3rd Asian Conference on Plant-Microbe Symbiosis and Nitrogen Fixation

Program and Abstracts

28 – 30 October, 2014

Chengdu, China

Program

TUESDAY 28 OCTOBER

All day

All day registration/check-in desk open at Holiday Inn (West Tower)

Free airport shuttle: From Chengdu International Airport to the hotel

WEDNESDAY 29 OCTOBER

08: 30 - 9: 00	
	Opening Speeches Chair: Min Lin and Qi Cheng
09: 00 - 12: 00	
	Session 1: Bioresource and Genomics Chair: Kiwamu Minamisawa and Shusei Sato
09: 00 - 09: 20	
OPS01-1	Establishment of the *Lotus japonicus* genomic information toward functional genomics **Shusei Sato**, Tohoku University, Japan
09: 20 - 09:35	
OPS01-2	Intra-species resolution insights into biogeographic patterns of bacteria in soils associated with soybean roots **Changfu Tian**, China Agricultural University, China
09: 35 – 09:50	
OPS01-3	Plant-induced inter-genus horizontal gene transfer of symbiosis islands of *Azorhizobium caulinodans* broadens rhizobial host-range specificity **Jun Zhu**, University of Pennsylvania, USA
09: 50 - 10:05	
OPS01-4	The National BioResource Project (NBRP) *Lotus* and *Glycine* in Japan **Masatsugu Hashiguchi**, University of Miyazaki, Japan
10: 05 - 10: 35	
	Coffee break
10: 35 - 10: 55	
OPS01-5	Analysis of symbiotic genes in *Bradyrhizobium* strain DOA9 **Neung Teaumroong**, Suranaree University of Technology, Thailand
10: 55 - 11:15	
OPS01-6	Current perspectives on rhizobium taxonomy and host specificity **Kristina Lindström**, University of Helsinki, Finland
11: 15 - 11: 30	
OPS01-7	Genome-wide transcription profiling of diazotrophic *Paenibacillus* sp. WLY78 growing in N2-fixing and non-N2-fixing Conditions **Sanfeng Chen**, China Agricultural University, China

11: 30 - 11: 45	
OPS01-8	How many different rhizobial species could nodulate medical legume *Sophora flavescens* and why the symbiotic promiscuity? **Wenfeng Chen**, China Agricultural University, China
11: 45 - 12: 00	
OPS01-9	Genetic diversity of rhizobia in the agro-system cereal-legume under salt stress **NourelHouda Abed**, Oran Es-Senia University, Algeria
12: 00 – 14: 00	
	Lunch Break
14: 00 – 15 : 20	
	Session 2: Plant-Microbe interaction Chair: Graham O'Hara and Barbara Reinhold-Hurek
14: 00 - 14: 20	
OPS02-1	Single-cell gene expression analysis in bacteria to elucidate the endophytic lifestyle **Barbara Reinhold-Hurek**, the University of Bremen, Germany
14: 20 - 14: 40	
OPS02-2	Plant sugnalling during sugarecane colonization with endophytic nitrogen-fixing bacteria **Adriana Hemerly**, Federal University of Rio de Janeiro, Brazil
14: 40 - 15: 00	
OPS02-3	*Burkholderia* as a model to unravel the mechanisms of plant-microbe interaction **Nazalan Najimudin**, University Sains, Malaysia
15: 00 - 15: 20	
OPS02-4	Class 1 plant hemoglobin as a modulator of nitric oxide is involved in the infection process of *Mesorhizobium loti* to *Lotus japonicas* **Toshiki Uchiumi**, Kagoshima University, Japan
15 : 20 - 15 : 45	
	Coffee break
15: 45 – 18 : 00	
	Session 3: Nitrogen Fixation and Nitrogen Cycles Chair: Neung Teaumroong and Yuichi Fujita
15: 45 - 16: 05	
OPS03-1	N2O emission from soybean rhizosphere and its mitigation based on N-cycle biology **Kiwamu Minamisawa**, Tohoku University, Japan

16: 05 - 16: 25	
OPS03-2	CnfR is a master transcriptional activator essential for nitrogen fixation in nonheterocystous cyanobacteria **Yuichi Fujita**, Graduate School of Bioagricultural Sciences, Japan
16:25 - 16: 45	
OPS03-3	Nuclear resonant vibrational spectroscopy on extremely weak Fe-CO/CN and Fe-H/D vibrations in nitrogenase, hydrogenases and their structural model complexes **Hongxin Wang**, UC Davis and Lawrence Berkeley National Lab, USA
16: 45 - 17: 00	
OPS03-4	A Purple acid phosphatase protein AsPPD1 is essential for nodule formation and nitrogen fixation in Chinese milk vetch **Youguo Li**, Huazhong Agricultural University, China
17: 00 - 17: 15	
OPS03-5	Characterization of *Mesorhizobium* strains isolated from tedera (*Bituminaria bituminosa* var. albomarginata) **Rui Tian**, Murdoch University, Australia
17: 15 - 17: 30	
OPS03-6	The quorum sensing regulator CinR hierarchically regulates two other quorum sensing pathways in ligand-dependent and-independent fashions in *Rhizobium etli* **Huiming Zheng**, Nanjing Agricultural University, China
17: 30 - 17: 45	
OPS03-7	Effect of glyphosate on bacterial community structure in rhizosphere of rice seedling innoculated with nitrogen fixing bacterium *P. stutzeri* A1501 **Wei Lu**, Biotechnology Research institute, CAAS, China
17 : 45 – 18 : 00	
OPS03-8	Transcriptional factor LsrB senses oxidation signals through posttranslational modifications, required for Rhizobium-legume symbiosis **Li Luo**, Shanghai University, China
18:00 – 20:00	
	Buffet
18:30	
	Dinner for the International Committee, discussing the time and hosting country of the 4th Asian conference

THURSDAY 30 OCTOBER

08 : 30 – 12: 00	
	Session 4: Legume and Rhizobial Symbiosis Chair: Lily Pereg and Chi-Te Liu
08: 30 - 08: 50	
OPS04-1	Understanding the basis of suboptimal and ineffective N2 fixation in newly evolved species of *Mesorhizobium* **Graham O'Hara**, Murdoch University, Australia
08: 50 - 09: 10	
OPS04-2	Symbiosis-related proteins of rhizobia and legumes **Christian Staehelin**, Sun Yat-sen University, China
09: 10 - 09: 30	
OPS04-3	*Lotus japonicus clathrin* heavy chain 1 is associated with Rop6 and Nod Factor receptor 5 and involved in nodulation process **Zonglie Hong**, University of Idaho, USA
09:30 - 09: 45	
OPS04-4	Transcriptomic profiles of nodule senescence in *Lotus japonicus* and *Mesorhizobium loti* symbiosis **Shigeyuki Tajima**, Kagawa University, Japan
09: 45 - 10: 00	
OPS04-5	The WOX genes STF and LFL are differentially required for leaf blade outgrowth and flower development in *Medicago truncatula* **Lifang Niu**, Biotechnology Research Institute, CAAS, China
10: 00 – 10: 30	
	Coffee break
10: 30 - 10: 50	
OPS04-6	Regulation of the symbiotic nodule development by *Azorhizobium caulinodans* chromosome partitioning protein: ParA **Chi-te Liu**, National Taiwan University, Taiwan
10:50 - 11: 10	
OPS04-7	Rhizobial type III secretion system controls host-dependent nodulation on soybean **Shin OKAZAKI**, Tokyo University of Agriculture and Technology, Japan
11: 10 - 11: 30	
OPS04-8	MicroRNA MiR172c targeting AP2 transcription factor GmNNC1 regulates nodulation in soybean **Xia Li**, Institute of Genetics and Developmental Biology, CAS, China

11: 30 - 11: 45	
OPS04-9	Fate map of *Medicago truncatula* root nodules, an essential tool to characterize mutant nodule phenotypes **Tingting Xiao**, Wageningen University, Netherlands
11: 45 - 12: 00	
OPS04-10	Function of the antioxidative gene katG from *Rhizobium Leguminosarum* **Guojun Cheng**, South-Central University for Nationalities, China
12: 00 - 12: 15	
OPS04-11	Function of *cysDN* and *cysH* genes associated with sulfur metabolism in *Sinorhizobium fredii* WGF03, *Sinorhizobium meliloti* 14500 and *Bradyrhizobium japonicum* USDA 6 **Bo Wu**, Guangxi University, China
12: 15 – 14: 00	
	Lunch Break
14: 00 – 16 : 15	
	Session 5: Applications for Sustainable Agriculture and Environments Chair: Nazalan Najimudin and Guoping Yang
14: 00 - 14: 20	
OPS05-1	Characterization of wide range of nitrogen-fixing microsymbionts associated with legumes growing in arid and semi-arid regions of Indian Thar Desert **Hukam Singh Gehlot**, Jai Narain Vyas Univesity, India
14: 20 - 14: 40	
OPS05-2	The potential for nitrogen fixation and denitrification in Australian cotton soils subjected to different management strategies **Lily Pereg**, University of New England, Australia
14: 40 - 15:00	
OPS05-3	Development of biofertilizer based on symbiosis microbes for soybean: Case study in Indonesia **Harmastini Sukiman**, Indonesian Institute of Sciences, Indonesia
15:00 - 15:15	
OPS05-4	The N economy of paddy rice in Myanmar: defining the critical role of biological N2 fixation **David Herridge**, University of New England, Australia

15:15 - 15:30	
OPS05-5	The advances of the rhizobial inoculant application in China **Guoping Yang**, Laboratory of quality & Safety Risk Assessment for Microbial Products, China
15: 30 - 15:45	
OPS05-6	Important agronomically role of arbuscular mycorrhizal fungi on nitrogen fixation and trehalose in chickpea genotypes under saline agriculture **Navid Baher**, Payam Noor University, Iran
15: 45 - 16: 00	
OPS05-7	Nitrogen fixing bacteria (*Azospirillum*) application, improvement and commercialization for production of agricultural crops in the Philippines **Julieta Avillar Anarna**, University of the Philippines, Philippines
16: 00 - 16: 15	
OPS05-8	Host specificity and stress tolerance of potential inoculant rhizobia **Petri Penttinen**, University of Helsinki, Finland
16 : 15 – 17 : 30	
	Coffee Break and Poster Session
17 : 30 – 18 : 00	
	Closing Session Chair: Kiwamu Minamisawa
19 : 00 -	
	Banquet Chair: Yiping Wang

FRIDAY 31 OCTOBER

08 : 00 - 12: 00

Excursion routes

Route 1) Panda Breeding and Research Center
(http://www.panda.org.cn/english)
Route 2) Dujiangyan Irrigation Water System
(http://www.djygov.com)

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