Enzyme Engineering XXVII

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Monday, October 2, 2023

06:00 - 08:00	Breakfast
08:30 - 08:45	Chairs welcome and opening remarks
08:45 – 09:30	Opening Plenary Talk Chair: Zhi Li Bacterial Phosphorothioate DNA Modification: New Defense Systems and Perspective Uses Zi Xin Deng, Shanghai Jiaotong University, China Session 1: Computational Tools for Enzyme Engineering
	Chair: Irmantas Rokaitis Sponsored by Biomatter Designs, UAB
09:30 – 10:10	Keynote Soluble expression of genes for enzymes in Escherichia coli Yasuhisa Asano, Toyama Prefectural University, Japan
10:10 – 10:40	Coffee Break (Sponsored by Hzymes Biotechnology Co., Ltd)
10:40 – 11:10	Invited Talk CATALYZING GREEN CHEMISTRY: In silico protocols for the efficient discovery and design of industrial enzymes Marina Canellas, Zymvol Biomodeling, Spain
11:10 – 11:40	Invited Talk Expanding the enzymatic toolbox with de novo protein design Indrek Kalvet, University of Washington, USA 4
11:40 – 12:00	Computational redesign of functional enzymes Bian Wu, Institute of Microbiology, Chinese Academy of Sciences, China
12:00 – 12:20	Machine-learning based prediction of glycosyltransferase substrates Ditte Welner, Technical University of Denmark, Denmark
12:20 – 13:30	Lunch & Networking
	Session 2: New Technologies for Enzyme Engineering Chair: Vesna Mitchell Sponsored by Codexis
13:30 – 14:10	Keynote Enzymatic recycling of plastics Uwe Bornscheuer, University of Greifswald, Germany 7
14:10 – 14:40	Invited Talk Exploring transaminase stability for biocatalysis Per Berglund, KTH Royal Institute of Technology, Sweden
14:40 – 15:00	A growth selection system for the directed evolution of amine-forming or converting enzymes Shuke Wu, Huazhong Agricultural University, China
15:00 – 15:30	Coffee Break

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15:30 – 16:00	Invited Talk The Engineering of Directed Evolution Jeff Moore, Merck & Co., Inc., USA	
16:00 – 16:20	Discovery and engineering of nylon hydrolases for PA66 recycling Joshua Michener, Oak Ridge National Laboratory, USA	10
16:20 – 16:40	Enzyme discovery and specificity fingerprints by analysis of correlated positions in CAZy family GH65 Emma De Beul, Ghent University, Belgium	11
16:40 – 17:00	Molecular mechanisms of nucleases: A single-molecule perspective Bo Sun, Shanghai University of Science and Technology, China	12
18:00 – 22:00	Standing Dinner & Poster Session (Odd-numbered posters to be presented	ed)

Tuesday, October 3, 2023

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09:10 – 09:40	Invited Talk 2-Hydroxyacyl-CoA synthases enable C1-based orthogonal biomanufacturing Ramon Gonzalez, Mojia Biotech, Singapore	14	
09:40 – 10:10	Invited Talk Enzyme engineereing of glutamate dehydrogenase for production amino acids Li-Rong Yang, Zhejiang University, China	of L-	15
10:10 – 10:40	Coffee Break (Sponsored by the Japanese Society of Enzyme Engineer	ring)	
10:40 – 11:10	Invited Talk Novel enzymes from the biosynthetic pathways of anthraquinone-f enediynes Zhaoxun Liang, Nanyang Technological University, Singapore	used	16
11:10 – 11:30	Discovery, evolution and synthetic applications of enzymes for chi oxygen-containing compounds Yong-Zheng Chen, Zunyi Medical University, China	i ral 17	7
11:30 – 11:50	Unlocking biocatalytic acylations by enzyme repurposing and engineer for amide synthesis Christian Schnepel, KTH Royal Institute of Technology, Sweden	neering	18
11:50 – 12:10	Hydroxynitrile Iyase engineering for promiscuous diastereoselectic synthesis of β-nitroalcohols Santosh Kumar Padhi, University of Hyderabad, India	ve 1	9
12:10 – 13:30	Lunch & Networking		
	Session 4: Enzyme Engineering in Synthetic Biology Chairs: Zhaoxun Liang and Robert Kourist		
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14:10 – 14:40	Invited Talk Enzyme Engineering in Synthetic Biology 2 Pimchai Chaiyen, Vidyasirimedhi Inistitute of Science and Technology,		
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16:10 – 16:40	Invited Talk α,α -Disubstituted α -amino acid metabolism including a novel three-component non-heme diiron monooxygenase system Jun Ogawa, Kyoto University, Japan	24
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	Session 5: Enzyme Engineering for Medical Application Chairs: Yongzheng Chen & Bian Wu
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09:10 – 09:40	Invited Talk Evolution of higly efficient t7 Rna polymerase for Mrna production using aptamer-based fluorescence-activated droplet sorting Guang-Yu Yang, Shanghai Jiao Tong University, China
09:40 – 10:00	TBA Wei Leong Chew, Genome Institute of Singapore, A*STAR, Singapore 28
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10:30 – 11:00	Invited Talk Accessing bacterial dark matter for improved enzyme discovery and engineering David Ackerley, Victoria University of Wellington, New Zealand
11:00 – 11:30	The use of in silico analysis to engineer the best immunogenic epitope and produce the corresponding prophylactic antigen-based vaccines with C1 production platform in order to rapidly respond to viral pandemics Ronen Tchelet, Dyadic International, Inc., USA
11:30 – 11:50	An engineered gastrointestinally stable microbial leucine decarboxylase for potential treatment of maple syrup urine disease Chinping Chng, Codexis, Inc., USA
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	Session 6: Process Engineering Chair: Pimchai Chaiyen
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