

Sino-German MegaSyn Symposium 2022
"Metabolic and megaenzyme engineering
for the biosynthesis of lipids and natural compounds"

MONDAY, OCTOBER 10th (Biocenter, B2)

10.00 Coffee

10.30 (16:30 Dalian Time) Welcome – Yongjin Zhou & Martin Grininger

Session 1 (virtual): Metabolic Engineering I – Chair: Yongjin Zhou

10.40

(T1) **Zongbao K. Zhao**, Dalian Institute of Chemical Physics, CAS
"Systems engineering of the red yeast Rhodotorula toruloides"

11.15

(T2) **Liming Liu**, Jiangnan University
"Engineering E. coli for the production of fine chemicals"

Session 2 (in-person): Microbial Natural Compounds I – Chair: Martin Grininger

11.50

(T3) **Lena Barra**, University of Konstanz
"NAD Acting as a Building Block in Natural Product Biosynthesis"

12.25

(T4) **Rolf Müller**, Helmholtz-Zentrum für Infektionsforschung, Saarbrücken
"Discovery and Engineering of Natural Product-based Antiinfectives from Myxobacterial Megasynthases"

13.00 Lunch "Mensa" (75 minutes)

Session 3 (in-person): Enzyme Catalysis & Synthetic Microbiology – Chair: Jennifer Gerke

14.15 (20:15 Dalian Time)

(T5) **Gerald Lackner**, Leibniz Institute for Natural Product Research and Infection Biology, Jena
"Biosynthesis, evolution, and biotechnology of the unusual cofactor F420 and its derivatives"

14.50

(T6) **Jennifer Andexer**, University of Freiburg
"Polyphosphate-driven Biomimetic Cofactor Regeneration"

15.25

(T7) **Hajo Kries**, Leibniz Institute for Natural Product Research and Infection Biology, Jena
"Biosynthetic engineering of nonribosomal peptides"

16.00 Coffee Break (30 minutes)

Postersession (in-person)

16.30 Flash Talks – Chair: Martin Grininger
& Visit Posters and Presenters

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19.00 Dinner Hotel Relexa

TUESDAY, OCTOBER 11th (Biocenter, B2)

Session 4 (virtual): Isoprenoid Biosynthesis – Chair: Zhiwei Zhou

08.00 (14:00 Dalian Time)

(T8) **Chun Li**, Tsinghua University
"Synthesis of Licorice Triterpenoids by Yeast cell factories"

08.35

(T9) **Ying Lin**, South China University of Technology
"Metabolic engineering of Pichia pastoris for isoprenoid synthesis"

9.10 Coffee Break (20 minutes)

Session 5 (virtual): Bio-refinery – Chair: Zongbao K. Zhao

9:30 (15:30 Dalian Time)

(T10) **Min Jiang**, Nanjing Tech University
"Microbial and enzymatic degradation of waste plastics and its UPcycling"

10.05

(T11) **Yongjin Zhou**, Dalian Institute of Chemical Physics, CAS
"Methanol Biotransformation for chemical production"

10.40 Coffee Break (20 minutes)

Session 6 (in-person): Microbiology & Synthetic Biology – Chair: Henrike Niederholtmeyer

11.00 (17:00 Dalian Time)

(T12) **Helge B. Bode**, Max-Planck-Institute for Terrestrial Microbiology, Marburg
"Natural products from microbes and men"

11.35

(T13) **Dora Tang**, Max-Planck-Institute of Molecular Cell Biology and Genetics, Dresden
"Bottom-up approaches to probe the effect of compartmentalization on enzyme kinetics"

12.10

(T14) **Tobias Erb**, Max-Planck-Institute for Terrestrial Microbiology, Marburg
"Artificial Chloroplasts to drive complex molecular syntheses"

12.45 Lunch at Mensa (90 minutes)

Session 7 (in-person): Megasynthase Engineering & Protein Analysis by Mass Spectrometry – Chair: Kenan Bozhüyük

14.15 (20:15 Dalian Time)

(T15) **Russell Cox**, Leibniz University Hannover
"Deciphering the Programming Mechanisms of Fungal High-Reducing Iterative PKS"

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14.50

(T16) Nina Morgner, Goethe University Frankfurt
"Native mass spectrometry: probing molecular interactions"

15.25

(T17) Carla Schmidt, Johannes Gutenberg University Mainz
*"Combining native mass spectrometry and cross-linking
to unravel the architecture of protein complexes"*

16.00 Coffee Break & Posters

19.00 Dinner "FRANKFURTER APFELWEINKNEIPE "APFELWEIN DAX"

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WEDNESDAY, October 12th (Biocenter, B2)

Session 8 (virtual): FAS and PKS for biosynthesis – Chair: Chun Li

08.00 (14:00 Dalian Time)

(T18) Linquan Bai, Shanghai Jiao Tong University
"Comprehensive understanding of ansamitocin biosynthesis led to improved titers"

08.35

(T19) Zhiwei Zhu, Dalian University of Technology
"Engineering Yeast Metabolism for the Synthesis of Specialty Fatty Acids"

9.10 Coffee Break (20 minutes)

Session 9 (virtual): Metabolic Engineering II – Chair: Zhiwei Zhu

09.30 (15:30 Dalian Time)

(T20) Lidan Ye, Zhejiang University
"Combining metabolic engineering and protein engineering for biosynthesis of terpenoids"

10.05

(T21) Menghao Cai, East China University of Science and Technology
"Engineering P. pastoris for the synthesis of pharmaceuticals"

10.40 Coffee Break (20 minutes)

Session 10 (in-person): Analysis and design of biosynthetic pathways – Chair: Helge B. Bode

11.00 (17:00 Dalian Time)

(T22) Frank Hahn, University of Bayreuth
"Biocatalysis with PKS and other enzymes from polyketide biosynthesis"

11.35

(T23) Eric Helfrich, Goethe University Frankfurt
*"Natural product biosynthesis off the beaten path:
Charting and expanding natural product biosynthetic space"*

12.10

Closing Remarks

12.20 Lunch "Mensa"

END OF SYMPOSIUM