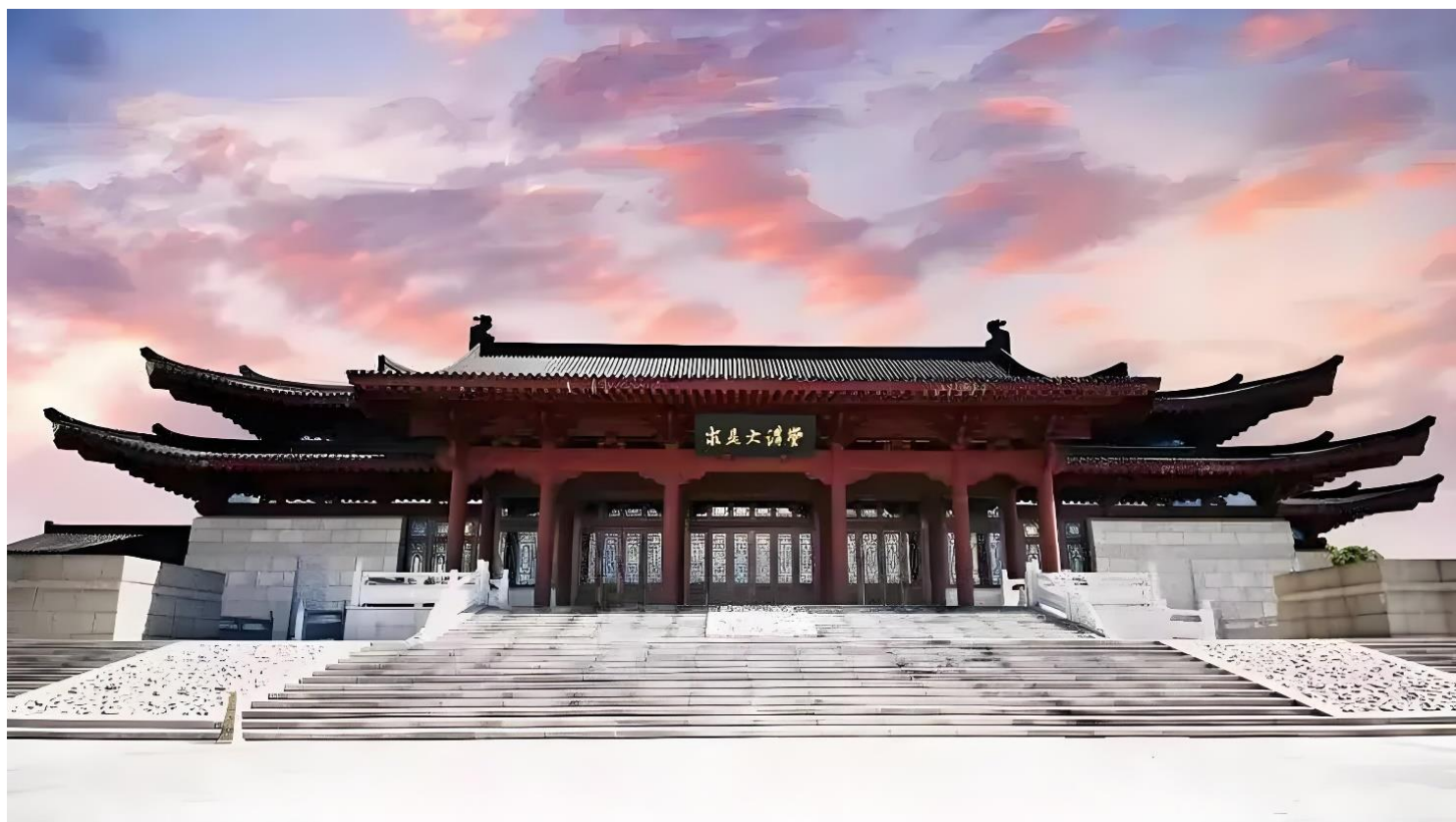


**International Symposium on Natural
Products Chemistry and Chemical Biology
2024**

Abstract Book

Nov. 23 (Fri) - Nov. 25 (Mon), 2024

Hangzhou, China



Organizers

Graduate School of Zhejiang University, China

College of Pharmaceutical Sciences, Zhejiang University, China

Asian Chemical Biology Initiative (ACBI), Japan

Institute of Modern Chinese Medicine, Zhejiang University,
China

Covered Topics

1. Chemical Synthesis and Biosynthesis of Natural Products
2. Chemical Biology
3. Drug Discovery and Development

Organization

Chairman

Prof. Jianhua Qi (Zhejiang University)

Organizing Committee

Chairmen

Prof. Jianhua Qi (Zhejiang University)

Prof. Motonari Uesugi (Kyoto University)

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Yi Wang Wenjing Yuan Yong Chen Lan Xiang Xuesong
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Secretariat

Secretary-general

Yong Chen

Members of Secretariat

Xuesong Liu Xiaoyuan Lian Lihua Peng Lijuan Gao
Ying Ye

Timetable

November 22 th	15:00- Registration at --- Yuan Zheng Qi Zhen Hotel (Zhejiang University), Yu Hang Tang Road 866, Hangzhou, China 18:00- Dinner	
November 23 th a.m.	8:30 Opening Remarks 9:00 Group Photo O1 9:20-9:45 Renxiang Tan O2 9:45-10:10 Hiroki Oguri 10:10 Tea Break (30 min)	O3 10:40-11:05 Huan Wang O4 11:05-11:30 Toshiyuki Wakimoto O5 11:30-11:55 Wen Liu
12:00 Lunch		
November 23 th p.m.	O6 13:30-13:55 Takaaki Mitsuhashi O7 13:55-14:05 Hanxin Song O8 14:05-14:30 Yiling Du O9 14:30-14:55 Richiro Ushimaru O10 14:55-15:05 Wenzhuo Li O11 15:05-15:30 Jianhua Qi 15:30 Tea Break (30 min)	O12 16:00-16:25 Dan Yang O13 16:25-16:35 Zhaleh Asadi Fakhr O14 16:35-17:00 Huiming Ge O15 17:00-17:25 Ying Ye O16 17:25-17:35 Danni Chen O17 17:35-18:00 Kazuya Kikuchi
18:30 Banquet		
November 24 th a.m.	O18 8:30-8:55 Zhen Yang O19 8:55-9:20 Midori Arai O20 9:20-9:45 Pengpeng Zhang O21 9:45-10:10 Zhujun Yao 10:10 Tea Break (30 min)	O22 10:40-11:05 Dehua Yang O23 11:05-11:30 Tengfei Xu O24 11:30-11:55 Hiroyuki Osada
12:00 Lunch		
November 24 th p.m.	O25 13:30-13:55 Motonari Uesugi O26 13:55-14:05 Yichen Wang O27 14:05-14:30 Hirokazu Kawagishi O28 14:30-14:40 Nan Zhou O29 14:40-15:05 Lishe Gan 15:05 Tea Break (30 min)	O30 15:35-15:45 Qingquan Li O31 15:45-16:10 Hiroshi Ohno O32 16:10-16:35 Xiaoguang Lei O33 16:35-17:00 Young-Tae Chang O34 17:00-17:25 Makoto Fujita 17:25 Closing Remark
18:30 Banquet		
November 25 th a.m.	O+P1 8:30-8:35 Chengli Liu O+P2 8:35-8:40 Yanan Liu O+P3 8:40-8:45 Wenping Ding O+P4 8:45-8:50 Yuying Wu O+P5 8:50-8:55 Meng Chen O+P6 8:55-9:00 Hao Zheng O+P7 9:00-9:05 Chenglong Cheng O+P8 9:05-9:10 Yang Xu O+P9 9:10-9:15 Yajing Li O+P10 9:15-9:20 Dongchen Xu O+P11 9:20-9:25 Xingming Pan O+P12 9:25-9:30 Wang Gu O+P13 9:30-9:35 Lanjie Li O+P14 9:35-9:40 Yanbing Chen	O+P15 9:40-9:45 Sinan Wang O+P16 9:45-9:50 Min Li O+P17 9:50-9:55 Minsong Guo O+P18 9:55-10:00 Mengnan Lu O+P19 10:00-10:05 Hengyuan Yu O+P20 10:05-10:10 Wenyu Zhang O+P21 10:10-10:15 Changtong Liu O+P22 10:15-10:20 Junjie Qiu O+P23 10:20-10:25 Shengnan Zhang O+P24 10:25-10:30 Yijiao Xiong O+P25 10:30-10:35 Lulu Xiao
Poster (1 h)		
11:35 Awarding session		

Program

Saturday, 23th November 2024

Oral Session

8:30		Opening Remarks (Chair: Prof. Jianhua Qi, Zhejiang University) 1 Prof. Jianhua Qi (Zhejiang University) 2 Prof. Motonari Uesugi (Kyoto University)
9:00		Group photo
9:20	O1 (P ₋)	New-to-nature regeneration of phytochemicals <u>Renxiang Tan</u> State Key Laboratory of Pharmaceutical Biotechnology, Nanjing University, Nanjing 210093
9:45	O2 (P ₋)	Biogenetically Inspired Synthesis of Skeletally Diverse Alkaloidal Scaffolds through Activation of Dihydropyridines <u>Hiroki Oguri</u> Department of Chemistry, School of Science, The University of Tokyo 7-3-1 Hongo, Bunkyo-ku, Tokyo 113-0033, JAPAN
10:10		Tea break
10:40	O3 (P ₋)	Biosynthesis of Class III Lanthipeptides <u>Huan Wang</u> Nanjing University
11:05	O4 (P ₋)	Chemoenzymatic synthesis of cyclic peptides by non-ribosomal peptide cyclases <u>Toshiyuki Wakimoto</u> Faculty of Pharmaceutical Sciences, Hokkaido University, Japan
11:30	O5 (P ₋)	A Type II Polyketide Synthase That Catalyzes Diketide Formation in Siderochelin Biosynthesis <u>Wen Liu</u> Shanghai Institute of Organic Chemistry, Chinese Academy of Sciences, Shanghai, China
12:00		Lunch

Saturday, 23th November 2024

Oral Session

13:30	O6 (P ₋)	Terpene Synthase from Giant Virus <u>Takaaki Mitsuhashi</u> Institute for Molecular Science, The University of Tokyo, Okazaki, Aichi 444-8787, Japan
13:55	O7 (P ₋)	Biocatalytic Steroidal 9 α -Hydroxylation and Fragmentation Enable the Concise Chemoenzymatic Synthesis of 9,10-Secosteroids <u>Hanxin Song</u> , Zeliang Zhang, Chunyang Cao, Zhijun Tang, Jinghan Gui and Wen Liu Shanghai Institute of Organic Chemistry, Chinese Academy of Sciences, Shanghai, China
14:05	O8 (P ₋)	Discovery of Nitrogen-Nitrogen Bond Forming Enzymes in Natural Product Biosynthesis <u>Yiling Du</u> Institute of Pharmaceutical Biotechnology, Zhejiang University School of Medicine 866# Yuhangtang Road, 310058, Hangzhou, China
14:30	O9 (P ₋)	Three membered ring formation catalyzed by nonheme iron enzymes <u>Richiro Ushimaru</u> Graduate School of Pharmaceutical Sciences, The University of Tokyo, Hongo, Bunkyo-ku Tokyo 113-0033, Japan
14:55	O10 (P ₋)	Structural insights into triple agonism of retatrutide at the GIP, GLP-1 or glucagon receptors <u>Wenzhuo Li</u> , Qingtong Zhou, Zhaotong Cong, Qingning Yuan, Wenxin Li, Fenghui Zhao, H Eric Xu, Lihua Zhao, Dehua Yang, Mingwei Wang State Key Laboratory of Chemical Biology, Chinese Academy of Sciences, Shanghai 201203, China
15:05	O11 (P ₋)	The Asexual Reproductive Hormone of Plant Pathogenic and Toxigenic <i>Fusarium</i> and It's Mechanism of Action <u>Jianhua Qi</u> College of Pharmaceutical Sciences, Zhejiang University. Add.: 866 Yuhangtang Rd, Hangzhou, Zhejiang 310058, P. R. China
15:30		Tea break

Saturday, 23th November 2024

Oral Session

16:00	O12 (P₋)	Small-Molecule Fluorescent Sensors for Molecular Detection and Imaging <u>Dan Yang</u> School of Life Sciences, Westlake University, Hangzhou, Zhejiang 310030, China
16:25	O13 (P₋)	Enhancement of trans-cleavage activity of CRISPR through engineered components <u>Zhaleh Asadi Fakhr</u> College of pharmaceutical science, Zhejiang university, Hangzhou, China
16:35	O14 (P₋)	Biosynthesis of Lankacidin-type natural product <u>Huiming Ge</u> School of Life Sciences, Nanjing University, Nanjing 210023, China
17:00	O15 (P₋)	Biosynthesis of cotylenins as protein-protein interaction stabilizers <u>Ying Ye</u> School of Pharmacy, Huazhong University of Science and Technology, Wuhan 430030, China
17:25	O16 (P₋)	Mechanism of Action Studies on ABG-001 in Improving Cognitive Function of AD Mice <u>Danni Chen</u> , Opeyemi B. Fasina, Lanjie Li, Meijuan Yi, Lan Xiang, Jianhua Qi College of Pharmaceutical Science, Zhejiang University, Yu Hang Road 866, Hangzhou, China
17:35	O17 (P₋)	in vivo Imaging probes with tunable chemical switches for monitoring protein location and function <u>Kazuya Kikuchi</u> Graduate School of Engineering, Osaka University, 2-1 Yamada-oka, Suita City, Osaka, Japan
18:30		Banquet

Sunday, 24th November 2024

Oral Session

8:30	O18 (P ₋)	Application of novel extracellular cyclophilins inhibitors in the prevention and treatment of chronic diseases <u>Zhen Yang</u> State Key Laboratory of Chemical Oncogenomics and Laboratory of Chemical Genomics, School of Chemical Biology and Biotechnology Peking University Shenzhen Graduate School, Shenzhen 518055
8:55	O19 (P ₋)	Microorganisms-animal immune cells interaction activates secondary metabolites production Yukiko Ujie, Yuri Asano, Shun Saito, <u>Midori Arai</u> Faculty of Science and Technology, Keio University, Yokohama 223-8522, Japan
9:20	O20 (P ₋)	Machine Learning Assisted Total Synthesis of Natural Products and The Modification of Drug Candidate <u>Pengpeng Zhang</u> College of Pharmaceutical Sciences, Zhejiang University, 866 Yuhangtang Rd, Hangzhou, Zhejiang 310058, China
9:45	O21 (P ₋)	Development of Isochromenylium-mediated Cascade Annulations for Natural Product Synthesis <u>Zhujun Yao</u> School of Chemistry and Chemical Engineering, Nanjing University, Nanjing, China
10:10		Tea break
10:40	O22 (P ₋)	The signal bias mediated by splice variants of class B1 G protein-coupled receptors Zhaotong Cong, Fenghui Zhao, Kaini Hang, Qingtong Zhou, Fulai Zhou, Chao Zhang, H Eric Xu, Xi Cheng, <u>Dehua Yang</u> , Ming-Wei Wang State Key Laboratory of Chemical Biology, National Center for Drug Screening, Shanghai Institute of Materia Medica, Chinese Academy of Sciences, Shanghai 201203, China
11:05	O23 (P ₋)	Natural Product Virtual screening-Interaction-Phenotype (NP-VIP) Target Characterization: A New Multi-Target Identification Approach for Natural Products Demonstrated with Salvia miltiorrhiza Extract Rui Xu, Hengyuan Yu, Yichen Wang, Boyu Li, Yong Chen, Xuesong Liu, <u>Tengfei Xu</u> College of Pharmaceutical Sciences, Zhejiang University, Hangzhou 310058, China
11:30	O24 (P ₋)	Screening of anticandidal compounds and target identification of the hit compounds Yushi Futamura, Harumi Aono and <u>Hiroyuki Osada</u> RIKEN CSRS, Wako-shi, Saitama 351-0198, Japan. Institute of Microbial Chemistry (BIKAKEN), Shinagawa-ku, Tokyo 141-0021, Japan
12:00		Lunch

Sunday, 24th November 2024

Oral Session

13:30	O25 (P ₋)	Covalent and Non-Covalent Small Molecules That Potentiate Antitumor Immunity <u>Motonari Uesugi</u> Institute for Chemical Research (ICR) and Institute for Integrated Cell-Material Sciences (WPI-iCeMS), Kyoto University, Japan
13:55	O26 (P ₋)	MetTD: Metabolomics based drug target identification method <u>Eason Wang</u> , Tengfei Xu Zhejiang University
14:05	O27 (P ₋)	Chemical elucidation of acute encephalopathy by ingestion of angel-wing mushroom (<i>Sugihiratake, Pleurocybella porrigens</i>) – involvement of three constituents in onset <u>Hirokazu Kawagishi</u> Faculty of Agriculture, Shizuoka University. Research Institute Mushroom Science, Shizuoka University, 836 Ohya, Suruga-ku, Shizuoka 422-8529, Japan
14:30	O28 (P ₋)	Plant cells transfected by a facile sonoporation-cationic nanosilicon as novel bioplatfrom for therapeutic protein and exosome production Tingwei Gu, <u>Nan Zhou</u> , Yuda Liu, Yang Xu, Luqi Huang, Lanping Guo, Lihua Peng 866 Yuhangtang Zhejiang University, Hangzhou 310058, China
14:40	O29 (P ₋)	Anti-diabetic Sesquiterpenoids from Traditional Chinese Medicine Lisha Zhang, Hao Zheng, Di Qiao, Yang Li, Changxin Zhou, <u>Lishe Gan</u> Zhejiang Chinese Medical University & Zhejiang University
15:05		Tea break

Sunday, 24th November 2024

Oral Session

15:35	O30 (P₋)	Paeoniflorin Improves the Lipid Profile in Apoc2-Deficient Zebrafish: A High-Throughput Screening Study <u>Qingquan Li</u> , Lu Zhao Pharmaceutical Informatics Institute, College of Pharmaceutical Sciences, Zhejiang University, Hangzhou 310058, China.
15:45	O31 (P₋)	Smoking affects gut immune system in inflammatory bowel disease by modulating gut metabolomic profiles and mucosal microbiota Eiji Miyauchi, Takashi Taida, <u>Hiroshi Ohno</u> RIKEN Center for Integrative Medical Sciences 1-7-22 Suehirocho, Tsutsumiku, Yokohama, Kanabawa 230-0045, Japan
16:10	O32 (P₋)	Chronic Itch: from Mechanism to Drug Discovery <u>Xiaoguang Lei</u> College of Chemistry, Peking-Tsinghua Center for Life Sciences, Peking University, China
16:35	O33 (P₋)	Dissection of live cells using fluorescent probes for reverse aging <u>Young-Tae Chang</u> Department of Chemistry, POSTECH, Pohang, Korea
17:00	O34 (P₋)	Crystalline Sponge Method Updated <u>Makoto Fujita</u> Department of Applied Chemistry, School of Engineering, The University of Tokyo, Bunkyo-ku, Tokyo 113-8656, Japan
17:25		Closing Remark Prof. Young-Tae Chang (Pohang University of Science and Technology)
18:30		Banquet

Monday, 25th November 2024

Oral + poster Session

8:30	O+P1 (P ₋)	P450-Modified Multicyclic Cyclophane-Containing Ribosomally Synthesized and Post-Translationally Modified Peptides <u>Chengli Liu</u> , Zi Jie Wang, Jing Shi, Hui Ming Ge State Key Laboratory of Pharmaceutical Biotechnology, Nanjing University, Nanjing 210023, China
8:35	O+P2 (P ₋)	Isoquercitrin improves yeast longevity through enhancing stress resistance and mitophagy <u>Yanan Liu</u> , Le Shen, Lan Xiang and Jianhua Qi College of Pharmaceutical Sciences, Zhejiang University, Yu Hang Tang Road 866, Hangzhou 310058, China
8:40	O+P3 (P ₋)	Biocatalytic Fluoroalkylation Using Fluorinated S-Adenosyl-L-methionine Cofactors <u>Wenping Ding</u> , Minqi Zhou, Yanan Du, Xingang Zhang, Zhijun Tang, and Wen Liu Shanghai Institute of Organic Chemistry, Chinese Academy of Sciences, Shanghai, China, 345 Lingling Road, Shanghai, 200032, China
8:45	O+P4 (P ₋)	The Role and Mechanism of Ginsenoside PGN1 in Dementia: A Focus on Alzheimer's disease and Vascular Dementia <u>Yuying Wu</u> , Xiaoyuan Lian College of Pharmaceutical Sciences, Zhejiang University, Hangzhou, China
8:50	O+P5 (P ₋)	β-Cyclocitral from <i>Lavandula angustifolia</i> Mill. demonstrates anti-aging effects through telomere protection, oxidative stress reduction, and autophagy activation <u>Meng Chen</u> , Jiangheng Shan, Jianxia Mo, Chenyue An, Lan Xiang, Jianhua Qi College of Pharmaceutical Sciences, Zhejiang University, Yu Hang Tang Road 866, Hangzhou, Zhejiang Province, China
8:55	O+P6 (P ₋)	Biotransformation pathways of 4-vinylguaiaicol during the aging process of <i>Citri Reticulatae</i> 'Chachiensis' Pericarpium and its anti-diabetic property <u>Hao Zheng</u> , Ligen Lin, Lishe Gan Affiliation: University of Macau Address and e-mail: Avenida da Universidade, Taipa, Macau, China
9:00	O+P7 (P ₋)	A new gentiopicrin derivative improves cognitive impairment in naturally aging AD mice by targeting AMPK and increasing neuroprotective metabolites of the gut microbiota <u>Chenglong Cheng</u> , Ying Wang, Guangfa Wang, Lan Xiang, and Jianhua Qi College of Pharmaceutical Sciences, Zhejiang University, Yu Hang Tang Road 866, Hangzhou 310058, China
9:05	O+P8 (P ₋)	Plant-derived exosomes as cell homogeneous nanoplatfoms for brain biomacromolecules delivery ameliorate mitochondrial dysfunction against Parkinson's disease <u>Yang Xu</u> , Lihua Peng Address: College of Pharmaceutical Sciences, Zhejiang University, Hangzhou

Monday, 25th November 2024

Oral + poster Session

9:10	O+P9 (P ₋)	Procyanidin A1, from the peanut skin extract, regulates oxidative stress, autophagy and cell senescence through PI3K/Akt inhibition <u>Yajing Li</u> , Lan Xiang, Jianhua Qi College of Pharmaceutical Science, Zhejiang University, Yu Hang Tang Road 866, Hangzhou, China
9:15	O+P10 (P ₋)	Methyl rosmarinate exerts anti-Parkinson's disease effects by promoting the transition of microglia from M1 to M2 phenotype through inhibition of glycolysis <i>in vitro</i> <u>Dongchen Xu</u> , Yong Chen College of Pharmaceutical Science
9:20	O+P11 (P ₋)	Solving a 30-Year Puzzle: Mg²⁺ Binding Mechanism in Class II Terpene Cyclases <u>Xingming Pan</u> , Liaobin Dong China Pharmaceutical University, 639 Longmian Avenue, Jiangning District, Nanjing, Jiangsu Province
9:25	O+P12 (P ₋)	Synthesis of Glycoconjugates through Chlorooxime–Thiol Conjugation <u>Wang Gu</u> , Jingrong Huang, Yichi Lu, Wanzhen Lin, Wei Xu, and Fa-Jie Chen College of Pharmacy, Fujian University of Traditional Chinese Medicine; College of Chemistry, Fuzhou University
9:30	O+P13 (P ₋)	GENI as an AMPK activator improves the memory dysfunction in mouse model of Alzheimer's disease <u>Lanjie Li</u> , Ying Wang, Lan Xiang, and Jianhua Qi College of Pharmaceutical Sciences, Zhejiang University, Yu Hang Tang Road 866, Hangzhou 310058, China
9:35	O+P14 (P ₋)	A multi-template molecularly imprinted ratiometric electrochemical sensor based on the improvement of functional monomers for simultaneous detection of active components in <i>Glycyrrhiza uralensis</i> <u>Yanbing Chen</u> , Shiguo Sun Key Laboratory of Xinjiang Phytomedicine Resource and Utilization, Ministry of Education, School of Pharmacy, Shihezi University, Shihezi, 832002, PR China

Monday, 25th November 2024

Oral + poster Session

9:40	O+P15 (P _)	Digital reference material method for the quality evaluation of controlled substance-containing complex botanical matrices exemplified with Ephedra sinica and patent drug <u>Sinan Wang</u> , Ruiqi Zheng, Yi Wang, Guido F. Pauli, Yu Tang Zhejiang University, Pharmaceutical Informatics Institute, College of Pharmaceutical Sciences, Zhejiang University, Hangzhou 310058, China
9:45	O+P16 (P _)	Rational design of supramolecular sensor for organelle-specific imaging of SIRT3 and its application in discovering bioactive compounds from Natural products <u>Min Li</u> , Yi Wang College of Pharmaceutical Sciences, Zhejiang University, Hangzhou 310058, China
9:50	O+P17 (P _)	High Glucose Exacerbates 6-OHDA-Induced Neuronal Injury via HK2-NF-κB-Mediated M1 Microglial Polarization <u>Minsong Guo</u> , Tengfei Xu College of Pharmaceutical Sciences, Zhejiang University, Hangzhou 310058, China
9:55	O+P18 (P _)	The effect of high altitude on ephedrine content and metabolic variations in two species of Ephedra <u>Mengnan Lu</u> , Ji De School of Ecology and Environment, Tibet University, NO. 10 East Tibet University Road, Lhasa, Tibet Autonomous Region, China
10:00	O+P19 (P _)	Integrated Thermal Proteome Profiling and Affinity Ultrafiltration Mass Spectrometry (iTPAUMS): A Novel Paradigm for Elucidating the Mechanism of Action of Natural Products <u>Hengyuan Yu</u> , Yang Chen, Yongjiang Wu, Tengfei Xu College of Pharmaceutical Sciences, Zhejiang University, Hangzhou 310058, China
10:05	O+P20 (P _)	Genome Mining and Characterization of Two Selected DinB Family Protein-Containing Biosynthetic Gene Cluster Products <u>Wenyu Zhang</u> , Zhijun Tang and Wen Liu Shanghai Institute of Organic Chemistry, Chinese Academy of Sciences, Shanghai, China, 345 Lingling Road, Shanghai, 200032, China
10:10	O+P21 (P _)	Mechanistic Insights into Immune-Checkpoint Inhibitor-Induced Cardiotoxicity and Protection by Cyanidin Chloride <u>Changtong Liu</u> , Lu Zhao Pharmaceutical Informatics Institute, College of Pharmaceutical Sciences, Zhejiang University, Hangzhou, 310058, China

Monday, 25th November 2024

Oral + poster Session

10:15	O+P22 (P _)	Prediction of pemetrexed combination drugs integrating metabolome and transcriptome <u>Junjie Qiu</u> , Tengfei Xu College of Pharmaceutical Sciences, Zhejiang University, Hangzhou, Zhejiang Province, 310058, China
10:20	O+P23 (P _)	Resources distribution, genetic diversity and metabolites of Tibetan medicinal plant <i>Saussurea obvallata</i> <u>Shengnan Zhang</u> , Ji De School of Ecology and Environment, Tibet University, NO. 10 East Tibet University Road, Lhasa, Tibet Autonomous Region, China
10:25	O+P24 (P _)	The Biosynthetic Logic of The Bicyclic Skeleton in Nosiheptide <u>Yijiao Xiong</u> and Wen Liu Shanghai Institute of Organic Chemistry, Chinese Academy of Sciences, Shanghai, China 345 Lingling Road, Shanghai, 200032, China
10:30	O+P25 (P _)	Polarity-extended liquid chromatography-mass spectrometry system for prostate cancer biomarker screening based on the extracellular vesicles <u>Lulu Xiao</u> , Tengfei Xu Zhejiang University
10:35	Poster (1 h)	
11:35	Awarding session	