday), 2026, Washington D.C.
In association with ASM Microbe 2026
Session S612: https://eppro01.ativ.me/appinfo.php?page=Session&project=ASM26&id=S612

The 2026 annual meeting of the Overseas Chinese Society of Microbiology (Sino-Micro 2026 Symposium) will be held in association with ASM Microbe 2026 (https://asm.org/events/asm-microbe, June 4-7, 2026), in Washington D.C. at the Walter E. Washington Convention Center. Our meeting will take place in the afternoon of June 4 with a mini-conference format. Scientists and medical practitioners in fundamental, clinical, food, and environmental microbiology are invited to attend the event to showcase their new discoveries and to seek opportunities for scientific collaborations.

Time: 1-4:15 pm, June 4 (Thursday), 2026
Venue: Room 146C, Walter E. Washington Convention Center, 801 Allen Y. Lew Place NW, Washington, DC 20001.

Agenda (Talks are 20 min+5 min Q&A discussion)

1:00-1:10 PM Introduction:
Sino-Micro 2026 Organization Committee: Zhao-Qing Luo (Sino-Micro President), Yiping Han (Sino-Micro President elect), Oliver He (Sino-Micro Board chair), and Hui Wu (Candidate for Sino-Micro President elect).

Self-introduction by attendees

Session 1: From Microbial Detection and Pathogenesis to Engineering
Moderator: Yiping Han

1:10-1:35 PM
Yi-Wei Tang (汤一苇), Professor, College of Public Health, Chongqing Medical University, China

Title: The Circle and Evolution of Techniques for the Laboratory Diagnosis of Microbial Infections

1:35-2:00 PM
Tao Dong (董 涛), Professor, Department of Immunology and Microbiology, School of Life Sciences, Guangming Advanced Research Institute, Southern University of Science and Technology, Shenzhen, Guangdong, China
Title: Building a powerful bacterial nanospear from soft matter: Assembly and engineering of the type VI secretion system

Session 2: Frontiers in Microbial Metabolism and Systems Monitoring
Moderator: Oliver He

2:00-2:25 PM
Jian Xu (徐 健), Director, Single-Cell Center; Director, Advanced Biomanufacturing Division; Qingdao Institute of BioEnergy and Bioprocess Technology (QIBEBT), Chinese Academy of Sciences
Title: Establishing A Global Network of Microbial Metabolic Observatories via the iMAPS Consortium

2:25-3:50 PM
Ethan YIN, Chief Scientist, eCyte Inc. (*Sino-Micro Company Sponsor 公司赞助商*)
Title: The Ramanomics Instruments for Profiling and Sorting Microbial Metabolism

Session 3: New Directions in Food Microbiology and ASM Journals
Moderator: Hui Wu

2:50-3:15 PM
Xiaonan Lu (陆晓楠), Professor, McGill University.
Title: *Campylobacter* dormancy and fitness in food supply chain
*(**note**: Dr. Lu will also introduce the new ASM journal focusing on Food Microbiology, for which he will serve as Editor-in-Chief.)*

3:15-3:40 PM
Dr. Aditi Jain, ASM Scientific Partnerships Manager
Title: Making the Most of ASM Journals

Session 4: General Sino-Micro Discussion:
3:40-4:15 PM
Moderator: Yiping Han.

Discussion topics:

- "Emerging Leader in Microbiology Award" ("微生物学启明星奖") co-sponsored by mBio and mLife (role of Sino-Micro in nomination, evaluation and other aspects) Active collaboration between Sino-Micro and ASM
- AI vs microbiology
- Sino-Micro 2027 event planning
- Promoting scientific collaboration by Sino-Micro association
- More topics. Suggestions are welcome and appreciated!

Abstracts

The Circle and Evolution of Techniques for the Laboratory Diagnosis of Microbial Infections

Yi-Wei Tang
Professor, College of Public Health, Chongqing Medical University, China

Abstract
The laboratory diagnosis of microbial infections has undergone a profound transformation over the past century, evolving from classical phenotypic methods to molecular genetic approaches and now toward ultra-sensitive molecular phenotyping. While this progression is often described as linear, a closer examination reveals a cyclical pattern: an initial reliance on observable biological function, followed by a shift toward genetic abstraction, and, more recently, a return to phenotypic measurement at unprecedented molecular resolution. This “diagnostic circle” reflects a deeper epistemological trajectory shared across multiple scientific disciplines, wherein knowledge alternates between direct observation and abstraction before converging into integrative, high-resolution frameworks. I will trace the evolution of diagnostic microbiology through three major phases - classical phenotypic methods, molecular/genetic diagnostics, and emerging ultra-sensitive phenotypic technologies - and argue that the field is entering a new era in which functional biology can be measured directly with molecular precision. This transition represents not merely technological progress but a conceptual shift toward restoring biological context, with significant implications for clinical decision-making, antimicrobial stewardship, and the future of precision infectious disease diagnostics.

Building a powerful bacterial nanospear from soft matter: Assembly and engineering of the type VI secretion system

Tao Dong
Professor, Department of Immunology and Microbiology, School of Life Sciences, Guangming Advanced Research Institute, Southern University of Science and Technology, Shenzhen, Guangdong, China

Abstract
The type VI secretion system (T6SS) is a contractile bacterial nanospear that can deliver effector proteins into competing bacterial and fungal cells through direct envelope penetration. For about 10 years, the canonical model proposed T6SS assembles "outside-in" starting from the outer membrane, but this framework could not account for its rapid and spatially precise assembly kinetics. I will discuss our recent work in multiple model species demonstrating that T6SS assembly initiates with liquid-liquid phase separation (LLPS) of the master initiator protein Fha. Fha forms dynamic cytoplasmic condensates that recruit core T6SS components, acting as pre-assembly platforms to initiate "inside-out" assembly of the T6SS complex. I will also outline the regulatory axis controlling assembly site selection and discuss how this insight provides a foundation for promising T6SS engineering and antibacterial development.

Establishing A Global Network of Microbial Metabolic Observatories via the iMAPS Consortium Jian XU

Director, Single-Cell Center; Director, Advanced Biomanufacturing Division; Qingdao Institute of BioEnergy and Bioprocess Technology (QIBEBT), Chinese Academy of Sciences

Abstract

Less than 1% of the microbes in nature has been utilized by mankind, due to the inability to monitor their in-situ metabolic functions or to mine live microbes of target function anytime and anywhere. To tackle these long-standing challenges, we have formed the iMAPS (in-situ Metabolic Atlas Projects @ Single-cell) Consortium (http://iMAPS.info), a global team of universities, research institutions, companies, and government agencies, to establish a world-wide network of iMAPS facilities. In the iMAPS Network, each node serves as a "metabolic sensor, functional-strain miner, and ecological remediator" of microbiomes for a particular scientific field or geographic area, so as to together understand, preserve and sustainably explore the power of microbiomes within and beyond human body. By high-throughput and multi-modal Raman Cytometry, RACS-Culture and RACS-Seq, iMAPS answers microbiome “Single-cell 6W” questions across ecosystems on Earth: Who (genome) is doing What (in-situ metabolism), Wealth (live pure-culture), Why (transcriptome, etc), When, Where, thus accelerating the translation of microbiome science into locally deployable yet world-wide coordinated solutions for global warming, health, agriculture, biomanufacturing, and ecosystem restoration. I will introduce the newest scientific progress made by the iMAPS network (http://iMAPS.info/Solutions).

The Ramanomics Instruments for Profiling and Sorting Microbial Metabolism Ethan YIN

Chief Scientist, eCyte Inc

Abstract

Microbiologists have long been searching for a universal, label-free, and non-disruptive technique capable of profiling and sorting cells based on their metabolic phenotypes. Raman-activated cell sorters achieve this goal by capturing cells’ molecular fingerprints using single-cell Raman spectroscopy. As a flow cytometric Raman-activated cell sorter, FlowRACS excels in throughput, analyzing and sorting thousands of cells per minute and enabling rapid metabolism-based screening of large microbial populations. It is suitable for applications such as strain development, fermentation process control, and probiotic QC. In contrast, RAMS (Raman-Activated Microfluidic Sorter) is a multi-modal single-cell sorter that combines Raman-based metabolic phenotyping with cell morphology and fluorescence analysis, providing a multi-faceted view of each cell and facilitating the identification of functional cells. Digital Colony Picker (DCP) is an innovative microfluidic device engineered for large-scale parallel cultivation of single cells, followed by automated selection and retrieval of functional clones. It enables cultivation in an aqueous environment within each of the 16,000 physically separated microchambers, real-time phenotypic monitoring during cell growth, and fully automated, AI-powered selection and contactless recovery of clones. Compatible with both microbial and mammalian cells, DCP is ideal for applications including strain and cell line development, environmental microbial resource mining, and microbiome research. Via these

innovative 'Ramanomics" instruments, the eCyte Team (www.eCyteBio.com) is working closely with the microbiologist community to make label-free sorting of live cells with targeted metabolic function as simple as a finger touch.

***Campylobacter* dormancy and fitness in food supply chain Xiaonan Lu** (陆晓楠)
Professor, McGill University, Canada.

Abstract:
Campylobacter jejuni is one of the leading causes of foodborne illnesses worldwide and poses significant challenges to food safety due to its ability to survive under unfavorable environmental conditions throughout the agri-food supply chain. This presentation summarizes recent advances in understanding *Campylobacter* dormancy and fitness, with a particular focus on biofilm formation, viable but non-culturable (VBNC) states, and persister cells. The role of biofilms in enhancing stress tolerance and environmental persistence will be discussed, together with quorum sensing-regulated biofilm development and novel control strategies targeting bacterial communication pathways. Advances in detection technologies for dormant *Campylobacter*, including intercalating dye-qPCR, loop-mediated isothermal amplification, and Raman optical tweezers integrated with microfluidics, will also be highlighted. In addition, metabolomics-based investigations into VBNC resuscitation and recent mechanistic studies on persister formation provide new insights into the survival mechanisms of *Campylobacter*. These findings contribute to improved surveillance, detection, and control strategies for enhancing *Campylobacter*-associated food safety and public health.
*(**note**: Dr. Lu will also introduce the new ASM journal focusing on Food Microbiology, for which he will serve as Editor-in-Chief.)*

Making the Most of ASM Journals Dr. Aditi Jain
ASM Scientific Partnerships Manager

Abstract:
This talk introduces how researchers can maximize the value of ASM journals across publishing, peer review, and scientific engagement. Drawing on the breadth of the ASM's portfolio of 17 journals, it highlights opportunities spanning open access, discipline-specific, clinical, and review journals, as well as new launches in animal and food microbiology. The session will provide guidance on identifying the right journal, engaging with calls for papers, and collections on artificial intelligence in microbiology. It will also showcase pathways for career development, including peer reviewing, editorial leadership, and global networking through ASM's ecosystem. Finally, the talk situates journals within ASM's broader strategy of scientific convening and community building, emphasizing how publishing, collaboration, and engagement can collectively amplify scientific impact in a global and interdisciplinary context.

Aditi is planning to give an overview of ASM Journals and our latest publishing efforts and other initiatives, including:

- Introducing our 2 new journals – ASM Animal Microbiology and ASM Food

Microbiology

- Upcoming Global Research Symposia in New Delhi (“Decoding Microbial Systems,” Sep/Oct) and Shanghai (“Precision Microbiology,” Nov. 2026)
- Thoughts on AI in microbiology and publishing
- Joint mBio-mLife Emerging Leader in Microbiology Award
- Multimedia initiatives – webinars, podcasts, WhatsApp, etc.

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June 4 (Thursday), 2026, Washington D.C.
In association with ASM Microbe 2026

Dinner and Business Session:

Time: 6:00 pm – 9:30 pm (after the Open Session of ASM Microbe)
Restaurant: **Chinatown Garden (龙之味饭店)**, 618 H St NW, Washington, DC 20001
Tel: 202-737-8887
Web: https://www.chinatowngardenwashington.com/

Agenda (Draft):

1. Introducing each other
2. Having dinner
3. Summary of current Sino-Micro administration (2024-2026)
    a. Introduction of members of the executive team and board of directors
        i. The leaders: Zhao-Qing Luo (Sino-Micro President), Yiping Han (Sino-Micro President elect), Oliver He (Sino-Micro Board chair).
    b. Association membership report
    c. Association financial report
4. **Voting for new Sino-Micro administration (duration: 2026-2028)**
    a. Vote for new leaders: Yiping Han (Sino-Micro President), Zhao-Qing Luo (Sino-Micro Board chair); and Dr. Hui Wu (Candidate for Sino-Micro President elect).
    b. Change on the Sino-Micro Board…
5. **Plan for 2027 Sino-Micro annual meeting in China**
6. Open discussion:
    - Collaboration between Sino-Micro and ASM, mLife, and other associations.
    - Further development of collaborative projects
    - AI and microbiology
    - More open discussion topics are expected and welcome.
7. Summary and future actions

Notes: More info will be posted to Sino-Micro website: https://sinomicro.org/. Suggestions and comments are welcome!