



The 6th Asian-Pacific Conference on Plant-Microbe Symbiosis and Nitrogen Fixation

Schedule “6th APMNF” 7-9 January, 2024

Date	Time	Activities	
Sunday 7-1-24	8.00 – 16.45	Excursion Route 1: Cultural Track: Old beautiful Northern style temples in Chiang Mai City, Doi Suthep Temple, Doi Kam Temple, Royal Flora Ratchapruek Park Route 2: Natural Track: Nong Hoi Agricultural Research Station, Royal Project, Queen Sirikit Botanical Garden	Appoint place: Kantary Hills Hotel Lobby (Near Reception front desk, please look for the Excursion sign) Appoint Time: Registration for excursion 7.30-8.00 am
	16.00-18.45	Registration / Drop ppt presentation file / Poster Decoration/Preparation	Room: Doi Luang-Doi Nang
	19.00-21.00	Opening Ceremony <ul style="list-style-type: none"> Welcome speech by Prof. Dr. Neung Teaumroong and Prof. Dr. Nantakorn Boonkerd Buffet Dinner 	Room: Doi Suthep 1-2
Monday 8-1-24	9.00-9.45	Plenary session 1 Prof. Dr. Kiwamu Minamisawa Tohoku University, Japan Cool earth via nitrogen-fixing bacteria: Methanotrophs and bradyrhizobia	Room: Doi Luang-Doi Nang
	9.45-10.30	Plenary session 2 Dr. Eric Giraud PHIM, France Alternatives symbioses between <i>Bradyrhizobium</i> strains and legumes: identification of new Type 3 effectors triggering nodulation independently of Nod factors	
	10.30-11.00	Plenary session 3 Prof. Dr. Neung Teaumroong SUT, Thailand Progress in bradyrhizobial effector protein from secretion system and symbiotic role in non-leguminous plants	
	11.00-11.15	Coffee Break	
	11.15-11.35	Chairman: Prof. Shusei Sato Co-Chair: Asst. Prof. Dr. Kamonchanok Umnajkitikorn Session: Bioresource and Genomics Prof. Dr. Shusei Sato Tohoku University, Japan	

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		Updated information on legume experimental resources in NBRP Lotus/Glycine	
	11.35-11.50	speaker 2 Deciphering how faba bean rhizobia adapt to acidic soils via comparative genomics Dr. Jian JIAO	
	11.50-12.05	speaker 3 The Methylomonas Pangenome Reveals A Novel Endophytic Bioresource Mr. Sahassawat Chailungka	
	12.05-13.30	Lunch Room: Lunch Room (Nimman)	
	13.30-13.50	Chairman: Prof. Chi-Te Liu Co-Chair: Dr. Takashi Goto Session: Plant – Microbe Interaction Invited speaker 1 Prof. Dr. Chi-Te Liu National Taiwan University, Taiwan From Lab to Farm: application of photosynthetic bacterial inoculant for sustainable agriculture	
	13.50-14.10	Invited speaker 2 Dr. Takashi Goto NIBB, Japan Auxin Methylation Recruited into Leguminous Nodule Symbiosis	
	14.10-14.25	speaker 3 The New Putative Type III Effector SkP48 in <i>Bradyrhizobium</i> sp. DOA9 is Involved in Legume Nodulation Dr. Pongdet Piromyou	
	14.25-14.40	speaker 4 An evolutionarily shared formin protein INFO-mediated different symbiotic intracellular infections in legume and non-legume plants Dr. Liang Pengbo	
	14.40-14.55	speaker 5 Molecular Basis of Mung Bean Symbiotic Incompatibility: A Pull-Down Assay Identifies Plant Proteins Targeted by NopP2 from <i>Bradyrhizobium</i> sp. ORS3257	

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		Dr. Pongpan Songwattana	
	14.55-15.15	Coffee Break	
	15.15-15.30	Flash poster presentation (Odd number) (1 min/person)	
	15.30-15.50	Chairman: Dr. Didier Lesueur Co-Chair: Prof. Dr. Graham Ohara Session: Application of N ₂ – fixation & N – cycle Invited speaker 1 Dr. Didier Lesueur CIAT, Hanoi, Vietnam Why scaling up cowpea inoculated with effective native rhizobia should be good for soil health and yields in Yen Bai Province of Northern Vietnam?	
	15.50-16.10	Invited speaker 2 Prof. Dr. Graham Ohara Murdoch University, Australia Consequences of inoculation - evolution of diverse rhizobia symbionts of agricultural legumes	
	16.10-16.25	speaker 3 Effect of nitrogen fixation enhancing gene on soybean growth and yield Dr. Akihiro Suzuki	
	16.25-16.40	speaker 4 Screening and evaluation of efficient nitrogen fixing rhizobia specific to cultivars of <i>Vigna radiata</i> recommended for different agro climatic regions of India Dr. Nisha Tak	
	16.40-16.55	speaker 5 The denitrification pathway of <i>Bradyrhizobium ottawaense</i> and its potential application in N ₂ O mitigation Dr. Atsuo Suzuki	
	17.00-18.00	Poster presentation (odd No.)	
Tuesday 9-1-24	9.00-9.20	Chairman: Prof. Dr. Toshiki Uchiumi Co-Chair: Dr. Kamonluck Teamtisong	Room: Doi Luang-Doi Nang

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		<p>Session: Application of N₂– fixation & N – cycle (continue)</p> <p>Invited speaker 1 Prof. Dr. Toshiki Uchiumi Kagoshima University, Japan</p> <p>Class 1 plant hemoglobin functions in two different symbiotic systems of <i>Lotus japonicus</i></p>
	9.20-9.35	<p>speaker 2 Transcriptome Analysis of Two RpoN Sigma Factors in <i>Bradyrhizobium</i> sp. Strain DOA9: Insights into Nitrogen Fixation Regulation under Free-Living Conditions</p> <p>Dr. Jenjira Wongdee</p>
	9.35-9.50	<p>speaker 3 Mechanism of endophytic bradyrhizobial cell viability, differentiation, and nitrogen fixation in rice, chili, and tomato</p> <p>Dr. Teerana Greetatorn</p>
	9.50-10.15	<p>Coffee Break</p>
	10.15-10.35	<p>Chairman: Prof. Dr. Arinthip Thamchaipenet Co-Chair: Dr. Katsuharu Saito</p> <p>Session: Non – legume and Microbial Symbiosis</p> <p>Invited speaker 1 Prof. Arinthip Thamchaipenet KU, Thailand</p> <p>Beneficial endophytic streptomycetes alleviate salinity tolerance in rice</p>
	10.35-10.55	<p>Invited speaker 2 Prof. Dr. Katsuharu Saito Shinshu University, Japan</p> <p>Enhancing asymbiotic growth in arbuscular mycorrhizal fungi using mixed fatty acids</p>
	10.55-11.10	<p>speaker 3 Arbuscular mycorrhizal <i>Acaulospora morrowiae</i> suppresses growth and nutrient uptakes of host plants regardless of soil P availabilities</p> <p>Dr. Lompong – Klinnawee</p>

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	11.10-11.25	speaker 4 Matching of cannabis endophytic bacterial microbiomes for plant growth stimulation and metabolite promotions Dr. Panlada Tittabutr	
	11.25-13.00	Lunch	Room: Lunch Room (Nimman)
	13.00-13.20	Chairman: Prof. Dr. Shin Okazaki Co-Chair: Prof. Dr. Chang-Fu Tian Session: Legume and Rhizobial symbiosis Invited speaker 1 Prof. Dr. Shin Okazaki TUAT, Japan Symbiotic roles of rhizobial type III effectors in soybean nodulation	Room: Doi Luang-Doi Nang
	13.20-13.40	Invited speaker 2 Prof. Dr. Chang-Fu Tian China Agricultural University, China Optimization mechanisms for symbiotic function of broad-host-range <i>Sinorhizobium fredii</i>	
	13.40-13.55	speaker 3 Wild mungbean resistance to the nematode <i>Meloidogyne enterolobii</i> involves the induction of phenylpropanoid metabolism and lignification Dr. Sook-Kuan Lee	
	13.55-14.10	speaker 4 Performance in nurseries and analysis of native microbial symbionts of Australian Acacia hybrid seedlings in Northern Vietnam (Phu Tho Province) Ms. Anh Phuong Ngo	
	14.10-14.25	Flash poster presentation (even No.) (1 min/person)	
	14.25-14.45	Coffee Break	Committee meeting Room: Small Party Room
	14.45-15.45	Poster presentation (even No.)	Room: Doi Luang-Doi Nang

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Date	Time	Activities
	15.45-16.00	Chairman: Dr. Toungporn Uttarotai Co-Chair: Dr. Pongdet Piromyou Session: Young Scientist (Oral presentation) speaker 1 Phylogenetic diversity of rhizobia nodulating <i>Crotalaria pallida</i> intercropped with coffee trees in Gia Lai province, Vietnam Mr. Long Nguyen Van
	16.00-16.15	speaker 2 Unveiling the Tripartite Synergistic Enhancement of Plant-Arbuscular Mycorrhizal Fungus Symbiosis by endophytic <i>Bacillus velezensis</i> S141 in <i>Lotus japonicus</i> Mr. Sutee Kiddee
	16.15-16.30	speaker 3 Enhancement of Rhizobial Inoculant for Peanut through Co-inoculation with Phosphate-Solubilizing Bacteria Dr. Jean Louise Cocson Damo
	16.30-16.45	speaker 4 Basidiomycetes Fungi isolated from rice in northern Thailand: Advantage or Disadvantage? Ms. Sahar Absalan
	16.45-17.00	speaker 5 Isolation and characterization of cowpea rhizobia in Myanmar Dr. Aung Zaw Htwe
	17.00-17.15	speaker 6 Role of type IV secretion system (T4SS) in <i>Bradyrhizobium</i> -legumes symbiosis Ms. Praneet Wangthaisong
	17.15-17.30	speaker 7 Identification of a genomic region related to host specificity in nodule symbiosis of <i>Lotus burttii</i> Mr. Yuhei Chiba

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	17.30-17.45	speaker 8 Phyllospheric Bacteria Isolated from Broccoli (<i>Brassica oleracea</i> var. <i>italica</i>) as Biocontrol Agent against <i>Ralstonia solanacearum</i> and as Plant Growth Promoting Bacteria Mr. Ariya Putra	
	17.45-18.30	Special lecture by Prof. Shusei Sato Overview & Inspiration on Plant-microbe interaction Research: The future and the possible collaboration	
	18.30-18.50	Closing Remark - Summarize the overall research from the 6 th APMNF by Prof. Dr. Kiwamu Minamisawa - Summarize of the meeting and closing the conference by Prof. Dr. Neung Teaumroong	
	19.30-23.00	Banquet & Awards Ceremony (Dressing with Traditional Thai Northern Style)	Room: Room: Doi Suthep 1-2



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Poster Presentation

Poster No.	Topic	Name	Theme
1	Identification of cannabis strains using Inter-Simple Sequence repeats (ISSRs) molecular marker	Ms.Souphaphone Keomany	1. Bioresource and Genomics
2	Impacts of Humic Acid Applications on Soil Bacterial Abundance and Community under Sweet Corn Rhizospheric soil	Ms.Mona Ayu Santi	
3	The National BioResource Project (NBRP) for Lotus and Glycine in Japan: QTL analysis for seed storability in soybean under different temperature	Dr. Pakanan Jiamtae	
4	Effects of rice straw and its derived biochar incorporation on soil enzyme activity in a flooded rice field	Ms. Saowalak Somboon	2. Plant – Microbe Interaction
5	The role of SUMO protease from Bradyrhizobium sp. DOA9 on Arachis hypogaea L. symbiosis	Mr. Beedou Aphaiso	
6	Lettuce Promoting Activity of Siderophore Producing Streptomyces sp. Rh1-5-22	Ms. Benyapa Kitwetch	
7	Unveiling Drought-Mitigating Potential of Streptomyces thermocarboxydus S3 in Pepper (Capsicum annum L.) Seedlings: Mechanistic Insights from Genome Mining	Dr. Pharada Rangseekaew	
8	Unlocking the Power of Bacillus velezensis S141: Unraveling Synergistic Growth Promotion and Biocontrol in Legumes	Dr. Nantakorn Boonkerd	



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9	Protein-protein interaction assay between <i>Vigna radiata</i> proteins and effector protein, NopP2, from <i>Bradyrhizobium elkanii</i> USDA61	Ms. Natcha Purksametanan	
10	The molecular interaction between <i>Lotus japonicus</i> and <i>Bradyrhizobium</i> mediated by type 3 effector protein, NopM	Ms. Cui Ying	
11	Application of Recombinant Human scFv Antibodies for the Enumeration of Individual Viable Cells in Mixed-Culture <i>Bradyrhizobial</i> Inoculants	Mr. Chayanan Singtothong	3. Application of Nitrogen – fixation & N – cycle
12	Amino-vinyl-glycine (AVG) and Indole-3-butyric acid (IBA) in Seed Coating enhance Plant growth and nitrogen fixation of soybean cv. CM60 under stress condition	Dr. Kamolchanok Umnajkitikorn	
13	AI-designing based on likelihood of evolutionarily structural origin between multi-subunit nitrogenase-like enzymes and single-polypeptide LPOR-like catalysts	Prof. Qi Cheng	
14	Transcriptomic study on the growth-promoting impact of <i>Bacillus velezensis</i> S141 on <i>Cannabis sativa</i>	Dr. Pakpoom Boonchuen	4. Non-legume and microbial symbiosis
15	Plant root endophytic bacteria for mitigation of greenhouse gas from agricultural fields	Dr. Shun Hashimoto	



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16	Production of Arbuscular Mycorrhizal Fungal spores in Zea mays using Light Emitting Diode (LED) condition	Dr. Kamonluck Teamtison	
17	Improve the Production of Edible Cassava (Manihot esculenta Crantz) cultivar Phiroon 6 using Biofertilizers for Sustainable Agriculture	Ms. Niramom Lakkason	
18	A genome DNA sequencing analysis of a root bacteria from water floating legume, Neptunia natans, indicated it as Stenotrophomonas pavidii.	Dr. Shigeyuki Tajima	5. Legume and Rhizobial symbiosis
19	Black pepper (Piper nigrum) – Arachis pintoi intercropping system in the Central Highlands in Vietnam: Impact on the soil fertility and the diversity of native rhizobia	Mr. Duy Quang Nguyen	
20	Unveiling a novel paradigm in Bradyrhizobium strains triggering NF-independent nodulation in soybean	Ms. Safirah Tasa Nerves Ratu	
21	Nod-factor independent symbiotic phenomena and symbiotic inhibition factor of Bradyrhizobium and Aeschynomene genus	Mr. Shogo Fukunaga	
22	Function of cysteinyl-tRNA synthetase of Mesorhizobium loti in root nodule symbiosis	Dr. Mitsutaka Fukudome	
23	Modulating Plant Defense Pathways: Bradyrhizobium sp. DOA9 Priming Induces Resistance to Cercospora canescens	Mr. Apisit Songsaeng	



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24	Assessing the Antagonistic Potential of <i>Rhizobium sp. Isolates</i> Against <i>Sclerotium rolfsii</i> , Causative Agent of Stem and Root Rot in Yard-Long Beans	Dr. Pilunthana Thapanapongworakul	
25	Screening and Efficiency Assessment of Rhizobium Strains for Growth Enhancement of Yard- Long Beans	Ms. Tawanchai Khuendee	
26	Screening of Rhizobium Strains Isolated from Yard-Long Bean for Their Plant Growth-Promoting Ability	Dr. Yupa Chromkaew	
27	Selection and evaluation of Bradyrhizobium inoculum for peanut, <i>Arachis hypogea</i> production in the Lao People's Democratic Republic	Ms. Tarnee Phimphong	
28	Enhancing Siamese Rosewood (<i>Dalbergia cochinchinensis</i>) Reforestation Success: The Impact of Rhizobial Inoculation on Nodulation and Growth	Dr. Janpen Prakamhang	