

The 9th Princess Chulabhorn International Science Congress THE CHALLENGES OF ONE HEALTH: THE ROLES OF BIOSCIENCES AND CHEMISTRY December 15 - 18, 2024, Bangkok, THAILAND

OPENING CEREMONY

Sunday, December 15, 2024

Time	Grand Ballroom, Shangri-La Hotel
16:45	- Guests to be seated in the Ballroom
17:00	 Arrival of His Majesty King Maha Vajiralongkorn Phra Vajiraklaochaoyuhua and Her Majesty Queen Suthida Bajrasudhabimalalakshana
17:05	 Report by Professor Dr. H.R.H. Princess Chulabhorn Mahidol, Chairperson of the National Organizing Committee
17:10	 Opening Address by His Majesty King Maha Vajiralongkorn Phra Vajiraklaochaoyuhua
	 Video Presentation in honor of the 6th cycle (72 years) birthday of King Maha Vajiralongkorn Phra Vajiraklaochaoyuhua
	 Video Presentation in honor of His Late Majesty King Bhumibol Adulyadej the Great

PC IX - PROGRAM OVERVIEW

Sunday,	Monday,	Tuesday,	Wednesday,
December 15, 2024	December 16, 2024	December 17, 2024	December 18, 2024
REGISTRATION 10:00 - 15:00	09:00 Grand Ballroom <u>KEYNOTE LECTURE</u> : From Environmental Exposures to Disease Manifestation: The Lasting Impacts of Arsenic Professor Dr. HRH Princess Chulabhorn (Chulabhorn Research Institute, Thailand) <u>SPECIAL REMARKS</u> : Tedros Adhanom Ghebreyesus (WHO HQ, Geneva)	09:00Grand BallroomPLENARY LECTURES:PL3: Drug Development and RegulatorySciences: Turning Crises into Opportunities— A Valuable Perspective Ram Sasisekharan (U.S.A.)PL4: The Two Sides of Precision Medicine: Proteomic Enablement of Biomarkers and	09:00 <u>SYMPOSIA</u> : S10 : Protein Changes in Disease (S-39 to S-43) S11 : Relationships between Genetic Mutation and the Environment in Cancer and Infectious Diseases (S-44 to S-47) <i>SPECIAL PLATFORM SESSION ON</i>
Grand Ballroom OPENING CEREMONY: 16:45 Guests to be seated in the Ballroom 17:00 Arrival of His Majesty King Maha Vajiralongkorn Phra Vajiraklaochaoyuhua and Her Majesty Queen Suthida Bajrasudhabimalalakshana	· · · /	 Therapeutics Jennifer van Eyk (U.S.A.) PL5: Programmable Therapeutics for Genetic Diseases John M. Essigmann (U.S.A.) PL6: The Lessons Learned from COVID-19 George F. Gao (P.R. China) 	CANCERS (sO-5 to sO-8) S12: Role of Chemical and Biological Sciences for Discovery of Modern Drugs II (S-48 to S-51) FREE COMMUNICATION III (O-26 to O-29)
17:05 Report by Professor Dr. HRH Princess Chulabhorn	POSTER PRESENTATION	L U N C H POSTER PRESENTATION	Grand Ballroom
 17:10 Opening Address by His Majesty King Maha Vajiralongkorn Video Presentation in honor of the 6th cycle (72 years) birthday of King Maha Vajiralongkorn Phra ajiraklaochaoyuhua Video Presentation in honor of His Late Majesty King Bhumibol Adulyadej the Great 	 13:00 <u>SYMPOSIA</u>: S1: Antimicrobial Resistance (AMR) and One Health: Critical Issues (S-1 to S-3) S2: One Health: Climate Change and Communicable diseases (S-4 to S-7) S3: Role of Chemical and Biological Sciences for Discovery of Modern Drugs I (S-8 to S-13) S4: Genetic Diseases: From Detection to Therapy (S-14 to S-19) 	 13:00 <u>SYMPOSIA</u>: S5: Early Detection and Prevention of Cancer (S-20 to S-22) S6: Antimicrobial Resistance: One Health Perspectives (S-23 to S-26) S7: Zoonotic Diseases (S-27 to S-30) S8: One Health and Therapeutics (S-31 to S-33) S9: Environmental Risk Factors Affecting Health (S-34 to S-38) SPECIAL PLATFORM SESSION ON ONE HEALTH (sO-1 to sO-4) 	 13:00 - 15:30 <u>ROUNDTABLE DISCUSSION</u>: Regulatory Innovation <u>ROUNDTABLE DISCUSSION</u>: AMR Policy Impacting South and Southeast Asia 16:00 <u>CLOSING CEREMONY</u>: Presentation of the Princess Chulabhorn Gold Medal Award of Appreciation
	CONGRESS DINNER at Royal Thai Navy Convention Hall	GNE HEALTH (sO-1 to sO-4) FREE COMMUNICATION I (O-1 to O-11) FREE COMMUNICATION II (O-12 to O-25)	 Closing Remarks by Professor Dr. HRH Princess Chulabhorn

SCIENTIFIC PROGRAM

SUMMARY

Monday, December 16, 2024

Time			Monuuy, December 10, 2024		
Time			Grand Ballroom		
09:00	Keynote Lecture: From Environmental Exposures to Disease Manifestation: The Lasting Impacts of Arsenic Professor Dr. H.R.H. Princess Chulabhorn Mahidol (Chulabhorn Research Institute, Thailand)				
09:45	Special Remarks: Tedros Adhanom G	Special Remarks: Tedros Adhanom Ghebreyesus (WHO, Switzerland)			
	Chairpersons: Ram Sasisekhar	an (U.S.A.) and <i>M.R.</i> Jisnuson Svasti (T	hailand)		
10:00	Plenary Lecture 1: One Health: Prediction	cting and Preempting Spillover and Infec	tion Dissemination PL-1		
	Julie L. Gerberg	ding (U.S.A.)			
10:45	Plenary Lecture 2: AMR in 2024: We		PL-2		
	Helen W. Bouc				
11:30		LUNCH			
	POSTER PRESENTATION	: PA-01 to PB-30 (Discussion 08:30-0	09:00 and 12:00-13:00)		
Time	Ballroom I	Ballroom II	Ballroom III		
13:00	SYMPOSIUM I: Antimicrobial Resistance (AMR) and One Health: Critical Issues Chairperson: Helen W. Boucher (U.S.A.) Co-chairperson: Mayuree Fuangthong (Thailand) Abstract No. AMR Governance: Critical S-1 Beyond the Science Adam Kamradt-Scott (U.S.A.) Is This the End of the Antibiotic Era? S-2 David Paterson (Singapore) Ensuring Sustainable Access S-3 to Effective Antibiotics: Key Messages from the Lancet Series Ramanan Laxminarayan (U.S.A.) SYMPOSIUM II: One Health: Climate Change and Communicable diseases Chairperson: Paul R. Hunter (U.K.) Co-chairperson: Mayuree Fuangthong (Thailand) World Health Organization Calls S-4 for Urgent Action to Mitigate Climate- Related Health Risks and Promote Resilience through A One Health Perspective Maria Neira (WHO, Switzerland) Climate Change and Emerging S-5 Infectious Diseases	SYMPOSIUM III: Role of Chemical and Biological Sciences for Discovery of Modern Drugs I Chairperson: Geoffrey A. Cordell (U.S.A.) Co-chairperson: Charnsak Thongsornkleeb (Thailand) Abstract No. Phytochemicals of Liverworts: S-8 Structures, Biological Activity, and Their Application to Foods and Medicinal Drugs Yoshinori Asakawa (Japan) Phenotypic Assays and Analog S-9 Synthesis: Effective Tools for the Discovery and Development of Marine Natural Product Drug Leads Raymond Andersen (Canada) Discovery of Antiviral Natural Products Based on Native Mass Spectrometry and Molecular Networking Yang Ye (P.R. China) Natural Product Biosynthesis S-11 and Associated Molecular Innovation Wen Liu (P.R. China) Efficient Synthesis of Bioactive Jinghan Gui (P.R. China) One Health - An Aspect of the S-00, Medicines, and Environment Conundrum for 2040 and Beyond Geoffrey A. Cordell (U.S.A.)	SYMPOSIUM IV: Genetic Diseases: From Detection to Therapy Chairperson: Pornswan Wasant (Thailand) Co-chairperson: Suthat Fucharoen (Thailand) Mbstract No. Thalassemia: A Model of Genetic S-14 Disease Suthat Fucharoen (Thailand) Over 3 Decades of Organizing Services for Inherited Metabolic Disorders in Thailand Pornswan Wasant (Thailand) Gaucher Disease as A Model for S-16 Rare Disorders Ari Zimran (Israel) Rare Inborn Metabolic Disorders: S-17 From Mystery to Diagnosis and Management Duangrurdee Wattanasirichaigoon (Thailand) Newborn Screening by Tandem S-18 Mass Spectrometry: From Early Detection of Rare Diseases to Therapy Nithiwat Vatanavicharn (Thailand) Lysosomal Storage Diseases: S-19 Progress in Diagnosis and Therapy in Thailand Thipwimol Tim-Aroon (Thailand)		
	Paul R. Hunter (U.K.)Rational Design of Vaccinesagainst Zika and Dengue VirusesLianpan Dai (P.R. China)Elimination of Hepatitis in Thailandby the Year 2030Yong Poovorawan (Thailand)				

PROGRAM SUMMARY

Tuesday, December 17, 2024

Time			Grand E	Ballr	oom
	PLENARY LECTURES:		Abstra		
	Chairpersons: John M. Essigmann (U.S.A.) and Skorn Mongkolsuk (Thailand)				
	Champersons. com		iongkolouk (Thailand)		
09 :00		ment and Regulatory Sciences: Turr	ing Crises into Opportunities —	PL-3	;
	A Valuable Pe				
	Ram Sasis	ekharan (U.S.A.)			
09:45		s of Precision Medicine: Proteomic E	Enablement of Biomarkers and	PL-4	
	Therapeutics				
	Jennifer vai	n Eyk (U.S.A.)			
10:30		e Therapeutics for Genetic Diseases		PL-5	
	John M. Es	sigmann (U.S.A.)			
11:15	Plenary Lecture 6: The Lessons I			PL-6	
	George F. G	Sao (P.R. China)			
12:00		LUNCH			
	POSTER PRESENTATIO	DN: <u>PC-01 to PF-07</u> (Discussion 1	2:30-13:00 and 16:30-17:00)		
Time	Ballroom I	Ballroom II	Ballroom III		
13:00	SYMPOSIUM VII:	SYMPOSIUM V:	SYMPOSIUM IX:		
10.00	Zoonotic Diseases	Early Detection and	Environmental Risk Factors		
	Chairperson:	Prevention of Cancer	Affecting Health		
	Khongsak Thiangtum (Thailand)	Chairperson:	Chairperson:		
	Co-chairperson:	Xin Wei Wang (U.S.A.)	Martin van den Berg		
	Waraphon Phimpraphai (Thailand)	Co-chairperson: Jittiporn Chaisaingmongkol	(The Netherlands) Co-chairperson:		
	Abstract No.	(Thailand)	Piyajit Watcharasit (Thailand)		
	Protecting Animals and Human S-27	Abstract No.	Abstract No.		IJ
	Lives from Rabies Project: One	Adductomic Strategies for S-20	Towards One Health:Toxicokinetics S-34		lle
	Health Approach for Rabies Control	Emerging Risk Factors in	at the Intersection of Human and	'n	Ga
	and Elimination in Thailand	Liver Cancer	Ecological Health	m	u
	Professor Dr. H.R.H. Princess Chulabhorn Mahidol (Thailand)	John D. Groopman (U.S.A.) Liver Cancer Prevention S-21	Michelle Embry (U.S.A.)	O-11) at The Study	-de
	One Health in Actions on S-28	Liver Cancer Prevention S-21 Hashem B. El-Serag (U.S.A.)	Food Safety from a One Health S-35 Perspective	he	Ja1
	Zoonoses and Agrifood Systems:	Emerging Strategies of Early S-22	Maged Younes (U.K.)	t T	e (
	Perspectives for Global Health and	Detection of Liver Cancer	Per- and Polyfluoroalkyl S-36) a	Th
	Food Security	Xin Wei Wang (U.S.A.)	Substances (PFAS): The Complexity	-11	at
	Thanawat Tiensin (FAO, Italy) Successful One Health Approach S-29		in Toxicity and Risk Assessment		25)
	to Reduce Zoonotic Disease from	<u>SYMPOSIUM VI:</u> Antimicrobial Resistance: One	Martin van den Berg (The Netherlands)	1 to	0
	Pigs	Health Perspectives	The Air We Breathe – Chemical S-37	(0-1	to
	Cate Dewey (Canada)	Chairperson:	Challenges to Health, A UK-Thailand	1	12
	Complexity, Context, and Community S-30 Engagement: Centering Anthropology	Peter Dedon (U.S.A.)	Perspective	NO	0
	Within the One Health Paradigm	Co-chairperson:	Dudley E. Shallcross (U.K.)	AT	I
	Elizabeth Finnis (Canada)	Nisanart Charoenlap (Thailand)	PM _{2.5} Toxicity and Adverse Health S-38	IICATION I	<u>ON II</u> (0-12 to 0-25) at The Garden Gallery
		One Health Selection and S-23	Effects Herman Autrup (Denmark)	NN	ΝTI
	<u>SYMPOSIUM VIII:</u> One Health and Therapeuties	Transmission of Antibiotic Resistance in Thailand, Argentina	Lethan had up (Dennany	FREE COMMUN	FREE COMMUNICAT
	One Health and Therapeutics Chairpersons:	and the United Kingdom	SPECIAL PLATFORM SESSION	IO.	INC
	Helen W. Boucher (U.S.A.)	Matthew B. Avison (U.K.)	ON ONE HEALTH	ы С	IMI
	Co-chairperson:	Lessons from Wastewater S-24	(sO-1 to sO-4)	CE.	OIN
	Ram Sasisekharan (U.S.A.)	Surveillance: Impact of COVID-19		FI	C
	Vaccine Manufacturing S-31	on AMR			REF
	Considerations for Pandemic	<i>Motoyuki Sugai (Japan)</i> Mining the Epitranscriptome for S-25			FF
	Preparedness	First-In-Class Antimicrobials			
	Rahul Singhvi (U.S.A.)	Peter Dedon (U.S.A.)			
	Design and Patterns of Optimized S-32 Drug Combinations for TB	AMASS: AutoMated Tool for S-26			
	Bree Aldridge (U.S.A.)	Antimicrobial Resistance Surveillance			
	Development of Multi-Epitope S-33	System – How Thailand Utilizes			
	Subunit Vaccines Against	Timely Data from 127 Public Hospitals for Actions at the Facility and National Levels			
	Acinetobacter baumannii	Direk Limmathurotsak			
	Bernard Arulanandam (U.S.A.)				
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PROGRAM SUMMARY

Wednesday, December 18, 2024

Time	Ballroom I	Ballroom II	Ballroom III		
9:00	SYMPOSIUM X: Protein Changes in Disease Chairperson: John R. Yates III (U.S.A.) Co-chairperson: Sittiruk Roytrakul (Thailand) Abstrcat No. How a Single Mutation in CFTR S-39 Causes the Systemic Disease Cystic Fibrosis: Interactions, PTMs, and Structure John R. Yates III (U.S.A.) Ultrasensitive Proteomics for S-40 Precision Oncology Yu-Ju Chen (Chinese Taipei) Navigating Drug-Targetome- Phenotype Interaction and Its Translational Implications Ho Jeong Kwon (Republic of Korea) Advancement in Peptidoproteomics S-42 for Cancer Research Sittiruk Roytrakul (Thailand) Exploring Microproteins and S-43 Interferon Pathways in Colorectal Cancer: Implications for Disease Progression and FOLFOX Chemoresistance Teck Yew Low (Malaysia)	SYMPOSIUM XI: Relationships between Genetic Mutation and the Environment in Cancer and Infectious Diseases Chairperson: Tariq Enver (U.K.) Co-chairperson: Panida Navasumrit (Thailand) Abstract No. Genetic and Epigenetic Cues S-44 Shape Initiation, Promotion and Therapy Resistance in Childhood Leukaemia Tariq Enver (U.K.) Towards an Understanding of A-45 Air Pollution Driven Lung Cancer Promotion Charles Swanton (U.K.) Axonal Injury Initiates Glioblastoma S-46 Simona Parrinello (U.K.) What Does Our Knowledge of Innate Immune Regulation during S-47 Infection Tell Us about Innate Immune Contribution to Cancer Outcome? Greg Towers (U.K.) Special PLATFORM SESSION ON CANCERS (sO-5 to sO-8)	SYMPOSIUM XII: Role of Chemical and Biological Sciences for Discovery of Modern Drugs II Chairperson: Roderick Bates (Singapore) Co-chairperson: Jutatip Boonsombat (Thailand) Abstract No. The Infinite Loop: Machine Learning S-48 for Discovery, Delivery, and Rapid Manufacturing of Potential Medicines Bradley L. Pentelute (U.S.A.) Antibody-Drug Conjugates (ADCs) – S-49 A Perfect Synergy? John A. Hartley (U.K.) Developments of Molecular Probes S-50 for Detection of Biological Targets Sun-Joon Min (Republic of Korea) From Structural Biology to Organic S-51 Synthesis: A Collaborative Search for New Anti-Mycobacterial Drugs Roderick Bates (Singapore) FREE COMMUNICATION III (0-26 to O-29)		
12:00		LUNCH			
Time		LONCH	Grand Ballroom		
13.00	CLOSING SESSION:		Abstract No.		
	REGULATORY INNOVATIO	N			
	Moderators: Ram Sasisekha	ran (U.S.A.) and Surachoke Tangwiwat (T	hailand)		
		vance Gene Therapy Development [Virtua	I Presentation] RD		
	Peter Marks (U.S.A.) Perspectives from the T Worasuda Yoongthon				
	Roundtable Discussion: Panelists: • Helen W. Boucher (U.S.A.) • Rahul Singvi (U.S.A.) • Worasuda Yoongthong (Thailand) • Ram Sasisekharan (U.S.A.)				
	Roundtable Discussion - AMR Policy Impacting South and Southeast Asia Moderators: Helen W. Boucher (U.S.A.) and Julie L. Gerberding (U.S.A.)				
	Panelists: • Helen W. Bou • George F. Ga • Julie L. Gerber • Ramanan Lax • David Patersc	o (P.Ř. Chiná) ding (U.S.A.) minarayan (U.S.A.)			
16:00	CLOSING CEREMONY:	·			
		labhorn Gold Medal Award of Apprecia r. H.R.H. Princess Chulabhorn	tion		

DAILY PROGRAM

Monday, December 16, 2024

		Grand Ballroom
09:00	<u>KEYNOTE LECTURE:</u>	
	From Environmental Exposures to Disease Manifestation The Lasting Impact of Arsenic	on:
	Professor Dr. HRH Princess Chulabhorn Mahido	Ι
	(Chulabhorn Research Institute, Thailand)	
09:45	SPECIAL REMARKS:	

PLENARY LECTURES:

Chairpersons: Ram Sasisekharan (U.S.A.)

M.R. Jisnuson Svasti (Thailand)

Abstract No. PL-1

10:00 Plenary Lecture 1

One Health: Predicting and Preempting Spillover and Infection Dissemination Julie L. Gerberding (Foundation for the National Institutes of Health, U.S.A.)

10:45 Plenary Lecture 2

PL-2

AMR in 2024: We Still Have an Awareness Problem Helen W. Boucher (Tufts University, U.S.A.)

11:30 LUNCH

Tedros Adhanom Ghebreyesus (World Health Organization, Switzerland)

Ballroom I

<u>SYMPOSIUM I:</u> Antimicrobial Resistance (AMR) and One Health: Critical Issues

С	hairperson: Helen W. Boucher (U.S.A.)	
Co-c	hairperson: Mayuree Fuangthong (Thailand)	
		Abstract No.
13:00	AMR Governance: Critical Challenges Beyond the Science Adam Kamradt-Scott (Tufts University, U.S.A.)	S-1
13:30	Is This the End of the Antibiotic Era? David Paterson (National University of Singapore, Singapore)	S-2
14:00	Ensuring Sustainable Access to Effective Antibiotics: Key Messages from the Lancet Series Ramanan Laxminarayan (One Health Trust, U.S.A.)	S-3

<u>SYMPOSIUM II:</u> One Health: Climate Change and Communicable Diseases

Ch	airperson:	Paul R. Hunter (U.K.)	
Co-ch	nairperson:	Mayuree Fuangthong (Thailand)	
14:30	Climate-Rela A One Healt	n Organization Calls for Urgent Action to Mitigate ated Health Risks and Promote Resilience through n Perspective [VDO presentaion] Jeira (World Health Organization, Switzerland)	S-4
14:45		nge and Emerging Infectious Diseases <i>Hunter (University of East Anglia, U.K.)</i>	S-5
15:15		sign of Vaccines against Zika and Dengue Viruses n Dai (Chinese Academy of Sciences, P.R. China)	S-6
15:45		of Hepatitis in Thailand by the Year 2030 oovorawan (Chulalongkorn University, Thailand)	S-7

Ballroom II

<u>SYMPOSIUM III:</u> Role of Chemical and Biological Sciences for Discovery of Modern Drugs I

C	hairperson: Geoffrey A. Cordell (U.S.A.)	
Co-c	hairperson: Charnsak Thongsornkleeb (Thailand)	
		Abstract No.
13:00	Phytochemicals of Liverworts: Structures, Biological Activity, and Their Application to Foods and Medicinal Drugs Yoshinori Asakawa (Tokushima Bunri University, Japan)	S-8
13:30	Phenotypic Assays and Analog Synthesis: Effective Tools for the Discovery and Development of Marine Natural Product Drug Lea Raymond Andersen (University of British Columbia, Canada)	S-9 ds
14:00	Discovery of Antiviral Natural Products Based on Native Mass Spectrometry and Molecular Networking Yang Ye (Chinese Academy of Sciences, P.R. China)	S-10
14:30	Natural Product Biosynthesis and Associated Molecular Innovation <i>Wen Liu</i> (Chinese Academy of Sciences, P.R. China)	S-11
15:00	Efficient Synthesis of Bioactive Steroid and Terpenoid Natural Products <i>Jinghan Gui</i> (Chinese Academy of Sciences, P.R. China)	S-12
15:30	One Health - An Aspect of the Food, Medicines, and Environment Conundrum for 2040 and Beyond <i>Geoffrey A. Cordell (Natural Products Inc., U.S.A.)</i>	S-13

Ballroom III

<u>SYMPOS</u>	<u>SIUM IV:</u> Genetic Diseases: From Detection to Therap	y
С	hairperson: Pornswan Wasant (Thailand)	
Co-c	hairperson: Suthat Fucharoen (Thailand)	ract No.
13:00	Thalassemia: A Model of Genetic Disease Suthat Fucharoen (Mahidol University, Thailand)	S-14
13:30	Over 3 Decades of Organizing Services for Inherited Metabolic Disorders in Thailand Pornswan Wasant (Mahidol University, Thailand)	S-15
14:00	Gaucher Disease as a Model for Rare Disorders Ari Zimran (Hebrew University of Jerusalem, Israel)	S-16
14:30	Rare Inborn Metabolic Disorders: From Mystery to Diagnosis and Management Duangrurdee Wattanasirichaigoon (Mahidol University, Thailand)	S-17
15:00	Newborn Screening by Tandem Mass Spectrometry: From Early Detection of Rare Diseases to Therapy <i>Nithiwat Vatanavicharn (Mahidol University, Thailand)</i>	S-18
15:20	Lysosomal Storage Diseases: Progress in Diagnosis and Therapy in Thailand <i>Thipwimol Tim-Aroon (Mahidol University, Thailand)</i>	S-19

Grand Ballroom

<u>PLENAF</u>	RY LECTURES:	
Chai	irpersons: John M. Essigmann (U.S.A.) Skorn Mongkolsuk (Thailand)	
	Abs	tract No.
09:00	Plenary Lecture 3 Drug Development and Regulatory Sciences: Turning Crises into Opportunities — A Valuable Perspective Ram Sasisekharan (Massachusetts Institute of Technology, U.S.A.)	PL-3
09:45	Plenary Lecture 4 The Two Sides of Precision Medicine: Proteomic Enablement of Biomarkers and Therapeutics Jennifer van Eyk (Cedars-Sinai Medical Center, U.S.A.)	PL-4
10:30	<u>Plenary Lecture 5</u> Programmable Therapeutics for Genetic Diseases John M. Essigmann (Massachusetts Institute of Technology, U.S.A	PL-5
11:15	<u>Plenary Lecture 6</u> The Lessons Learned from COVID-19 George F. Gao (Chinese Academy of Sciences, P.R. China)	PL-6

12:00 LUNCH

Ballroom I

<u>SYMPOSIUM VII:</u> Zoonotic Diseases

	Chairperson:	Khongsak Thiangtum (Thailand)	
Co-	chairperson:	Waraphon Phimpraphai (Thailand)	
		Abs	tract No.
13:00	One Health Ap Professor	nals and Human Lives from Rabies Project: proach for Rabies Control and Elimination in Thailand Dr. H.R.H. Princess Chulabhorn Mahidol n Research Institute, Thailand)	S-27
13:30	Perspectives for	Actions on Zoonoses and Agrifood Systems: or Global Health and Food Security Tiensin (Food and Agriculture Organization of the United Na)	S-28 tions
14:00		e Health Approach to Reduce Zoonotic Disease from Pigs •y (University of Guelph, Canada)	S-29
14:30	Anthropology v	ntext, and Community Engagement: Centering vithin the One Health Paradigm Finnis (University of Guelph, Canada)	S-30
SYMPOS	<u>SIUM VIII:</u> Or	ne Health and Therapeutics	
	Chairperson:	Helen W. Boucher (U.S.A.)	
Co-	chairperson:	Ram Sasisekharan (U.S.A.)	
15:00		facturing Considerations for Pandemic Preparedness ghvi (National Resilience, Inc., U.S.A.)	S-31
15:30	•	atterns of Optimized Drug Combinations for TB dge (Tufts University, U.S.A.)	S-32
16:00	Acinetobacter	of Multi-Epitope Subunit Vaccines Against baumannii rulanandam (Tufts University School of Medicine, U.S.A.)	S-33

	[Ballroom II
<u>SYMPO</u>	<u>SIUM V:</u> Early Detection and Prevention of Can	cer
	Chairperson: Xin Wei Wang (U.S.A.)	
•	Co-chairperson: Jittiporn Chaisaingmongkol (Thailand)	
		Abstract No.
13:00	Adductomic Strategies for Emerging Risk Factors in Liver Cancer John D. Groopman (Johns Hopkins School of Medicine, U.S	
13:30	Liver Cancer Prevention Hashem B. El-Serag (Baylor College of Medicine, U.S.A.)	S-21
14:00	Emerging Strategies of Early Detection of Liver Cancer <i>Xin Wei Wang</i> (<i>National Cancer Institute, U.S.A.</i>)	S-22
<u>SYMPO</u>	<u>SIUM VI:</u> Antimicrobial Resistance: One Health	Perspectives
	Chairperson: Peter Dedon (U.S.A.)	
	Co-chairperson: Nisanart Charoenlap (Thailand)	Abstract No.
44.20	One Legith Colortion and Transmission of Antibiotic Desistance	
14:30	One Health Selection and Transmission of Antibiotic Resistance in Thailand, Argentina and the United Kingdom <i>Matthew B. Avison</i> (University of Bristol, U.K.)	S-23
15:00	Lessons from Wastewater Surveillance: Impact of COVID-19 on Motoyuki Sugai (National Institute of Infectious Diseases, Ja	
15:30	Mining the Epitranscriptome for First-In-Class Antimicrobials <i>Peter Dedon</i> (Massachusetts Institute of Technology, U.S.A.)	S-25
16:00	AMASS: AutoMated Tool for Antimicrobial Resistance Surveilland System – How Thailand Utilizes Timely Data from 127 Public Hos for Actions at the Facility and National Levels Direk Limmathurotsakul (Mahidol University, Thailand)	

Ballroom III

<u></u>	SIUM IX: Environmental Risk Factors Affecting Health	
C	Chairperson: Martin van den Berg (The Netherlands) o-chairperson: Piyajit Watcharasit (Thailand)	
C		ract No.
13:00	Towards One Health: Toxicokinetics at the Intersection of Human and Ecological Health <i>Michelle Embry</i> (Health and Environmental Sciences Institute, U.S.A.)	S-34
13:30	Food Safety from a One Health Perspective Maged Younes (Robert Gordon University, U.K.)	S-35
14:00	Per- and Polyfluoroalkyl Substances (PFAS): The Complexity in Toxicity and Risk Assessment <i>Martin van den Berg</i> (Utrecht University, The Netherlands)	S-36
14:30	The Air We Breathe – Chemical Challenges to Health, A UK-Thailand Perspective Dudley E. Shallcross (University of Bristol, U.K.)	S-37
15:00	PM _{2.5} Toxicity and Adverse Health Effects <i>Herman Autrup</i> (University of Aarhus, Denmark)	S-38
<u>Special</u>	Platform Session on One Health	
	Chairperson: Bette Meek (Canada)	
C	Co-chairperson: Kwanrawee Sirikanchana (Thailand)	
15:30	World Health Organization Calls for Enhanced Multisectoral Action to Improve Chemical Safety and Protect Public Health, Including Through A One Health Approach <i>Virunya Bhat (World Health Organization, Switzerland)</i>	s0-1
15:45	Development of Guidance on Problem Formulation for Implications for One Health Approaches Bette Meek (University of Ottawa, Canada)	s0-2
16:00	Harnessing Nano- and Bio-Technology Platforms for Human and Plant Health Archana Bhaw-Luximon (University of Mauritius, Mauritius)	sO-3
16:15	Tracking Communicable Diseases Using Wastewater in an Environmental One Health Framework <i>Kwanrawee Sirikanchana</i> (Chulabhorn Research Institute, Thailand)	s0-4

<u>Free (</u>	Communication I:	The Study
	Chairperson: James Dubbs (Thailand)	
C	co-chairperson: Rojana Sukchawalit (Thailand)	Abstract No.
13:00	The Impact of Glyphosate on Emergence of Antimicrobial Res Nisanart Charoenlap (Chulabhorn Research Institute, The	sistance O-1
13:15	Biocide-associated Resistance Mechanisms in <i>Pseudomonas Aeru</i> Impacts on Antibiotics and Host Immunity Adisak Romsang (Mahidol University, Thailand)	ıginosa: O-2
13:30	Nano Boost: Enhancing Antibacterial Efficacy of Ceftriaxone w Magnesium Oxide Nanoparticles to Tackle Antimicrobial Resis Qaiser Akram (University of Veterinary and Animal Science	stance
13:45	Evaluating AMR Surveillance Methodologies in Cholistani and A Comparative Study of Sampling Strategies and Testing Tech <i>Muhammad Amjad Ali</i> (<i>Bahauddin Zakariya University, P</i>	nniques in Pakistan
14:00	Emergence of Multi-Drug Resistant Bacteria Due to Irrational in Livestock Dhanushka Darshana Silva Nammuni (University of Ruh	
14:15	The Gut Microbiota in Children from an E-waste Recycling Are with 6PPDQ and Other Pollutant Exposure <i>Xia Huo (Jinan University, P.R. China)</i>	ea O-6
14:30	Heavy Metal (Loid) Exposure Increases the Risk of Childhood Evidence from a Typical E-waste Recycling Area in China Bo Xie (Jinan University, P.R. China)	Anemia: O-7
14:45	Influence of E-waste Exposure on DNA Damage and DNA Methy in People Living Near Recycling Sites <i>Jinhan Wang</i> (Chinese Academy of Medical Sciences, P.F	-
15:00	The Health Status Assessment of Personnel Handling Electronic in Developing Country: A Situation Analysis Ravichandran Beerappa (ICMR Regional Occupational F	
15:15	Blood Heavy Metals, DNA Damage, and Intelligence Quotient Ar Children from an Informal E-waste Processing Village in Vietn <i>Hien Thi Thu Ngo (Phenikaa University, Vietnam)</i>	•
15:30	Environmental Health Risks of Post-Ban Paraquat Residues in Phitsanulok's Nan River and Vicinity Areas Pantip Hinhumpatch (Naresuan University, Thailand)	n O-11

Free (Communication II	The Garden Gallery	
	Chairperson: Daam Settachan (Thailand)		-
C	Co-chairperson: Chotirat Rattanasinchai (Thailand		
13:00	Enhancing Anti-glioma Activity with Combined Epige and MAGE-D4 Peptide-specific T Cells <i>Xiaoxun Xie</i> (<i>Guangxi Medical University, P.R. C</i>	-	
13:15	Adipose Tissue Levels of PBDEs in Relation to Chemotherapy Toxicity, Chemoresistance and Prognosis in Breast Cancer Patients <i>Lin Peng</i> (Shantou University Medical College, P.R. China)		3
13:30	Genetic Underpinnings of Hypoglycemia-Induced Ep Insights from GYS2 Gene Mutations <i>Muhammad Ilyas</i> (<i>Riphah International Universi</i>		4
13:45	<i>Candida albicans</i> DNA-protein crosslink repair and it in stress response <i>Oranart Matangkasombut</i> (Chulabhorn Researc		8
14:00	Differential Requirement for IL-2 And IL-23 in the Diff and Effector Functions of T Cell Against Cancer <i>Cai Ping Koh</i> (Quest International University, Ma		6
14:15	Clinical Feasibility of MALDETEC-CTC For Detection Tumor Cells in Osteosarcoma Using Whole-Cell MAI Mass Fingerprint Santhasiri Orrapin (Chiang Mai University, Thai	LDI-TOF	7
14:30	Aminoacyl-tRNA Synthetase Deficiencies: Clinical Pr Biochemical Analyses, and Functional Studies Parith Wongkittichote (Mahidol University, Thai		5
14:45	Metabolic Dysfunction in Mice with Adipocyte Specifi the Adenosine A2A Receptor <i>Narendra Verma</i> (Centre of Biomedical Researc		9
15:00	PI3K/AKT Mediate Collagen Type 1- Induced Osteog Dental Pulp Stem Cells Via Focal Adhesion Mechani Norhayati Yusop (Universiti Sains Malaysia, Ma	sm	20

(To be continued)

Tuesday, December 17, 2024

The Garden Gallery

Free Communication II (continued)

Abstract No. 15:15 Synergistic Effects of AMPK Activation and TBK1 Inhibition to 0-21 Improve Metabolic Health and Insulin Sensitivity in Obese Mice Churaibhon Wisessaowapak (University of California San Diego, U.S.A.) 15:30 Unraveling the Intracellular Action of Antimicrobial Peptide A11 0-22 through Proteomic Analysis in Acinetobacter baumannii Ratchaneewan Aunpad (Thammasat University, Thailand) 15:45 Glycolipid Biosurfactant and Its Potential Applications in Biomedicines **O-23** Nitnipa Soontorngun (King Mongkut's University of Technology Thonburi, Thailand) 16:00 Genome Persistence & Survival of Clostridium perfringens from **O-24** Ichthyofauna of Dal Lake Himalaya-A Possible Future Public Health Hazard Irfan Ahmad (University of Agricultural Sciences & Technology of Kashmir, India) Toxicological Impacts of Clofibric Acid, Diclofenac and Ibuprofen **O-25** 16:15 on Fish: An Environmental Health Issue Manoharan Saravanan (Bharathiar University, India)

Ballroom I

<u>SYMPOS</u>	<u>SIUM X:</u> Protein Changes in Disease	
	Chairperson: John R. Yates III (U.S.A.)	
(Co-chairperson: Sittiruk Roytrakul (Thailand)	Abstract No.
09:00	How a Single Mutation in CFTR Causes the Systemic Disease Cystic Fibrosis: Interactions, PTMs, and Structure John R. Yates III (The Scripps Research Institute, U.S.A.)	S-39
09:30	Ultrasensitive Proteomics for Precision Oncology Yu-Ju Chen (Academia Sinica, Chinese Taipei)	S-40
10:00	Navigating Drug-Targetome-Phenotype Interaction and Its Translational Implications Ho Jeong Kwon (Yonsei University, Republic of Korea)	S-41
10:30	Advancement in Peptidoproteomics for Cancer Research <i>Sittiruk Roytrakul</i> (National Center for Genetic Engineering and Biotechnology, Thailand)	S-42
11:00	Exploring Microproteins and Interferon Pathways in Colorectal Cancer: Implications for Disease Progression and FOLFOX Chemoresistance Teck Yew Low (Universiti Kebangsaan Malaysia, Malaysia)	S-43
11:30	LUNCH	

Ballroom II

<u>SYMPOSIUM XI:</u> Relationships between Genetic Mutation and the Environment in Cancer and Infectious Diseases

Chairperson: Tariq Enver (U.K.)

Co-chairperson: Panida Navasumrit (Thailand)

	Abstr	act No.
09:00	Genetic and Epigenetic Cues Shape Initiation, Promotion and Therapy Resistance in Childhood Leukaemia <i>Tariq Enver (University College London, U.K.)</i>	S-44
09:30	Towards an Understanding of Air Pollution Driven Lung Cancer Promotion Charles Swanton (Francis Crick Institute, U.K.)	S-45
10:00	Axonal Injury Initiates Glioblastoma Simona Parrinello (University College London, U.K.)	S-46
10:30	What does Our Knowledge of Innate Immune Regulation during Infection Tell Us About Innate Immune Contribution to Cancer Outcome? <i>Greg Towers (University College London, U.K.)</i>	S-47

Special Platform Session on Cancers

	Chairperson: Christopher Loffredo (U.S.A.) Co-chairperson: Benjarath Javed (Thailand)	
11:00	The Landscape of Etiological Patterns of Hepatocellular Carcinoma and Intrahepatic Cholangiocarcinoma in Thailand Benjarath Javed (Chulabhorn Research Institute, Thailand)	sO-5
11:15	Integrated Genomic Applications Discern Molecular Subgroups and Treatment Response in Liver Cancer Anuradha Budhu (National Cancer Institute, U.S.A.)	sO-6
11:30	Ionizing Radiation-associated Liver Cancers in the Mayak Worker Cohort Christopher Loffredo (Georgetown University, U.S.A.)	s0-7
11:45	Urinary Biomarkers for Early Lung Cancer Detection in Non-smokers: A Step Toward Personalized Screening Daxeshkumar P. Patel (National Cancer Institute, U.S.A.)	sO-8

12:00 LUNCH

Ballroom III

<u>SYMPOSIUM XII:</u> Role of Chemical and Biological Sciences for Discovery of Modern Drugs II

	Chairperson: Roderick Bates (Singapore)	
С	o-chairperson: Jutatip Boonsombut (Thailand)	
	Abs	stract No.
09:00	The Infinite Loop: Machine Learning for Discovery, Delivery, and Rapid Manufacturing of Potential Medicines	S-48
	Bradley L. Pentelute (Massachusetts Institute of Technology, U.S.A.)	
09:30	Antibody-Drug Conjugates (ADCs) – A Perfect Synergy? John A. Hartley (University College London, U.K.)	S-49
10:00	Developments of Molecular Probes for Detection of Biological Targets Sun-Joon Min (Hanyang University (ERICA), Republic of Korea)	S-50
10:30	From Structural Biology to Organic Synthesis: A Collaborative Search for New Anti-Mycobacterial Drugs <i>Roderick Bates</i> (Nanyang Technological University, Singapore)	S-51

Free Communication III:

	Chairperson:	Poonsakdi Ploypradith (Thailand)	
	Co-chairperson:	Rapeepat Sangsuwan (Thailand)	
11:00	Synthesizing Fu	Characterizing the Biosynthetic Machineries for Ingal Natural Products Ing Lin (Academia Sinica, Chinese Taipei)	O-26
11:15	and SARS-CO	ng Anti-Viral and Virucidal Effects Against HIV-1 RT /-2 By Phenylamino-Phenoxy-Quinoline rasen (Chulabhorn Research Institute, Thailand)	0-27
11:30	the Detection of	lication of Ultrasensitive & Selective Sensor for An Anticancer Drug Using Nanoparticles Ingi (University of Sindh, Pakistan)	O-28
11:45	Strategy to Dev	aran Sulfate–SARS-COV-2 Spike Protein Interaction: elop Novel Viral Inhibitors rafioriti (Istituto di Ricerche Chimiche e Biochimiche ", Italy)	O-29

CLOSING SESSION:

13:00-15:30

REGULATORY INNOVATION

Moderators: Ram Sasisekharan (U.S.A.) and Surachoke Tangwiwat (Thailand)

Abstract No.

Grand Ballroom

- U.S. FDA's Efforts to Advance Gene Therapy Development RD
 Peter Marks (Food and Drug Administration, U.S.A.) [Virtual presentation]
- Perspectives from the Thai FDA
 Worasuda Yoongthong (Food and Drug Administration, Thailand)

Roundtable Discussion

Panelists: • Helen W. Boucher (U.S.A.)

- Rahul Singhvi (U.S.A.)
- Worasuda Yoongthong (Thailand)
- Ram Sasisekharan (U.S.A.)

<u>Roundtable Discussion</u> – AMR Policy Impacting South and Southeast Asia

Moderators: Helen W. Boucher (U.S.A.) and Julie L. Gerberding (U.S.A.)

Panelists: • Helen W. Boucher (U.S.A.)

- George F. Gao (P.R. China)
- Julie L. Gerberding (U.S.A.)
- Ramanan Laxminarayan (U.S.A.)
- David Paterson (Singapore)

CLOSING CEREMONY

- 16:00 Presentation of the Princess Chulabhorn Gold Medal Award of Appreciation

 Recipients: (in alphabetical order)
 Professor Martin van den Berg (The Netherlands)
 Dr. Norbert Frank (Germany)
 Dr. Curtis C. Harris (U.S.A.)
 Professor Leonard Ritter (Canada)
 Dr. Xin Wei Wang (U.S.A.)
 Thanphuying Putrie Viravaidya (Thailand)
 - Closing Remarks by Professor Dr. HRH Princess Chulabhorn

POSTER SESSIONS:

The Ballroom Foyer

GROUP 1:

POSTER NUMBER: <u>PA-01 to PB-31</u> BOARD NUMBER: <u>001 - 072</u>

Posters should be set up for display on Monday, December 16 from 08:00. Display: Monday, December 16, 08:00 to Tuesday, December 17, 10:00. Discussion: Monday, December 16 from 08:30 to 09:00 and 12:00 to 13:00. The display must be removed by 10:00, on Tuesday, December 17, 2024.

List of Poster Presentations:

Code	Topic	Poster No.	Board No.
PA	Diseases of Public Health Concerns (Genetic Diseases, Cancer)	PA-01 to PA-42	001 - 042
PB	Drug Development for Prevention and Treatment	PB-01 to PB-30	043 - 072

GROUP 2:

POSTER NUMBER: PC-01 to PF-07

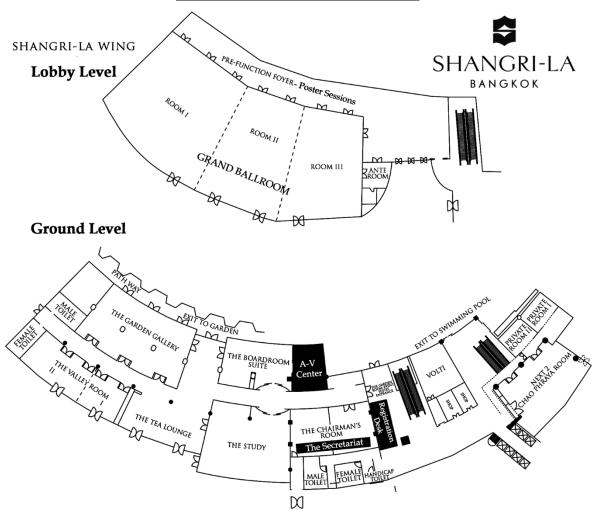
BOARD NUMBER: <u>001 - 066</u>

Posters should be set up for display on Tuesday, December 17 from 11:00. Display: Tuesday, December 17, 11:00 to Wednesday, December 18, 18:00. Discussion: Tuesday, December 17 from 12:30 to 13:00 and 16:30 to 17:00. The display must be removed by 18:00, on Wednesday, December 18, 2024.

List of Poster Presentations:

Code	Topic	Poster No.	Board No.
PC	Antimicrobial Resistance	PC-01 to PC-26	001 - 026
PD	Climate Change and Communicable Diseases	PD-01 to PD-11	027 - 037
PE	Environmental Health Issues	PE-01 to PE-22	038 - 059
PF	Food Safety and Security	PF-01 to PF-07	060 - 066

THE CONGRESS CENTER MAP



REGISTRATION:

Location: Registration takes place in the Garden Room-Event Suites Entrance on the Ground Floor.

On-site registration hours: Sunday, December 15 from 10:00 to 15:00.

Monday to Tuesday, December 16 - 17 from 08:00 to 17:00.

Full registration fee includes admission to all congress sessions, Program-Abstract book (e-book), and lunches.

Accompanying person's fee is only for social activities (including the opening ceremony) and accompanying guests' program. It does not admit individuals to scientific sessions.

IDENTIFICATION BADGES:

Name badges are issued to all registered participants and accompanying guests.

These are entry badges and should be worn at all times.

LUNCH:

For all participants, lunch is arranged in the room indicated on the meal vouchers, starting on Monday, December 16 to Wednesday, December 18 during lunch breaks. **Meal vouchers will be required.**

AUDIO-VISUAL CENTER (A-V Center):

Location: The Boardroom Suite on the Ground Floor of the Shangri-La Hotel.

Hours: Sunday, December 15 from 10:00 to 15:00

Monday, December 16 to Wednesday, December 18 from 08:00 to 17:30.

SECRETARIAT OFFICE:

Location: The Chairman's Room on the Ground Floor of the Shangri-La Hotel *Hours:* Sunday, December 15 to Wednesday, December 18 from **08:00 to 17:30**.