

***The First International Symposium on
Botanical Gardens and Landscapes
2-4 December 2019
Asia Hotel, Bangkok, Thailand***

Sunday 1 December 2019

Orchid Room, 1st Floor, Asia Hotel

12:00-17:00 hr. Pre-registration

Monday 2 December 2019

King Petch Hall, 3rd Floor, Asia Hotel

8.00-9.00 hr.

Registration and Posting Posters

9:00-10:00 hr.

Opening Ceremony

MC: Asst. Prof. Dr. Alyssa Stewart

- Welcome Address

by Associate Professor Dr. Kanchit Thammasiri, BGL 2019 Convener

- Welcome Address

by Associate Professor Dr. Puangpaka Umpunjun, Head of Department of Plant Science, Faculty of Science, Mahidol University

- Opening Address

by Associate Professor Dr. Palangpon Kongsaree,
Dean, Faculty of Science, Mahidol University

- Welcome and Presentation

by Professor Dr. Francesco Orseni

Chair, Division Landscape and Urban Horticulture (ISHS)

- Welcome and Presentation

by Dr. Yuri Plugatar

Director of the Nikita Botanical Gardens

- Presentation of ISHS certificate and medal to Symposium Convener

- Presentation of Souvenirs to Symposium Sponsors

- Group Photographs

10:00-10:30 hr.

Keynote Presentation:

Botanic garden and plant diversity conservation in China

Shengji Pei, Kanchit Thammasiri, Zhiwei Yang

10:30-10:45 hr.

Coffee Break

Invited Oral Presentations

Chair: Dr. Vladimir Upelniek

Secretary: Assoc. Prof. Dr. Paweena Traiperm

- 10:45-11:05 hr. I_1 **COP for botanic gardens**
Hugh W. Pritchard, Xiangyun Yang, Kanchit Thammasiri,
Yan Zhu, Anders Lindstrom, Anna Nebot, Dani Ballesteros
- 11:10-11:30 hr. I_2 **Biocultural Diversity Conservation in Botanical Gardens**
Chunlin Long, Zhuo Cheng, Guanhua Li, Yanxiao Fan,
Xia Jiang, Liu He, Kanchit Thammasiri
- 11:35-11:55 hr. I_3 **From microgarden technologies to vertical farms:
Innovative growing solutions for multifunctional urban
agriculture**
Francesco Orsini, Giuseppina Pennisi, Giorgio Gianquinto
- 12:00-13:00 hr. Lunch Break
- 13:00-13:20 hr. I_4 **Biotechnology ways of plant biodiversity conservation in
botanical gardens of Russia**
Irina Mitrofanova, Olga Molkanova

Session I: Researches in Botanical Gardens (BG)

Chair: Prof. Shenji Pei

Secretary: Asst. Prof. Dr. Wisuwat Songnuan

- 13:25-13:40 hr. BG_1 **Water and nutrient management in botanical gardens and
horticulture**
Uwe Schindler, Frank Eulenstein
- 13:45-14:00 hr. BG_2 **Development of the collections of floral-ornamental crops
in the Nikitsky Botanical Gardens**
Svetlana Plugatar, Yuri Plugatar, Zinaida Klimenko,
Vera Zykova, Ludmila Alexandrova, Irina Ulanovskaya,
Natalya Zubkova, Natalya Smykova
- 14:05-14:20 hr. BG_3 **The Nikitsky Botanical Gardens: record of achievements
and prospects**
Yuri Plugatar
- 14:25-14:40 hr. BG_4 **Development of a master plan and fund-raising plan for
the M.S. Swaminathan botanical garden in Wayanad,
India**
Sarada Krishnan, Anil Kumar, Madhura Swaminathan
- 14:45-15:00 hr. BG_5 **Research on the construction of Chinese botanical garden
exhibition system based on regional characteristics**
Peiyao Hao, Zonghui Hu, Xinyi Shu, Dandan Zhang

15:05-15:20 hr. BG_6 **People pollinating partnerships: Harnessing collaborations between botanic gardens and agricultural research organizations on crop diversity**
Sarada Krishnan, Stephanie L. Greene, Colin K. Houry, Jeff Kuehny, Allison J. Miller, Tara Moreau, Ari Novy

15:20-15:35 hr. Coffee Break

Session II: Researches in Landscapes (LS)

Chair: Prof. Dr. Francesco Orsini

Secretary: Assoc. Prof. Dr. Paweena Traiperm

15:35-15:50 hr. LS_1 **A taxonomic key for identifying seeds of undesirable plants in landscapes**

Phil Allen

15:55-16:10 hr. LS_2 **Residential garden as green infrastructure: A research-by-design case study in Chiang Mai**

Pongsakorn Suppakittpaisarn, Chulalux Wanitchayapaisit, Nadchawan Chareonlerthanakit, Vipavee Surinseng, Ekachai Yaipimol

16:15-16:30 hr. LS_3 **University-trained volunteers use demonstration gardens as tools for effective and transformative community education**

Karrie Reid, Melissa Gable

16:30-17:30 hr. Poster Presentations (Odd Numbers)

17:30-18:30 hr. Poster Presentations (Even Numbers)

18:30-20:30 hr. Welcome Dinner and Cultural Show

Tuesday 3 December 2019

King Petch Hall, 3rd Floor, Asia Hotel

MC: Asst. Prof. Dr. Alyssa Stewart

Session II: Researches in Landscapes (LS) (continued)

Chair: Prof. Dr. Phil Allen

Secretary: Asst. Prof. Dr. Sasivimon C. Swangpol

- | | | |
|----------------|--------------|---|
| 8:30-8:45 hr. | LS_4 | <p>Design of fire-affected school grounds of special primary and secondary schools
Angeliki Paraskevopoulou, Kyriakos Aggelakopoulos, Eleftheria Stathopoulou</p> |
| 8:50-9:05 hr. | LS_5 | <p>Bridging interdisciplinary knowledge for sustainable urban landscapes: results from the international student competition UrbanFarm2019
Francesco Orsini, Giuseppina Pennisi, Andrea D'Alessandro, Denisa Kratochvilova, Gloria Steffan, Mattia Paoletti, Gianmarco Sabbatini, Michele D'Ostuni, Antonella Trombadore, Giorgio Gianquinto</p> |
| 9:10-9:25 hr. | LS_6 | <p>Floral visitors of Kluai Bua Si Som (<i>Musa rubra</i>: Musaceae): an ornamental plant in Thailand
Wipawee Nilapaka, Thaya Jenjittikul, Alyssa Stewart, Kongmaitree Tedsungnoen, Sasivimon C. Swangpol</p> |
| 9:30-9:45 hr. | LS_7 | <p>Identifying obstacles for autonomous mowers in the North American landscape
Alyssa Brown</p> |
| 9:45-10.00 hr. | Coffee break | |

Session III: Researches in Plant Conservation (PC)

Chair: Prof. Dr. Maria Papafotiou

Secretary: Asst. Prof. Dr. Wisuwat Songnuan

- | | | |
|-----------------|------|--|
| 10:00-10:15 hr. | PC_1 | <p>Conservation strategies for a critically endangered species, <i>Madhuca insignis</i> (Radlk.) H.J. Lam - A unique case model
P.E. Rajasekharan</p> |
| 10:20-10:35 hr. | PC_2 | <p>Aquagene: A unique conservatory for aquatic plants of south India at KSCSTE ' MBGIPS, Kerala, India
N.S. Pradeep, K.P. Anoop, P.V. Madhusoodanan, Kumar S. Pradeep</p> |
| 10:40-10:55 hr. | PC_3 | <p>Cryopreservation of <i>Fragaria x ananassa</i> using different techniques</p> |

Sandhya Gupta, Prashant Tewari

Session IV: Researches in Plant Tissue Culture (PTC)

Chair: Asst. Prof. Dr. Kullanart Obsuwan

Secretary: Asst. Prof. Dr. Panida Kongsawadworakul

- 11:00-11:15 hr. PTC_1 **Shoot multiplication of HQC34 hybrid pineapple [*Ananas comosus* (L.) Merr.] via bioreactor with different concentrations of 6-benzylaminopurine and MS medium**
Lenti Valentina, Yulian Yulian, Orchat Sittichan,
Suneerat Sripaoraya
- 11:20-11:35 hr. PTC_2 **Establishment of a protocol for micropropagation of *Clausena guillauminii* Tanaka**
Supanath Kanjanawattanawong, Natthathida Singbumrung
- 11:40-11:55 hr. PTC_3 **Some features of in vitro morphogenesis in endangered *Seseli lehmannii* Degen**
Olga Mitrofanova, Irina Mitrofanova, Marina Rudenko,
Nina Lesnikova-Sedoshenko, Tatyana Kuzmina
- 12:00-12:15 hr. PTC_4 **An efficient in vitro plantlet regeneration of an ornamental aquatic plant *Anubias heterophylla* through shoot tip culture**
Ariya Walam, Sutha Klaocheed, Kanchit Thammasiri,
Suphat Rittirat
- 12:15-13:15 hr. Lunch Break

Session V: Researches in Production, Physiological, Phytochemical, and Molecular Studies (M)

Chair: Dr. Rujira Deewatthanawong

Secretary: Asst. Prof. Dr. Unchera Viboonjun

- 13:15-13:30 hr. M_15 **Phytochemical content and antioxidant activity of leaf extracts from nine bamboo species and determination of flavone C-glycosides by TLC and HPLC**
Pennapa Karawak, Supanyika Sengsai,
Chockpisit Thepsithar, Sarunyaporn Maksup
- 13:35-13:50 hr. M_16 **Anticancer efficacy of *Luisia zeylanica* Lindl., an epiphytic orchid from Eastern Ghats of Andhra Pradesh, India--an in vitro approach**
Shaik Mahammad Khasim, Katta Jhonsi
- 13:50-15:00 hr. Coffee Break
- 15:00-16:30 hr. Business Meeting and Closing Ceremony

Tuesday 3 December 2019

Patumwan Hall, 2nd Floor, Asia Hotel

MC: Dr. Saroj Ruchisansakun

Session V: Researches in Production, Physiological, Phytochemical, and Molecular Studies (M)

Chair: Prof. Dr. Chunlin Long

Secretary: Dr. Saroj Ruchisansakun

- 8:30-8:45 hr. M_1 **Asexual and sexual propagation of *Muntingia calabura* L.**
Fitriana Nasution, Chinawat Yapwattanaphun
- 8:50-9:05 hr. M_2 **Vapour phase antifungal activity of essential oils and their raw materials against *Aspergillus* sp., *Curvularia lunata*, and *Fusarium sacchari***
Alex Ahebwa, Rachsawan Mongkol,
Mana Kanjanamaneesathian
- 9:10-9:25 hr. M_3 **Efficacy of ethanolic extracts of galangal (*Alpinia galanga* L.) in mycelial growth of *Fusarium sacchari* and *Curvularia lunata* and their phytotoxicity on Pak choi (*Brassica rapa* var. *chinensis*)**
Molika Ma, Mana Kanjanamaneesathian,
Rachsawan Mongkol
- 9:30-9:45 hr. M_4 **Promoted tuber yields in Jerusalem artichoke by controlled spectral distribution lighting with LED**
Thitima Seedapalee, Panupon Hongpakdee
- 09:45-10:00 hr. Coffee Break
- 10:00-10:15 hr. M_5 **Mechanical stimulation techniques promote compactness in potted sunchoke production**
Kesorn Kaewbua
- 10:20-10:35 hr. M_6 **Site analysis and development of strategy to enhance the identity of Lycabettus Hill in Athens and support sustainable management**
Maria Papafotiou, Angeliki Paraskevopoulou,
Anastasia Akoumianaki-Ioannidou, Verina Myroforidou,
Matina Galati, Christina Andreopoulou,
Anna-Maria Vissilia, Konstantinos Choundas,
Ioannis Kontos, Theodora Porfyraiki,
Feve Christara-Papageorgiou, Dimitrios Gogolos,
Eleni-Anna Papakonstantinou

Session V: Researches in Production, Physiological, Phytochemical, and Molecular Studies (M) (continued)

Chair: Prof. Dr. Mohammad Khasim Shaik

Secretary: Asst. Prof. Dr. Aussanee Pichakum

- 10:40-10:55 hr. M_7 **Effect of substrate type and cultivation position on growth and safety to consume of the edible medicinal species *Crithmum maritimum* L., in an extensive urban green roof in Athens (Greece)**
Aikaterini N. Martini, Maria Papafotiou, Ioannis Massas, Nikoleta Chorianopoulou, Ivana Zivanovic
- 11:00-11:15 hr. M_8 **Effect of hydroponic and organic fertilizer on growth, safety, and storage quality of watercress (*Nasturtium officinale* R. Br.)**
Sutin Kunyamee, Supraween Suvunnaphom, Kanokporn Sananon, Maliwan Saouy
- 11:20-11:35 hr. M_9 **Summer condition promoted growth, development, and carbohydrate content in sacred lotus (*Nelumbo nucifera* Gaertn.)**
Sornnarin Suangto, Soraya Ruamrungsri, Panupon Hongpakdee
- 11:40-11:55 hr. M_10 **Controlled porosity based sub-surface porous vessel (SSPV) structures for irrigating organic farms of Fruits and Vegetables**
Anand Plappally, Lovelesh Dave, Hanwant Rathore, Nirmal Gehlot, Rajkumar Satankar, Sandeep Gupta, Pankaj Jakhar, Amrita Nighojkar, Meraj Ahmad
- 12:00-12:15 hr. M_11 **Effect of paclobutrazol on growth of young potted flame tree (*Delonix regia* (Boj. ex Hook) Raf.)**
Pichaporn Srikoat, Aussanee Pichakum, Patchareeya Boonkorkaew, Nath Pichakum
- 12:15-13:15 hr. Lunch Break

Session V: Researches in Production, Physiological, Phytochemical, and Molecular Studies (M) (continued)

Chair: Prof. Dr. Irina Mitrofanova

Secretary: Asst. Prof. Dr. Aussanee Pichakum

- 13.15-13:30 hr. M_12 **Ethnobotanical study on medicinal dietary plants used by the Yi people in southeastern Yunnan, China**
Yong Xiong, Jingxian Sun, Xiangzhong Huang, Chunlin Long

- 13:35-13:50 hr. M_13 **Value analysis of *Hedychium flavum*, a Buddhist plant**
Guanhua Li, Chunlin Long
- 13:55-14:10 hr. M_14 **Acoustic diagnostics of phytopathogenic damage to the trunk wood of *Magnolia grandiflora* L.**
Vladimir Gerasimchuk, Yuri Plugatar

Wednesday 4 December 2019

Technical Tour (Starting from Asia Hotel)

8:30-17:30 hr. Visit Suan Luang Rama IX Garden, Bangkok and back to Asia Hotel

Post Tour (Starting from Suan Luang Rama IX Garden)

15.30 hr. Transfer from Suan Luang Rama IX Garden to Suvarnabhumi Airport (BKK) for a 5-day visit to beautiful gardens in Chiang Rai and Chiang Mai in northern Thailand