Preface

This volume is the collection of papers presented at the International Conference and Exhibition on Pharmaceutical Sciences and Technology 2020 (PST 2020) taken place at the College of Pharmacy, Rangsit University, Thailand on 19-20 May 2020 which brought together multidisciplinary researchers from academia, industry and government, and provide valuable opportunities for international networking and knowledge exchange.

The PST 2020 conference provided a forum for discussion and knowledge sharing on the recent discovery and accomplishment in the area of pharmaceutical engineering and pharmaceutical sciences, pharmaceutical materials, nano-products, polymers, cosmetics, and material processing which encourage the innovation development of pharmaceutical materials and technology as well as technology transfer toward researchers and industries.

The conference has attracted a lot of researchers and industry practitioners which almost 200 delegates from the United Kingdom, China, Japan, India, Malaysia, Philippine, Indonesia, Singapore, Myanmar, and Thailand attended the conference. All those who supported PST 2020 conference, including all the authors submitted abstract, proceeding and papers to PST 2020 conference as well as the reviewers who reviewed the submitted manuscript, are acknowledged for the success of this meeting. We also would like to thanks the organizing committees and scientific committees for their contribution and devotion to the organization of the conference.

Associate Professor Dr. Thanapat Songsak Dean, College of Pharmacy, Rangsit University Chairman of PST 2020

Associate Professor Dr. Chalermsri Pummangura Dean, Faculty Pharmacy, Siam University Chairman of PST 2020

Assistant Professor Dr. Jirapornchai Suksaeree Chair of Scientific Committee of PST 2020

Committees

Advisory Board

Chomchin Chantaraskul TIPA.

Thailand

Isada Sirimontree

TIPA, Thailand

Sorada Wangmethekul

TIPA, Thailand

Totsapon Santitewagun

ISPE, Thailand

Sompol Prakongpan

AFPS/TIPA, Thailand Arthit Ourairat Rangsit University,

Thailand

Thanapat Songsak Rangsit University,

Thailand

Pornsak Sriamornsak TIPA, Silpakorn University,

Thailand

Wimon Phuntuwate

Srinakharinwirot University,

Thailand

Arom Jedsadayanmata Thammasat University,

Thailand

Pornchai Mongkhonvanit

Siam University,

Thailand

Chalermsri Pummangura

Siam University,

Thailand

Tanasait Ngawhirunpat Silpakorn University,

Thailand

Wicharn Janwitayanuchit Huachiew Chalermprakiet University, Thailand

Jarupa Viyoch

Naresuan University,

Thailand

Organizing Committee

Narisa Kamkaen

Chairman Rangsit University, Thailand

Suchada Piriyaprasarth

Scientific

Silapakorn University,

Thailand

Phennapa Charoenwiwattanakij

Hospitality

Siam University, Thailand

Wannee Panitphong

Venue/Sponsor contact TIPA, Thailand

Prasopchai Patrojanasophon

PR&IT

Silapakorn University,

Thailand

Chutimon Muankaew

Vice Chairman

Siam University, Thailand Worapan Sitthithaworn

Registration

Srinakarinwirot University,

Thailand

Benchawan Chamsai

Venue

Rangsit University, Thailand

Pattana Mangjak

Finance

TIPA, Thailand Nawinda Chinatangkul

Secretariat

Siam university, Thailand

Jirapornchai Suksaeree

Scientific

Rangsit University, Thailand

Supawan Bunrathep Social function

Rangsit University, Thailand

Wipada Samprasit

Venue

Rangsit University, Thailand

Rungnapa Amarinthnukrowh

Sponsor contact TIPA, Thailand Parapat Sobharaksha

Venue/Assistant secretariat

Huachiew Chalermprakiet University, Thailand

Editor

Jirapornchai Suksaeree

Duangratana Shuwisitkul

Rangsit University, Thailand

Srinakarinwirot University, Thailand

Associate Editor

Laksana Charoenchai Rangsit University,

Thailand

Worawut Kriangkrai Naresuan University,

Thailand

Sucharat Limsitthichaikoon

Rangsit University,

Thailand

Chirattikarn Maicheen Huachiew Chalermprakiet University, Thailand Tasana Pitaksuteepong Naresuan University,

Thailand

Panita Suwannoi Thammasat University,

Thailand

Scientific Committee

Leandros Skaltsounis National and Kapodistrian

University of Athens, Greece

Neelam Balekar IPS Academy,

India Jun Li

National University of

Singapore, Singapore

Hirofumi Takeuchi Gifu Pharmaceutical

University, Japan

Paul Wan Sia Heng National University of

Singapore, Singapore

Maree Donna Simpson Charles Sturt University,

Australia

Wiwat Pichayakorn

Prince of Songkla University,

Thailand

Sontaya Limmatvapirat Silpakorn University,

Thailand

Ruengwit Kitbunnadaj Naresuan University,

Thailand

Supawadee Parhira Naresuan University,

Thailand

Somchai Sawatdee Walailak University,

Thailand

Pajaree Sakdiset Walailak University,

Thailand

Worranan Rangsimawong Ubon Ratchathani University,

Thailand

Ekapol Limpongsa Rangsit University,

Thailand

Pattwat Maneewattanapinyo

Rangsit University,

Thailand

Wong Tin Wui

Universiti Teknologi MARA,

Malaysia Mao Shirui

Shenyang Pharmaceutical

University, China Young-Joon Surh

Seoul National University,

South Korea

Tsuyoshi Yokoi Nagoya University,

Japan

Leng Chee Chang

University of Hawai'i at Hilo,

USA

Gerard de Guzman Adamson University,

Philippines

Panupong Puttarak

Prince of Songkla University,

Thailand

Srisagul Sungthongjeen Naresuan University,

Thailand

Nattakanwadee Khumpirapang

Naresuan University,

Thailand

Phatsawee Jansook

Chulalongkorn University,

Thailand

Thipapun Plyduang Walailak University,

Thailand

Tanatchaporn Sangfai

Walailak University,

Thailand Namon Hirun

Thammasat University,

Thailand

Abhiruj Chiangsom Rangsit University,

Thailand

Ratana Indranupakorn

Huachiew Chalermprakiet

University, Thailand Clive Roberts

University of Nottingham,

United Kingdom

Mont Kumpugdee-Vollrath Beuth University of Applied Sciences Berlin, Germany Vitaliy Khutoryanskiy University of Reading,

England

Fumiyoshi Yamashita Kyoto University,

Japan

Milen I. Georgiev Bulgarian Academy of

Sciences, Bulgaria

Prapaporn Boonme

Prince of Songkla University,

Thailand

Thawatchai Phaechamud Silpakorn University,

Thailand

Sakchai Wittaya-areekul Naresuan University,

Thailand

Pensri Charoensit Naresuan University,

Thailand

Veerakiet Boonkanokwong Chulalongkorn University,

Thailand

Namfa Sermkaew Walailak University,

Thailand

Sureewan Duangjit

Ubon Ratchathani University,

Thailand

Chuda Chittasupho Chiang Mai University,

Thailand

Wipaporn Kajornwongwattana

Rangsit University,

Thailand

Boonnada Pamornpathomkul Rajamangala University of Technology Thanyaburi,

Thailand

Sponsors

Thai Industrial Pharmacist Association (TIPA)

College of Pharmacy, Rangsit University

Faculty of Pharmacy, Siam University

Faculty of Pharmacy, Silpakorn University

Faculty of Pharmacy, Srinakharinwirot University

Faculty of Pharmacy, Huachiew Chalermprakiet University

Faculty of Pharmacy, Thammasat University

Faculty of Pharmaceutical Sciences, Naresuan University

International Society for Pharmaceutical Engineering (ISPE) Thailand Affiliate

Thailand Center of Excellence for Life Sciences (TCELS)

Kasem Pangsriwong Foundation

Government Pharmaceutical Organization

