



Annual Meeting of the NRCT Research Project
“Chemical Research on Thai Mushroom Resources for Their Medicinal Utilization”
8 March 2024
Thailand Science Park, Pathum Thani, Thailand

Organized by:

National Center for Genetic Engineering and Biotechnology (BIOTEC)
National Science and Technology Development Agency (NSTDA)
Ministry of Higher Education, Science, Research, and Innovation (MHESI)

Rationale:

Higher fungi have a long history of use in folk medicine, especially in Asian countries, and their study has become a matter of great significance. Investigations on their secondary metabolites have mostly been aiming to isolate bioactive compounds as potential lead structures for the development of new drugs, products for crop protection, and even cosmetics. For instance, the medicinal mushroom *Ganoderma lucidum*, well-known as “Lingzhi”, has been used since ancient times to treat hepatitis, hypertension, hypercholesterolemia and gastric cancer. It has been shown to possess a broad range of pharmacological activities, such as anticancer, antimicrobial, and anti-HIV activities, as well as hepatic and renal protective effects. Ganoderic acids, belonging to the lanostane-type triterpenes, have been considered as main active ingredients of Lingzhi. Identification of active ingredients (if small molecules) of medicinal mushrooms should lead to not only their use as lead compounds for drug discovery but also the value addition of existing medicinal mushroom species and the opportunity for new medicinal products.

The National Center for Genetic Engineering and Biotechnology (BIOTEC) has been conducting research on the search for bioactive fungal metabolites mainly from mushroom resources in Thailand. Recent results demonstrated that basidiomycetes are exceptionally rich sources of bioactive terpenoids with diverse chemical structures. In addition, we have the recent research project “Chemical Research on Thai Mushroom Resources for their Medicinal Utilization” supported by the National Research Council of Thailand (NRCT) through the Strategic Fund on Research Group Promotion Grant (Senior Research Scholar). This project is a collaboration with Maharakham University, Mahidol University, Chulalongkorn University and BIOTEC

Thus, BIOTEC and collaborative organization will organize the Annual Meeting of the NRCT Research Project on “Chemical Research on Thai Mushroom Resources for Their Medicinal Utilization” with the aim of sharing the research project progress and research in areas of natural product chemistry, biochemistry, molecular biology, pharmacology, and mycology and to create a research network in the area.

Objectives:

To update the research results and to create a research community in the field of natural product chemistry, biochemistry, molecular biology, pharmacology, and mycology.

Speakers:

- **Prof. Emeritus Dr. Vatcharin Rukachaisirikul**
Prince of Songkla University
- **Dr. Masahiko Isaka**
National Center for Genetic Engineering and Biotechnology
- **Dr. Philip James Shaw**
National Center for Genetic Engineering and Biotechnology
- **Assoc Prof. Dr. Prapairat Seephonkai**
Mahasarakham University
- **Dr. Surapun Tapaamordech**
Chulalongkorn University
- **Dr. Sutharinee Likitnukul**
Mahidol University

Language:

The meeting will be instructed in English without translation.

Target group:

Lecturers and researchers in the field of natural product chemistry, biochemistry, molecular biology, pharmacology, and mycology from government sections, universities and private companies

No. of participants: 50 Persons

Registration fee: Free of charge

Registration deadline: 29 February 2024 or when fully participants registration

Registration:

- Online registration: <https://www.biotec.or.th/home/annual-meeting-nrct-research>
- QR code for registration:



Draft program:

09:00 – 10:00	Registration and Coffee Break	
10:00 – 10:10	Opening Remark By Dr. Verawat Champreda Director, Biorefinery and Bioproduct Technology Research Group, National Center for Genetic Engineering and Biotechnology	
10:10 – 10:50	Keynote Lecture: Drug Discovery from Thai Fungal Resources at Prince of Songkla University By Prof. Emeritus Dr. Vatcharin Rukachaisirikul Prince of Songkla University (the 2023 Outstanding Scientist Award)	
10:50 – 11:00	Introduction of the NRCT Research Scholar Award Project By Dr. Masahiko Isaka National Center for Genetic Engineering and Biotechnology	
11:00 – 11:40	Natural Product Chemistry on Mushroom Resources from Thailand By Dr. Masahiko Isaka National Center for Genetic Engineering and Biotechnology	
11:40 – 12:00	Antimalarial Mechanism of Action of the Natural Product 9-Methoxystrobilurin G By Dr. Philip James Shaw National Center for Genetic Engineering and Biotechnology	
12:00 – 13:30	Lunch and Lab Tour	
13:30 – 13:50	Medicinal Mushroom Utilization Research at Maharakham University By Assoc. Prof. Dr. Prapairat Seephonkai Maharakham University	
13:50 – 14:10	The Insulin-Mimicking Effect of Fungal Metabolites: Mechanism of Action and More to Cover By Dr. Surapun Tapaamorndech Chulalongkorn University	
14:10 – 14:30	Evaluation of Anti-Diabetic Efficacy and Liver Lipid Metabolism of Pyridylnidulin: <i>In Vivo</i> Study By Dr. Sutharinee Likitnukul Mahidol University	
14:30 – 15:00	Open Discussion and Closing Remark	
15:00	Coffee Break	

General information:

Public transportation to the venue

Air-conditioned bus routes:

- No. 39 (Victory Monument - Thammasat University, Rangsit)
- No. 510 (Victory Monument - Thammasat University, Rangsit - Thai Market)

Air-conditioned van routes:

- No. 118 (Mo Chit BTS Sky Train Station – Thailand Science Park)
- No. 85 (Victory Monument - Thammasat University, Rangsit)

Accommodation

You are responsible for making your own arrangements.

Suggested accommodation:

- **Sirindhorn Science Home** (Located in Thailand Science Park)
Tel: (66) 2529 7100 ext. 77235 Fax: (66) 2529 7147
Website: http://www.nstda.or.th/ssh/service/service_1.php
- **Institute of East Asian Studies** (A 10-minute-walk from Thailand Science Park)
Tel: (66) 2564 5000 – 3
Website: http://www.asia.tu.ac.th/ieas/ieas_buiding.htm

For more information: Please contact

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