

Meeting program		
Day 1: 17 th Feb 2022		
Time	Activity	Speakers
8.00-9.00	Registration	
9.00-9.30	Opening ceremony & opening remark	Dr Satit Pitutecha <i>Deputy Minister of Health, Thailand</i> Dr Nopporn Cheanklin <i>Executive Director, Health Systems Research Institute, Thailand</i>
9.30-10.00	First inaugural lecture (discourse to Professor Khunsupa Na-nakorn) How DNA ages: The discovery and implications of DNA protection and rejuvenation effects of DNA gaps	Professor Apiwat Mutirangura <i>Center of Excellence in Molecular Genetics of Cancer and Human Disease, Department of Anatomy, Faculty of Medicine, Chulalongkorn University</i>
10.00-10.30	First presidential address Human Genomics in Thailand: Past, Present & Future	Professor Vorasuk Shotelersuk <i>President, Thai Society of Human Genetics</i>
10.30-10.45	Break	
Plenary session (Moderator Dr Prasit Phowthongkum)		
10.45-11.10	Human genetics and genomics human resource training: Planning for Thailand and experiences in South East Asia	Professor Thanyachai Sura <i>President, Asia Pacific Society of Human Genetics</i> <i>President, Thai Medical Genetics and Genomics Association</i>
11.10-11.35	Cancer genetics and genomics: Where are we in the world stage?	Professor Manop Pithukpakorn <i>Faculty of Medicine Siriraj Hospital Mahidol University</i>
11.35-11.55	Cell and somatic gene therapy in the genomes editing era: Thalassemia and beyond	Professor Suradej Hongeng <i>Faculty of Medicine Ramathibodi Hospital Mahidol University</i>
Oral presentation: Clinical Genetics and Cancer Genetics (Moderator Dr Prasit Phowthongkum)		
11.55-12.05	O1A Orodonal features associated with dentinogenesis imperfecta and osteogenesis imperfecta	Dr Narin Intarak <i>Faculty of Dentistry, Chulalongkorn University</i>
12.05-12.15	O1B Ano-Rectosigmoid cancer vs Proximal colon cancer: different mechanisms confirmed in the era of next-generation sequencing	Dr Phawin Koranantakul <i>Faculty of Medicine, Chulalongkorn University</i>
12.15-12.25	O1C Telemedicine in Cancer-genetic Clinic at King Chulalongkorn Memorial Hospital during the COVID-19 pandemic	Ms Chanchira Sriraksasin <i>Faculty of Medicine, Chulalongkorn University</i>
12.25-12.35	Break	
Luncheon Symposium		

12.35-13.00	Luncheon Symposium 1: Breaking the Interpretation Bottleneck; Evidence-Backed AI solutions for Genomic Analysis and Discovery at Scale	Michael Fietz, PhD FFS _c (RCPA) Senior Sales Specialist in Clinical Informatics Illumina	
13.00-13.25	Luncheon Symposium 2 Applications of PacBio Highly Accurate Long Read Sequencing in Rare and Inherited Diseases (PacBio)	Zuwei Qian Director of Marketing (APAC), at Pacific Biosciences	
13.25-13.35	Break		
International session: Korean Genome Organization (Moderator Dr Surakameth Mahasirimongkol)			
13.35-13.55 (14.35-14.55 South Korean Time)	RORα enforces stability of the T- helper-17 cell effector program	Professor June-Yong Lee Department of Microbiology and Immunology Yonsei University College of Medicine, South Korea	
13.55-14.15 (14.55-15.15 South Korean Time)	The role of Polycomb repressive complex 2 in gene regulation and cancer	Professor Chul-Hwan Lee Department of Pharmacology, College of Medicine, Seoul National University, South Korea	
Oral presentation: Pharmacogenetics, Genetic technology & Applied Genetics (Moderator Assistant Professor Pajaree Chariyavilaskul)			
14.15-14.25	O2A Genetic variation profiling prediction of 51 pharmacogenes in a Thai population using whole-genome sequencing	Ms Natnicha Wankaew Program in Bioinformatics and Computational Biology Graduate School, Chulalongkorn University	
14.25-14.35	O2B Revisit and proposal to expand to ethnic-specific secondary findings from the whole-exome sequencing of the Thai population	Ms Wanna Chetruengchai Faculty of Medicine, Chulalongkorn University	
14.35-14.45	O2C Impact of G6PD deficiency and its Mutations on Diabetes Diagnosis by hemoglobin A1c in Thailand Cohort	Ms Punchalee Mungkalsut Faculty of Medicine, Chulalongkorn University	
14.45-15.00	Break		
Parallel sessions start			
Room 1		Room 2	
15.00-16.30 (18 minutes each)	Genomics and Clinical Practice (Moderator Assistant Professor Thipwimol Tim-aaron)	15.00-16.30 (30 minutes each)	Genomics Sciences and Genomics Technology (Moderator Assistant Professor Pajaree Chariyavilaskul)
1. Genomics and adult patient care Dr Prasit Phowthongkum 2. Genomics and acute care settings: 89 cases and four-year experiences of rapid exome sequencing in severely ill children and adults with suspected monogenic conditions in Thailand Dr Wuttichart Kamolvisit 3. Genomics and dental health Associate Professor Thantrira Porntaveetus		1. Long read sequencing: 4 th generation sequencing - end of decade epic of discovery Assistant Professor Patra Yeetong 2. Analysis of cancer stem cell-like population in patient-derived hepatocellular and cholangiocarcinoma organoids using single-cell RNA sequencing Associate Professor Nipan Israsena na Ayuthaya	

4. Primary Immune Disorder - Make them fight against germs again: Gene Therapy Professor Kanya Suphapeetiporn 5. Genomics and reproductive health Associate Professor Boonsri Chanrachakul	3. Mitochondrial manipulation technology: future of the future: from three parents' baby to somatic mitochondrial replacement therapy Associate Professor Sirisak Chanprasert University of Washington
Parallel sessions end	
End of Day 1 meeting	

Meeting program			
Day 2: 18 th Feb 2022			
Time	Activity	Speakers	
8.00-9.00	Registration	-	
Parallel sessions start			
Room 1		Room 2	
9.00-10.00 (20 minutes each)	Genomics education/ workforce preparation (Moderator Assistant Professor Thipwimol Tim-aroon)	9.00-10.00 (15 minutes each)	Bioinformatics/ data sciences/ AI (Moderator Assistant Professor Monnat Pongpanich)
1. Genetic knowledge gap in adult healthcare provider: challenge and solution Dr Prasit Phowthongkum 2. Genomics fellowship training experiences Professor Kanya Suphapeetiporn Professor Duangrudee Wattanasirichaigoon 3. Bioinformatics and genomics data scientist training in Thailand: Obstacles and opportunities Dr Chureerat Phokaew		1. Bioinformatics pipeline for long-read sequencing analysis: What is new? Assistant Professor Monnat Pongpanich 2. Bioinformatics for RNA sequencing analysis: xPore - A new bioinformatics tool for RNA modification identification Dr Naruemon Pratanwanich 3. Data management of Genomics Thailand Dr Sissades Tongsima 4. Data processing and variant prioritization standardization Dr Chumpol Ngamphiw	
10.00-11.00 (15 minutes each)	ELSI and policy (Moderator Dr Prasit Phowthongkum)	10.00-11.00 (20 minutes each)	Population genetics (Moderator Assistant Professor Bhoom Suktitipat)
1. Genomics Thailand: 2019-2021 Dr Surakameth Mahasirimongkol 2. Thailand National Essential Drug for Rare Diseases Working Group Professor Duangrudee Wattanasirichaigoon 3. Ethical Considerations in Genomic Studies Professor Soraj Hongladarom 4. Ethical guidelines standard development for genomics research Dr Prasit Phowthongkum		1. Polygenic risk scores in diverse populations: the importance of inclusivity Dr Jakris Eu-ahsunthornwattana 2. Population genetics: return nationality to Thais (Sirinthorn Project) Associate Professor Kornkiat Vongpaisarnsin 3. Population and Thai ancestry Associate Professor Jatupol Kampuansai	
Parallel sessions end			
11.00-11.30	Break		
Oral presentation: Basic Science & Translational Genetics (Moderator Assistant Professor Pajaree Chariyavilaskul)			
11.30-11.40	O3A From cat to human heart	Dr Chupong Ittiwut Faculty of Medicine, Chulalongkorn University	
11.40-11.50	O3B KCNQ2 Function	Ms Suphalak Chokvithaya Faculty of Dentistry, Chulalongkorn University	
11.50-12.00	O3C Targets of DNMT isoforms and their application for personalised nutrition approach	Dr Chanachai Sae-Lee Faculty of Medicine Siriraj Hospital, Mahidol University	
12.00-12.10	Break		

Luncheon Symposium		
12.10-12.40	Luncheon Symposium 3 Population Genomics in Mobile Internet Era (BGI)	Mr Chen Gang
12.40-13.10	Luncheon Symposium 4: Improving the Practice of Healthcare using Predictive Genomics Today	David Hanna Director, Sales and Business Development Microarray Genotyping Thermo Fisher Scientific
13.10-13.20	Break	
Plenary Session (Moderator Dr Prasit Phowthongkum)		
13.20-13.50	Panoramic not only for pandemic	Professor Thiravat Hemachudha
13.50-14.20	COVID-19 in Thailand	Department of Medical Science, Ministry of Public Health, Thailand
14.20-14.30	Break	
International session: Genomic in the UK (Moderator Dr Surakameth Mahasirimongkol)		
14.30-15.10 (8.30-9.10 GMT)	Genetics human resource development program in the UK	Dr Michelle Bishop Associate Director Learning and Training at Wellcome Connecting Science, the Wellcome Genome Campus, UK
Award presentation		
15.10-16.00	Award Closing ceremony	
End of the conference		