



山东大学
SHANDONG UNIVERSITY

HZI

HELMHOLTZ
Zentrum für
Infektionsforschung



SKLMT
微生物制造技术全国重点实验室
State Key Laboratory of Microbial Technology

HELMHOLTZ
International Lab
for Anti-Infectives

2025 Shandong University–Helmholtz
International Lab (HIL) Annual Meeting
&
International Conference on Microbial Natural
Products and Anti-infective Drugs

Agenda

From June 3rd to June 7th, 2025
Qingdao, China



Day 2, June 4th, 2025

Workshop:

Opening Ceremony			
Time	Topic		Host
8:30-8:40	Welcome Speech 1		Youming Zhang
8:40-8:50	Welcome Speech 2		
8:50-9:00	Welcome Speech 3		
9:00-9:10	Group Photo		
Plenary Talk			
Time	Name	Topic	Host
9:10-9:40	Rolf Müller	Novel Antibiotics from Soil Bacteria: Unearthing Nature's Biosynthetic Potential Towards Clinical Application	Shengying Li
9:40-10:10	Youming Zhang	Genome Engineering and Pathway Shuffling	
10:10-10:30	Coffee Break		
Session 1 Discovery of Microbial Natural Products for Anti-infective Molecules			
Time	Speaker	Topic	Host
10:30-10:55	Ikuro Abe The University of Tokyo	Unusual Enzyme Reactions in Natural Product Biosynthesis	Rolf Müller
10:55-11:20	Jianhua Ju Shandong University	Discovery and Biosynthesis of Anti-infective Natural Products from Microorganisms	
11:20-11:45	Chengzhang Fu Helmholtz Institute for Pharmaceutical Research Saarland (HIPS)	Novel Genome Mining Approach Development and Biosynthesis Study of Natural Products from Bacteria	
11:45-12:10	Zongqiang Wang China Pharmaceutical University	Culture-independent Discovery and Drug Development of Anti-infective Microbial Natural Product	
12:10-14:00	Lunch Break		

Session 2 Biotechnology for Natural Products and Anti-infective Drugs

Time	Speaker	Topic	Host
14:00-14:25	Shengying Li Shandong University	From Sulfur to Selenium: Reprogramming Microbial Sulfur Carrier Protein System into Organosulfur Compound Biosynthetic Machinery	Ikuro Abe
14:25-14:50	Anna K. H. Hirsch HIPS	Tackling Underexplored Drug Targets as a Pathway to Antibiotics with a Novel Mode of Action	
14:50-15:15	Changsheng Zhang South China Sea Institute of Oceanology, Chinese Academy of Sciences (CAS)	Discovery and Biosynthesis of Benzofluorene-containing Atypical Angucyclines from Marine Actinobacteria	
15:15-15:40	Xiang Gao Shandong University	Interbacterial Warfare in the Human Gut	
15:40-15:50	Coffee Break		
15:50-16:15	Martin Empting HIPS	Breaking Persistence: Tackling Chronic Bacterial and Viral Infections via Small Molecular Drugs	Wen Liu
16:15-16:40	Yunzi Luo Tianjin University	Synthetic Biology Empowers the Exploration and Innovation of <i>Streptomyces</i> Natural Products	
16:40-17:05	Paul M. D'Agostino HIPS	Discovery and Application of Furanolide Biosynthetic Machinery	
17:05-17:30	Guangyi Fan BGI Research	Genetic Dark Matter Mining Driven by the Conservative Evolution of Protein Structure	
17:30-17:55	Liuji Huo Shandong University	Genome Mining and Biosynthetic Investigations on RiPPs	

Day 3, June 5th, 2025

Session 3 Biosynthesis and Synthesis of Bioactive Small Molecules			
Time	Speaker	Topic	Host
8:30-8:55	Wei Zhang Flinders University	Deep-sea Synthetic Biomanufacturing and Bioproducts Engineering for a Sustainable Deep-sea Bioeconomy	Jiahai Zhou
8:55-9:20	Wen Liu Shanghai Institute of Organic Chemistry, CAS	Biosynthetic Logic of Nosiheptide, a Parent Bicyclic Thiopeptide Antibiotic	
9:20-9:45	Yihua Chen Institute of Microbiology, CAS	Discovery of Microbial Peptides Against Drug Resistant Pathogens	
9:45-10:10	Florian Hubrich HIPS	Expanding the Prenylated Ribosomal Peptide Diversity	
10:10-10:30	Coffee Break		
10:30-10:55	Jiahai Zhou Nanjing Normal University	Molecular Mechanism of Enzyme-catalyzed Pericyclic Reactions	Anna Hirsch
10:55-11:20	Kenan Bozhüyük HIPS	Synbio and AI-driven Optimization of Microbial Megasyntetases	
11:20-11:45	Dalei Wu Shandong University	Allosteric Regulation of “Nuclear Receptor-like” bHLH-PAS Transcription Factors by Small-molecule Ligands	
11:45-12:10	Xuenian Huang Qingdao Institute of Bioenergy and Bioprocess Technology, CAS	Decoding Micafungin Precursor Biosynthesis for Industrial Strain Engineering	
12:10-14:00	Lunch Break		

Session 4 Biochemical and Medicinal Chemistry for Small Molecules

Time	Speaker	Topic	Host
14:00-14:25	Huiming Ge Nanjing University	The Online Assembly Biosynthetic Process of Polyketides	Yihua Chen
14:25-14:50	Alexander Titz HIPS	Lectins and Glycomimetics in Infectious Diseases	
14:50-15:15	Yan Zhang Shanghai Jiao Tong University	Radical Chemistry in Anaerobic Bacteria	
15:15-15:40	Aitao Li Hubei University	Unravelling an Efficient O ₂ /Reductant-dependent Catalytic Route in Heme Peroxygenases for Sustainable Applications	
15:40-15:50	Coffee Break		
15:50-16:15	Alexander F. Kiefer HIPS	Ene diyne-based Antibody-drug Conjugates: Precision Targeting of B- cell Malignancies	Alexander Titz
16:15-16:40	Hui Tao Wuhan University	Exploring Cyclization Enzymes in the Biosynthesis of Natural Products	
16:40-17:05	Walid A. M. Elgaher HIPS	Small-molecule Inhibitors of the Immune Responsive Gene 1 (IRG1): a Host-directed Approach to Anti-infective Therapy	

Session 5 Flash Talk			
Time	Speaker	Topic	Host
17:05-17:08	Andreas M. Kany HIPS	Promoting Anti-infective Drug Discovery Using an In-house Screening Cascade for <i>in Vitro</i> ADMET Properties	Dalei Wu
17:08-17:11	Yunjun Pan Shandong University	NcAA-engineered P450s: Unlocking New Antimicrobial Macrolides	
17:11-17:14	Thorsten Kinsinger HIPS	Sialomimetic Viral Entry Inhibitors	
17:14-17:17	Yu Han Shandong University	Ktedontides: the First Alkenylated Ranthipeptides with Conserved Cys-Asn/Asp Cross-Links	
17:17-17:20	Qiuyu Zhu HIPS	A Sialomimetic Glycan Array for the Identification of Viral Entry Inhibitors	Chengzhang Fu
17:20-17:23	Jiaqi Liu Shandong University	Genome Mining of a Tribird Biosynthetic Gene Cluster Family in Bacteria	
17:23-17:26	Biyan Chen HIPS	Genetically Encoded Cross-linking Strategies for Multi-modular NRPS Assembly Engineering	
17:26-17:29	Menghan Shi Shandong University	Functional and Mechanistic Investigation of a Distinct DUF6895 Family Epimerase Involved in Lasso Peptide Modification	
17:29-17:32	Jingjun Mo HIPS	Tandem Ketone Reduction in Pepstatin Biosynthesis Reveals an F ₄₂₀ H ₂ -dependent Statine Pathway	Xiaoying Bian
17:32-17:35	Jiawei Guo Shandong University	Mechanism Study on the Sulfur Introduction and Construction of Thiolactone Ring in Thiolactomycin	
17:35-17:38	Haowen Zhao HIPS	Biosynthesis of Actimotin, Benzoxazole-containing Compounds Discovered by ACTIMOT	
17:38-17:41	Chengjie Zhang Shandong University	Oxidative Electrocyclization Assembles 2,2-dimethyl-2H-pyran in Fungal Indole Alkaloids	

Day 4, June 6th, 2025

- 9:00 AM: Depart hotel