**The 7th International Conference on Biochemistry and Molecular Biology (BMB 2021)**
**"Challenges in Biochemistry to Overcome Pandemics and Disruptions"**
**July 6-7, 2021**

## Program

| Day 1: Tuesday 6 July, 2021 | | |
|---|---|---|
| 09.00 – 09.30 | **Welcome and Opening Ceremony**<br>• **BMB Thailand Video Presentation**<br>• **Conference Report by Chair of Scientific Program Committee**<br>• **Message from Chair of Biochemistry and Molecular Biology Section**<br>• **Opening Speech: Emeritus Prof. Dr. M.R. Jisnuson Svasti**<br>• **Group Photo** | |
| 09.30 – 10.15 | **PL1: Plenary lecture 1**<br>**Prof. Dr. David Craik**<br>2015 FAOBMB Awardee for Research Excellence<br>**University of Queensland, AUSTRALIA**<br>**The discovery and applications of cyclotides in drug design and agriculture**<br>**Chair: Emeritus Prof. Dr. Piamsook Pongsawasdi** | |
| 10.15 – 10.30 | Break | |
| | **S1: BMB in Medicine**<br>**Chair: Assoc. Prof. Dr. Chanitra Thuwajit**<br>**Co-chair: Asst. Prof. Dr. Suchada Phimsen** | **S2: Food, Biotechnology and Agricultural Biochemistry**<br>**Chair: Dr. Sirawut Klinbunga**<br>**Co-chair: Dr. Suriyan Cha-um** |
| 10.30 – 11.00 | **S1-K-01 Keynote lecture 1**<br>**Prof. Dr. Vorasuk Shotelersuk**<br>2016 Outstanding Scientist of Thailand<br>**Chulalongkorn University, THAILAND**<br>**Genomics in medicine, public health, and society** | **S2-K-01 Keynote lecture 1**<br>**Assoc. Prof. Dr. Joy Scaria**<br>**South Dakota State University, USA**<br>**Mining gut microbiota as antibiotic alternatives to treat enteric infection in poultry** |
| 11.00 – 11.15 | **S1-O-01** Chartinun Chutoe<br>The effect of cannabinoid receptor agonists on breast cancer and its interaction with bone cells | **S2-O-01** Benjawan Tinthip<br>Antimicrobial activity of fermented industrial soybean waste extracts against food spoilers and foodborne pathogens |
| 11.15 – 11.30 | **S1-O-02** Chi Be Hlaing<br>Effects of iron-tanning acid nanoparticles on hepatocarcinogenesis in rats | **S2-O-02** Jiralapat Thamrongwatwongsa<br>Elevation of secondary metabolite production by using light-emitting diodes illumination in Mulberry (*Morus* spp.) |
| 11.30 – 11.45 | **S1-O-03** Mayuree Poonasri<br>4-methoxycinnamyl p-coumarate from *Etlingera pavieana* inhibits inflammatory response via NF-κB signaling pathway in microglial cells | **S2-O-03** Jongkolnee Yaowapaksophon<br>Energy balance and biological response of dairy goats fed pomegranate seed pulp and soybean oil |
| 11.45 – 12.00 | **S1-O-04** Warathit Semmarath<br>Associations between frail phenotypes and inflammatory biomarkers and synergistic effects of black rice supplement and exercise intervention on physical performance, muscle strength and aging biomarkers among aging population | **S2-O-04** Warumporn Yingsunthonwattana<br>Functional characterization of Pacific white shrimp *Litopenaeus vannamei* heat shock protein 90 (*Lv*HSP90) in response to white spot syndrome virus (WSSV) infection |
| 12.00 – 13.00 | **Luncheon seminar**<br>**Dr. Lee May May**<br>**Merck, Ltd.**<br>**Glycosylation analysis: Fast glycan release and reproducible detection A workflow analysis by fast enzymes, quality reference materials, fast spin filters and reproducible columns** | |
| | **S3: Bioenergy, Environmental Science and Toxicology**<br>**Chair: Dr. Verawat Champreda**<br>**Co-chair: Dr. Pattanop Kanokratana** | **S4: Frontiers in Biochemistry and Molecular Biology**<br>**Chair: Assoc. Prof. Dr. Kiattawee Choowongkomon** |

<table>
<tr><th colspan="5">Day 1: Tuesday 6 July, 2021</th></tr>
<tr><td></td><td colspan="2"></td><td colspan="2">Co-chair: Asst. Prof. Dr. Chomdao Sinthuvanich</td></tr>
<tr><td>13.00 – 13.30</td><td colspan="2">S3-K-01 Keynote lecture 1<br>Prof. Dr. Alisa Vangnai<br>Chulalongkorn University, THAILAND<br>Translational research in environmental biochemistry: From lab to implementation</td><td colspan="2">S4-K-01 Keynote lecture 1<br>Prof. Dr. Paul Matsudaira<br>National University of Singapore, SINGAPORE<br>Stem cells in zebrafish intestine</td></tr>
<tr><td>13.30 – 13.45</td><td colspan="2">S3-I-01 Invited lecture 1<br>Dr. Surisa Suwannarangsee<br>National Center for Genetic Engineering and Biotechnology (BIOTEC), THAILAND<br>Cell-surface engineering of Saccharomyces cerevisiae for cellulosic biorefinery</td><td colspan="2">S4-O-01 Marutpong Detarya<br>The O-GalNAcylating enzyme GALNT5 mediates EGFR-driven progression of CCA</td></tr>
<tr><td>13.45 – 14.00</td><td colspan="2">S3-O-01 Hao Jing<br>Elucidation of Gram-positive bacterial iron (III) reduction for kaolinite clay refinement</td><td colspan="2">S4-O-02 Punnida Arjsri<br>Anti-metastasis effects of Spirogyra neglecta on castration-resistant prostate cancer via the blockage of AKT signaling pathway</td></tr>
<tr><td>14.00 – 14.15</td><td colspan="2">S3-O-02 Neeranuch Suwannarin<br>Association of exposure to neonicotinoid insecticides and oxidative stress in farmworkers in Chiang Mai province, Thailand</td><td colspan="2">S4-O-03 Sedthawut Laotee<br>Production of Escherichia coli outer membrane vesicles displaying anti-MUC1 single chain variable fragment via SpyTag/SpyCatcher system</td></tr>
<tr><td>14.15 – 14.30</td><td colspan="2">S3-O-03 Sorawit Buraphawat<br>An investigation of subcellular localization of YlSnf1p-EGFP in response to a fatty acid in Yarrowia lipolytica</td><td colspan="2">S4-O-04 Yu Pan<br>Engineering of human lactoferrin for improved anticancer activity</td></tr>
<tr><td>14.30 – 15.00</td><td colspan="4">Break</td></tr>
<tr><td rowspan="3">15.00 – 16.00</td><td colspan="4">Poster session</td></tr>
<tr><td colspan="2">S1: BMB in Medicine</td><td colspan="2">S2: Food, Biotechnology and Agricultural Biochemistry</td></tr>
<tr><td>S1-1<br>S1-P-## (odd number)<br>Chair: Asst. Prof. Dr. Chalermchai Mitrpant</td><td>S1-2<br>S1-P-## (even number)<br>Chair: Assoc. Prof. Dr. Sarawut Kumphune</td><td>S2-1<br>S2-P-## (odd number)<br>Chair: Assoc. Prof. Dr. Sasimanas Unajak</td><td>S2-2<br>S2-P-## (even number)<br>Chair: Asst. Prof. Dr. Puey Ounjai</td></tr>
<tr><td>16.00 – 17.00</td><td colspan="4">S5: BMB Education – Thai BMB Thailand Education Consortium<br>Chair: Assoc Prof. Dr. Rina Patramanon<br>Khon Kaen University, THAILAND<br>Panel discussion (in Thai)<br>Panelists:<br>Asst. Prof. Dr. Saisiri Mirasena<br>Naresuan University, THAILAND<br>Assoc. Prof. Dr. Sasimanas Unajak<br>Kasetsart University, THAILAND<br>Assoc. Prof. Dr. Tanakarn Monshupanee<br>Chulalongkorn University, THAILAND<br>Assoc. Prof. Dr. Nuttee Suree<br>Chiang Mai University, THAILAND</td></tr>
</table>

<table>
<tr><th colspan="2">Day2: Wednesday 7 July, 2021</th></tr>
<tr><td>09.00 – 09.45</td><td>PL2: Plenary lecture 2<br>Prof. Dr. Kiat Ruxrungtham<br>Chulalongkorn University, THAILAND<br>Covid-19 mRNA Vaccine Development<br>Chair: Assoc. Prof. Dr. Tuangporn Suthiphongchai</td></tr>
<tr><td>09.45 – 10.30</td><td>BMB Thailand Award Ceremony/ Prof. MR JS BMB awardee Lecture<br>Prof. Dr. Pithi Chanvorachote<br>Chulalongkorn University, THAILAND<br>Targeting proteins for lung cancer treatment and cancer stem cell control<br>Chair: Prof. Dr. Anchalee Tassanakajon</td></tr>
</table>

| Day2: Wednesday 7 July, 2021 | | |
|---|---|---|
| | **S1: BMB in Medicine**<br>**Chair: Assoc. Prof. Dr. Kulthida Vaeteewoottacharn**<br>**Co-chair: Asst. Prof. Dr. Patompon Wongtrakoongate** | **S2: Food, Biotechnology and Agricultural Biochemistry**<br>**Chair: Dr. Sittiruk Roytrakul**<br>**Co-chair: Assoc. Prof. Dr. Gunnaporn Suriyaphol** |
| 10.30 – 11.00 | **S1-K-02 Keynote lecture 2**<br>**Prof. Carlito B. Lebrilla**<br>**University of California, Davis, USA**<br>**Glycosylation changes in cancer** | **S2-K-02 Keynote lecture 2**<br>**Dr. Wonnop Visessanguan**<br>**National Center for Genetic Engineering and Biotechnology (BIOTEC), THAILAND**<br>**Development of natural antimicrobials for food and feed ap-plications: From screening to practical applications** |
| 11.00 – 11.15 | **S1-O-05** Peerut Chienwichai<br>Elucidation of rabies virus pathogenesis from clinical canine brain using proteomic approach | **S2-O-05** Alisa Nira<br>Disruption of URA3 gene in thermotolerant natural yeast by CRISPR/Cas9 technology |
| 11.15 – 11.30 | **S1-O-06** Ho Chun Loong<br>Engineering microbes for various medical applications | **S2-O-06** Widya Fajariani<br>OsGTL1 promoter editing using CRISPR/Cas9 in rice *Oryza sativa* L. |
| 11.30 – 11.45 | **S1-O-07** Purithat Rattajak<br>Effect of L-quebrachitol on osteoclastogenesis | |
| 11.30 – 12.15 | **Annual General Meeting, BMB-Thailand** | |
| 12.15 – 13.00 | **PL3: Plenary lecture 3**<br>**Prof. Dr. Xiao-Yun Lu**<br>2019 FAOBMB Education Awardee<br>**Xi'an Jiaotong University, CHINA**<br>**Improving students' metacognitive ability in professional course learning**<br>**Chair: Prof. Dr. Tavan Janvilisri** | |
| | **S3: Bioenergy, Environmental Science and Toxicology**<br>**Chair: Dr. Verawat Champreda**<br>**Co-chair: Dr. Pattanop Kanokratana** | **S4: Frontiers in Biochemistry and Molecular Biology**<br>**Chair: Assoc. Prof. Dr. Kiattawee Choowongkomon**<br>**Co-chair: Asst. Prof. Dr. Chomdao Sinthuvanich** |
| 13.00 – 13.30 | **S3-K-02 Keynote lecture 2**<br>**Dr. Tatiana Soares da Costa**<br>2018 FAOBMB Young Scientist Award<br>**La Trobe University, AUSTRALIA**<br>**Towards novel herbicide modes of action by inhibiting lysine biosynthesis in plants** | **S4-K-02 Keynote lecture 2**<br>**Assoc. Prof. Dr. Varodom Charoensawan**<br>2018 FAOBMB Young Scientist Awardee<br>**Mahidol University, THAILAND**<br>**Gene expression and beyond: From single-cell biology to human cell atlas** |
| 13.30 – 13.45 | **S3-O-04** Guo Huina<br>Effect of cooking on phytochemical effect of cooking on phytochemical contents and chemopreventive activities of glutinous purple rice | **S4-O-05** Nang Lae Lae Phoo<br>Transcriptomic profiling of cisplatin resistance signet ring gastric carcinoma cell line |
| 13.45 – 14.00 | **S3-O-05** Kanyapak Kohsuwan<br>Preliminary study of urinary biomarker, miR-21, for kidney injury detection | **S4-O-06** Orasa Panawan<br>Cell line-derived cancer stem-like cell: A useful tool for understanding cholangiocarcinoma |
| 14.00 – 15.00 | **Poster session** | |
| | **S4: Frontiers in Biochemistry and Molecular Biology** | |
| | **S4-1**<br>**S4-P-## (odd number)**<br>**Chair: Assoc. Prof. Dr. Sarawut Kumphune** | **S4-2**<br>**S4-P-## (even number)**<br>**Chair: Asst. Prof. Dr. Songklod Sarapusit** |
| 15.00 – 16.00 | **Closing session** | |