



## Conference Program

### PROGRAM OVERVIEW

Date	Time	NUS EA Auditorium	Lobby
16 <sup>th</sup> May 2018	8:50 am – 11:00 am	Session I: plenary talk I	<b>Poster Presentation and Exhibition</b>
	11:00 am – 11:30 am	Tea break and networking session	
	11:30 am – 13:10 pm	Session II: Food and Ingredients	
	13:10 pm – 14:00 pm	Lunch break (poster session)	
	14:00 pm – 16:00 pm	Session III: Fuels and Bioenergy I	
	16:00 pm – 16:30 pm	Tea break and networking session	
	16:30 pm – 18:30 pm	Session IV: Biobased Chemicals	
	18:00 pm	End of Day 1	
17 <sup>th</sup> May 2018	9:00 am – 11:00 am	Section V: Plenary talk II	
	11:00 am – 11:30 am	Tea break and networking session	
	11:30 am – 13:10 pm	Section VI: Waste treatment and valorisation	
	13:10 pm – 14:00 pm	Lunch break	
	14:00 pm – 16:00 pm	Section VII: Fuels and Bioenergy II	
	16:00 pm – 16:30 pm	Tea break and networking session	
	16:30 pm – 17:30 pm	Section VIII: Sustainable Biomolecules	
	17:30 pm – 18:00 pm	Award presentation	
	18:00 pm – 21:00 pm	Conference Dinner	
18 <sup>th</sup> May 2018	8:30 am – 13:00 pm	Technical Tours (Optional)	
	13:00 pm – 14:00 pm	Lunch	

## ORAL PRESENTATIONS

Day 1 - 16<sup>th</sup> May 2018, NUS LT1 & LT2

8:50 am - 11:00 am

Session I: Plenary talk I

**Session Chair - Dr. Anli GENG, President, BioEnergy Society of Singapore**

8:50 am - 9:00 am: Welcome Address by Dr. Anli GENG

9:00 am - 9:40 am: Integrated Biomolecular engineering framework for "molecules- 2-market", by Dr. MURALI P.M., Managing Director & CEO, Evolva Biotech Pvt Ltd.

9:40 am - 10:20 am: Sustainable Products Innovation, by Dr Magali BONNIER, Global R&D Director -Beauty Formulation, CRODA.

10:20 am - 11:00 am: Enzyme molecular evolution in synthetic biology: a key role from proof-of-concept towards precision functions, by Prof. FENG Yan, Distinguished Professor, Vice dean, School of Life Sciences and Biotechnology, Shanghai Jiao Tong University, China

### Technical talks

Day 1 - 16<sup>th</sup> May 2018

11:30 am - 13:10 pm

Session II: Food and Ingredients

**Session Chair: Dr Lianghai JJ, Head, Biomaterials & Biocatalysts Laboratory, Temasek Life Sciences Laboratory, Singapore**

11:30 am - 12:00 pm: Functional food ingredients from underutilized vegetable biomass via lactic acid fermentation, by Dr. Shiferaw Terefe NETSANET, Senior Research Scientist, CSIRO Agriculture and Food.

12:00 pm - 12:30 pm: Paradigm shift for grain processing: minimizing the wastage by reclaiming the proteins and soluble fibres from spent grains and oil seeds, by Prof. HUANG Dejian, Food Science and Technology Program, National University of Singapore.

12:30 pm - 12:50 pm: Bioactive compounds from *Chaenomeles speciose* and their antimicrobial activities, by Prof. HE Donglan, Dean of Graduate School, South-Central University for Nationalities, China.

12:50 pm - 13:10 pm: TBA

### **Day 1 - 16<sup>th</sup> May 2018**

**14:00 pm - 16:00 pm**

#### Session III: Fuels and Bioenergy I

**Session Chair - Assoc/Prof. Kun-Lin YANG, Department of Chemical and Biomolecular Engineering, National University of Singapore**

14:00 pm - 14:30 pm: Fundraising for Bioenergy and Biorefinery Startups, Mr. Saku RANTANEN, CEO, Tasma Bioenergy.

14:30 pm - 15:00 pm: Chemical modifications of celluloses, by Prof. Tsutomu INOKUCHI, Graduate School of Natural Science and Technology, Okayama University, Japan.

15:00 pm - 15:20 pm: Develop *Zymomonas mobilis* as a chassis for lignocellulosic bioproducts, by Prof. YANG Shihui, Distinguished Professor, The College of Life Sciences, Hubei University, China.

15:20 pm - 15:40 pm: Depolymerization of Lignin to Value Added Chemicals by Dr. Jayasree SEAYAD, Scientist III, Institute of Chemical and Engineering Sciences, A\*Star, Singapore.

15:40 pm - 16:00 pm: TBA

### **Day 1 - 16<sup>th</sup> May 2018**

**16:30 pm - 18:30 pm**

#### Session IV: Biobased Chemicals

**Session Chair: Assoc/Prof. Zhi LI, Department of Chemical and Biomolecular Engineering, National University of Singapore**

16:30 pm - 17:00 pm: Synthetic biology for bio-based polyesters: new polyester creation and oligomer secretion, Prof. Seiichi TAGUCHI, Tokyo University of Agriculture, Japan.

- 17:00 pm - 17:30 pm: Construction of aromatic amino acid over-producing strain by combination of omics technology and biosensor based evolution, Prof. ZHANG Dawei, Tianjin Institute of Industrial Biotechnology, Chinese Academy of Sciences, China.
- 17:30 pm - 18:00 pm: Biocatalytic Oxidation of C-H and C-N Bond for Fine Chemicals, Prof. CHEN Yong-Zheng, Dean of the School of Pharmacy, Zunyi Medical University, China.
- 18:00 pm - 18:30 pm: Tapping into C1 Metabolism to Produce Bio-based Products, by Prof. Patrick LEE, School of Energy and Environment, City University of Hong Kong.

## **Day 2 - 17<sup>th</sup> May 2018**

**9:00 am - 11:00 am**

### Session V: Plenary talk II

**Session Chair: Dr Wu Jinchuan, Head, Industrial Biotechnology, Institute of Chemical and Engineering Sciences, A\*star, Singapore**

- 9:00 am - 9:40 pm: Microalgae-based platform for carbon utilization and biofuels production - Biorefinery and circular economy perspectives, by Prof. Jo-Shu CHANG, University Chair Professor, National Cheng Kung University (NCKU), Taiwan
- 9:40 am - 10:20 am: Construction and expression of a synthetic pathway in a microbial cell for the production of an economically smart chemical precursor of methionine and other added-value products, by Prof. Jean-Marie FRANCOIS, Professor of Industrial Microbiology, Functional Genomics and BioNanotechnology, LISBP, France.
- 10:20 am-11:00 am: ARTP mutagenesis as an enabling discovery and evolution tool for systematic biobreeding of cell factories, by Prof. XING Xin-Hui, Director, Institute of Biochemical Engineering, Tsinghua University, China.

### **Technical talks**

## **Day 2 - 17<sup>th</sup> May 2018**

**11:30 am - 13:10 pm**

### Session VI: Waste treatment and valorisation

**Session Chair: Prof. Tong Yen Wah, Department of Chemical and Biomolecular Engineering, National University of Singapore, Singapore.**

- 11:30 am - 12:00 pm: Unlocking the potential of wastewater via turning waste into worth, by Mr. Andre STOLZ, CEO, EcoWorth Tech Pte. Ltd. EcoWorth Tech.
- 12:00 pm - 12:30 pm: Transforming agricultural and textile wastes into high value-added products, by Prof. Carol Sze Ki LIN, School of Energy and Environment, City University of Hong Kong.
- 12:30 pm - 12:50 pm: Supercritical fluid processing for waste volarization, by Dr. Cindy LEE Lai Yeng, Director of Excellence in Learning and Teaching (DELT) & Assistant Professor, Newcastle University in Singapore.
- 12:50 pm - 13:10 pm: Hydrothermal Liquefaction of Food Wastes, by Dr. Shy Chyi WUANG, Domain Lead, Water Technology, Temasek Polytechnic, Singapore

**Day 2 - 17<sup>th</sup> May 2018**

**14:00 pm - 16:00 pm**

Session VII: Fuels and Bioenergy II

**Session Chair - Assist/Prof. Ning YAN, Department of Chemical and Biomolecular Engineering, National University of Singapore**

- 14:00 pm - 14:30 pm: Updated Situation of Jatropha curcas: biodiesel raw material alternative, by Prof. Penjit Srinophakun, Center of Excellence for Jatropha, Kasetsart University, Thailand.
- 14:30 pm - 15:00 pm: Xylose-fermenting yeast improvement with comparative genome analysis and identification of a novel acetic acid resistance target gene in *S. cerevisiae*, by Dr. Geng Anli, School of Life Sciences and Chemical Technology, Ngee Ann Polytechnic, Singapore.
- 15:00 pm - 15:20 pm: Construction of multigene transcription programs and RFN-based biosensor in *Bacillus subtilis*, by Prof. ZHANG Guimin, The College of Life Sciences, Hubei University, China.
- 15:20 pm - 15:40 pm: TBA
- 15:40 pm - 16:00 pm: TBA

Day 2 - 17<sup>th</sup> May 2018

16:30 pm - 17:30 pm

Session VIII: Sustainable Biomolecules

**Session Chair: Assoc/Prof. Jianzhong HE, Department of Civil and Environmental Engineering, National University of Singapore**

16:30 pm - 16:50 pm: Disorder prediction-based mutation of *Bacillus naganoensis* pullulanase for improvement of its activity and catalytic efficiency, by Prof. Wang Xinye, School of Biotechnology and Key Laboratory of Industrial Biotechnology, Ministry of Education, Jiangnan University, Wuxi, China.

16:50 pm - 17:10 pm: Novel homodimer laccase from a white-rot fungus *Cerrena unicolor* BBP6 - characterization, heterologous expression, directed evolution and potential applications, by Zhang Ji, R&D Scientist, School of Life Sciences and Chemical Technology, Ngee Ann Polytechnic, Singapore.

17:10 pm - 17:30 pm: Production improvement and a novel separation method of bacteriocin Y31 produced by *Enterococcus faecium* Y31, by Dr. Liu Wenli, College of Chemistry & Environmental Engineering, Shenzhen University, China.

Day 2 - 31<sup>st</sup> May 2016

17:30 pm - 18:00 pm

Session IX: Awards Presentation

- **Best poster awards**
- **BESS Achievement Awards**

Day 2 - 17<sup>th</sup> May 2018

18:30 pm - 21:00 pm: Conference Dinner

Day 2 - 18<sup>th</sup> May 2018

**Technical Tour**

- National University of Singapore
- Temasek Life Sciences laboratories
- Wilmar Research Institutes (TBA)