# Program

## 14 December 2025

| Time | Session |
|---|---|
| 12:00 PM – 01:00 PM | **Registration** |
| 01:00 PM – 01:15 PM | **Welcome Speech by Skorn MONGKOLSUK** |
| 01:15 PM – 02:00 PM | **Keynote: Peter C. DEDON**<br>(Massachusetts Institute of Technology, USA)<br>Revisiting the central dogma in the age of epigenomes and epitranscriptomes: Nucleic acid modifications driving health and disease |
| | **Session 1: Post-transcription**<br>**Chair:** CHO Eun-Jung<br>**Co-chair:** Mayuree FUANGTHONG |
| 02:00 PM – 02:20 PM | **WU Cheng-Wen**<br>(National Yang Ming Chiao Tung University, Taiwan)<br>S1-01: Intron 2 variation of human *POU5F1* creates OCT4Borf1 microprotein that promotes tumorigenesis in lung squamous cell carcinoma |
| 02:20 PM – 02:40 PM | **Mayuree FUANGTHONG**<br>(Chulabhorn Research Institute, Thailand)<br>S1-02: Functional and regulatory roles of tRNA modifications in the stress responses of *Pseudomonas aeruginosa* |
| 02:40 PM – 03:00 PM | Refreshment |
| 03:00 PM – 03:20 PM | **Reshma TANEJA**<br>(National University of Singapore, Singapore)<br>S1-03: Interrogating the epigenetic landscape in rhabdomyosarcoma |
| 03:20 PM – 03:40 PM | **CHO Eun-Jung**<br>(Sungkyunkwan University, Republic of Korea)<br>S1-04: Epigenetic control of pericentromeric chromatin dynamics underlying myogenic differentiation |
| 03:40 PM – 04:00 PM | **Narumon THONGDEE**<br>(Chulabhorn Research Institute, Thailand)<br>S1-05: Small RNA base pairing within coding sequences transiently slows translation elongation and alters target protein activity |
| 04:00 PM – 04:40 PM | **2-min Flash Presentations** |
| 04:40 PM – 08:00 PM | Welcome Drink and Dinner |

## 15 December 2025

| Time | Session |
|---|---|
| 09:30 AM – 10:00 AM | **Plenary Lecture: Varodom CHAROENSAWAN**<br>(Mahidol University, Thailand)<br>Decoding transcriptional regulation through the lens of a systems biologist: from functional genomics to spatial transcriptomics |
| | **Session 2: Stress response, regulation and signaling**<br>**Chair:** NAKASONE Kaoru<br>**Co-chair:** Oranart MATANGKASOMBUT |
| 10:00 AM – 10:20 AM | **NAKASONE Kaoru**<br>(Kindai University, Japan)<br>S2-01: Molecular mechanisms of phytotoxin tropolone in rice-seedling blight, *Burkholderia plantarii* |
| 10:20 AM – 10:40 AM | Group Photo |
| 10:40 AM – 11:00 AM | Refreshment |
| 11:00 AM – 11:20 AM | **KATAOKA Masakazu**<br>(Shinshu University, Japan)<br>S2-02: pH homeostasis: exhaustive screening of the genes involved in pH regulation on *Escherichia coli* |
| 11:20 AM – 11:55 AM | **2-min Flash Presentations** |
| 11:55 AM – 01:30 PM | Lunch |
| 01:30 PM – 01:50 PM | **Oranart MATANGKASOMBUT**<br>(Chulalongkorn University, Thailand)<br>S2-03: Exploring the roles of DNA-protein crosslink repair proteases in *Candida albicans* survival under oxidative stress |
| 01:50 PM – 02:10 PM | **Piyajit WATCHARASIT**<br>(Chulabhorn Research Institute, Thailand)<br>S2-04: Arsenic impaired insulin and IGF-1 signaling and neural network: the protective roles of insulin and IGF-1, through the PI3K/Akt axis |
| 02:10 PM – 02:30 PM | **Kusumawadee UTISPAN**<br>(Thammasat University, Thailand)<br>S2-05: Nitric oxide and stress response in head and neck cancer |
| 02:30 PM – 02:45 PM | **Biswanath CHATTERJEE**<br>(Taipei Medical University, Taiwan)<br>S2-06: Hypoxia-induced EMT and transcription of EMT-associated genes of cancer cells require DNA demethylation BY DNMT3A |
| 02:45 PM – 04:15 PM | **Poster Presentations** and Refreshment |

## 15 December 2025 (continued)

| Time | Session |
|---|---|
| | **Session 3: Molecular insights into health, diseases, and treatment**<br>**Chair:** Kalai MATHEE<br>**Co-chair:** Nisa PATIKARNMONTHON |
| 04:15 PM – 04:35 PM | **Kalai MATHEE**<br>(Euleris LLC, USA)<br>S3-01: Microbiolomics meets AI: revolutionizing the future of microbiology |
| 04:35 PM – 04:55 PM | **Tanapat PALAGA**<br>(Chulalongkorn University, Thailand)<br>S3-02: The role of Ezh2 of polycomb repressive complex 2 in driving tumor-associated macrophages toward tumor promoting phenotypes in liver cancer model |
| 04:55 PM – 05:15 PM | **Nisa PATIKARNMONTHON**<br>(Mahidol University, Thailand)<br>S3-03: Nanoparticle-mediated intracellular delivery of anti-envelope antibodies against dengue: a strategy to interfere with viral gene expression |
| 05:15 PM – 05:35 PM | **Worasak KAEWKONG**<br>(Naresuan University, Thailand)<br>S3-04: Oncogenic editing of expression: targeting the splicing machinery for cancer suppression |
| 05:35 PM – 05:55 PM | **YANG Jae-Hyun**<br>(Korea Advanced Institute of Science and Technology, Republic of Korea)<br>S3-05: Epigenetic strategies for reversing mammalian aging |
| 06:00 PM – 08:00 PM | Dinner |

## 16 December 2025

| Time | Session |
|---|---|
| | **Session 4: Omics approaches to gene expression**<br>**Chair:** WANG Gang<br>**Co-chair:** Punyawee DULYAYANGKUL |
| 09:00 AM – 09:20 AM | **Voraratt CHAMPATTANACHAI**<br>(Chulabhorn Research Institute, Thailand)<br>S4-01: Anticancer efficacy of the combination treatment of oxaliplatin and protein *O*-GlcNAcylation reduction in SW620 metastatic colorectal cancer cells |
| 09:20 AM – 09:40 AM | **Naphat CHANTARAVISOOT**<br>(Chulalongkorn University, Thailand)<br>S4-02: Multi-omics insights into the mechanisms of brain cancer aggressiveness |
| 09:40 AM – 10:00 AM | **Narisara CHANTRATITA**<br>(Mahidol University, Thailand)<br>S4-03: Host–pathogen transcriptomics in melioidosis: predicting outcomes and revealing resistance mechanisms |
| 10:00 AM – 10:20 AM | Refreshment |
| 10:20 AM – 10:40 AM | **Kriengsak LIRDPRAPAMONGKOL**<br>(Chulabhorn Research Institute, Thailand)<br>S4-04: ERK-mediated βIVa-tubulin up-regulation confers metastasis-associated paclitaxel resistance in naïve lung cancer cells |
| 10:40 AM – 11:00 AM | **Kanokwan SRIWATTANAPONG**<br>(Chulalongkorn University, Thailand)<br>S4-05: Novel therapeutic strategy to enhance bone regeneration in osteogenesis imperfecta |
| 11:00 AM – 11:20 AM | **Phum TACHACHARTVANICH**<br>(Chulabhorn Research Institute, Thailand)<br>S4-06: Identification of emerging environmental contaminants as novel metabolism disruptors via PPARγ activation: insights from *in vitro* and transcriptome studies |
| 11:20 AM – 12:20 PM | Lunch |
| 12:20 PM – 09:00 PM | **Networking Excursion (Optional)** |

## 17 December 2025

| Time | Session |
|---|---|
| | **Session 5: Transcription machinery, regulation and diseases**<br>**Chair:** KANG Changwon<br>**Co-chair:** Narumon THONGDEE |
| 09:00 AM – 09:20 AM | **KANG Changwon**<br>(Korea Advanced Institute of Science and Technology, Republic of Korea)<br>S5-01: Distinct preferences for termination mechanisms across RNA polymerases |
| 09:20 AM – 09:40 AM | **SHIMAMOTO Nobuo**<br>(National Institute of Genetics, Japan)<br>S5-02: Biological significance of abortive initiation |
| 09:40 AM – 10:00 AM | **HOHNG Sungchul**<br>(Seoul National University, Republic of Korea)<br>S5-03: Mechanisms of co-transcriptional R-loop formation at double-stranded breaks revealed by single-molecule fluorescence imaging |
| 10:00 AM – 10:20 AM | Refreshment |
| 10:20 AM – 10:40 AM | **Danaya PAKOTIPRAPHA**<br>(Mahidol University, Thailand)<br>S5-04: Versatility of MarR domain in the regulation of phenolic compound utilization |
| 10:40 AM – 11:00 PM | **ZHANG Yan Jessie**<br>(University of Texas, Austin, USA)<br>S5-05: “Zipper” grammar of CTD governs the spatial programing of the transcription cycle of RNA polymerase II |
| 11:00 PM – 11:20 PM | **WANG Gang**<br>(Fudan University, China)<br>S5-06: Nucleolar MED19 regulates the rRNA 2’-O-methylation in promoting tumorigenesis |
| 11:20 PM – 11:40 PM | **Patompon WONGTRAKOONGATE**<br>(Mahidol University, Thailand)<br>S5-07: From RNA biology to mRNA therapeutics: from academics to startups |
| 11:40 PM – 01:20 PM | Lunch / IAB, IOC, and ISC Meeting |
| 01:20 PM – 01:40 PM | **KIM AeRi**<br>(Pusan National University, Republic of Korea)<br>S5-08: TAD-dependent sub-TAD is required for enhancer-promoter interaction enabling the β-globin transcription |
| 01:40 PM – 01:55 PM | **CHOI Jinmi**<br>(Sungkyunkwan University, Republic of Korea)<br>S5-09: Repeat-rich RNA guides genomic repeats into condensates for heterochromatin organization |

## 17 December 2025 (continued)

| Time | Session |
|---|---|
| 01:55 PM – 02:10 PM | **HAN Sun**<br>(Seoul National University, Republic of Korea)<br>S5-10: Termination mechanisms of human RNA polymerase III revealed by single-molecule fluorescence imaging |
| 02:10 PM – 03:40 PM | **Poster Presentations** and Refreshment |
| | **Session 6: AMR: genomic, mechanisms, and regulations**<br>**Chair:** James M. DUBBS<br>**Co-chair:** Nisanart CHAROENLAP |
| 03:40 PM – 04:00 PM | **Suganya YOUNGKIETTRAKUL**<br>(National Science and Technology Development Agency, Thailand)<br>S6-01: From genomic insights to diagnostics: MassARRAY-Based identification and serotyping of foodborne and zoonotic bacteria |
| 04:00 PM – 04:20 PM | **Adisak ROMSANG**<br>(Mahidol University, Thailand)<br>S6-02: Dual reactive chlorine species responsive sensor adaptation overcomes tolerance to disinfectants and host immunity in *Pseudomonas aeruginosa* |
| 04:20 PM – 04:40 PM | **Anusak KERDSIN**<br>(Kasetsart University, Thailand)<br>S6-03: Genomic epidemiology of carbapenem-resistant *Enterobacterales* in Thailand |
| 04:40 PM – 05:00 PM | **Punyawee DULYAYANGKUL**<br>(Chulabhorn Research Institute, Thailand)<br>S6-04: Molecular characterization of pandrug- and extensively drug-resistant *Stenotrophomonas maltophilia* strain SMC1291 and SMC3920 |
| 05:00 PM – 05:15 PM | **Poonyaporn KANAWONG**<br>(Chulabhorn Graduate Institute, Thailand)<br>S6-05: Mutation-induced structural alteration of SoxR enhances antibiotic resistance in *Stenotrophomonas maltophilia* |
| 05:15 PM – 05:35 PM | Poster Awards Announcement |
| 05:35 PM – 08:00 PM | Closing Ceremony and Conference Dinner |