Chulabhorn Research Institute

The 8th Princess Chulabhorn International Science Congress

ENVIRONMENTAL HEALTH: INTER-LINKAGES AMONG THE ENVIRONMENT, CHEMICALS AND INFECTIOUS AGENTS

November 13-17, 2016

Shangri-La Hotel, Bangkok, Thailand

ANNOUNCEMENT AND CALL FOR ABSTRACTS

Organized by the
Chulabhorn Research Institute

Abstract Submission Deadline:
September 15, 2016

Congress Website - https://pc8.cri.or.th

The 8th Princess Chulabhorn International Science Congress

organized to commemorate

the 70th Anniversary Celebrations of His Majesty King Bhumibol's Accession to the Throne, His Majesty's Upcoming 90th Birthday, and the 7th Cycle (84 Years) Birthday of Her Majesty Queen Sirikit.

The 8th Princess Chulabhorn International Science Congress

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Congress Theme

ENVIRONMENTAL HEALTH: INTER-LINKAGES AMONG THE ENVIRONMENT, CHEMICALS AND INFECTIOUS AGENTS

Chairperson of Organizing Committee:

Professor Dr. HRH Princess Chulabhorn

The Princess Chulabhorn International Science Congress Program (PC) was initiated by Professor Dr. Her Royal Highness Princess Chulabhorn Mahidol, the youngest daughter of Their Majesties the King and Queen of Thailand, to provide a forum for the exchange of the latest information and the most recent advances in research among the international scientific community. Through this program, international congresses on selected topics in science and technology are organized every 4 to 5 years.

In 2016, the Congress will be held at the Shangri-la Hotel, Bangkok, Thailand from November 13-17, **to commemorate the seventieth anniversary celebrations of His Majesty King Bhumibol's accession to the throne, His Majesty's upcoming ninetieth birthday, and the seventh cycle (84 years) birthday of Her Majesty Queen Sirikit,** auspicious occasions for the people of Thailand to celebrate and pay tribute to Their Majesties the King and Queen. This marks a time of national joy and jubilation, which all scientists are invited to share.

The 8th Princess Chulabhorn International Science Congress (PC VIII)

Congress Theme

ENVIRONMENTAL HEALTH: INTER-LINKAGES AMONG THE ENVIRONMENT, CHEMICALS AND INFECTIOUS AGENTS

Over the past decade, there has been an increasing global awareness of the significant role the environment plays in human health outcomes. This is reflected in international discussions on chemical-related topics, such as lead in paints, hazardous substances within the life cycle of electrical and electronic products, nanotechnology and manufactured nanomaterials, endocrine-disrupting chemicals, environmentally persistent pharmaceutical pollutants, and highly hazardous pesticides, as well as the importance of chemical emissions on issues such as climate change, with potential resultant indirect impacts on human health. Susceptible populations, such as children, the elderly and people with pre-existing diseases, offer an additional layer of complexity in terms of exposure and manifestation of resultant health effects. At the same time, while there is a transition from primarily infectious agents as the main driving force for burden of disease to non-communicable diseases, infectious agents still play a significant role. Malaria, Dengue, SARS, MERS, Ebola, and avian influenza are but a handful of the infectious diseases that still contribute to a significant number of deaths and human suffering around the world.

While we are increasingly aware of the potential interactive effects of climate change and the spread of endemic areas for several infectious diseases through the spread of favorable conditions for the spawning of disease vectors, there is still a lot we do not understand about the inter-linkages of the environment, chemicals and infectious agents and their impacts on human health. In order to effectively address health risks and impacts of exposure to chemicals and infectious agents, much research is needed to define the inter-linkages, such that policy decisions and interventions can be taken to control and ultimately reduce the global burden of disease attributed to them, thereby improving the quality of life for all. The sustainable development of mankind will ultimately depend on our ability to do this successfully.

The theme for the 8th Princess Chulabhorn International Science Congress is "Environmental Health: Inter-linkages among the Environment, Chemicals and Infectious Agents". The scientific program will cover the following general areas:

- Chemical and infectious agents
- Exposure
- Diseases resulting from environmental exposure
- Mechanisms and pathways of disease development
- Modifiers of susceptibility and disease outcomes
- Tools and technologies
- New and emerging therapy

COMMITTEE AND INVITED SPEAKERS

International Advisory Committee (Partial list):

William W. Au	(P.R. China)	Denis L. Henshaw	(U.K.)
Herman N. Autrup	(Denmark)	Ram Sasisekharan	(U.S.A.)
John M. Essigmann	(U.S.A.)	William A. Suk	(U.S.A.)
Timothy W. Gant	(U.K.)	Xin Wei Wang	(U.S.A.)
John D. Groopman	(U.S.A.)	Christopher P. Wild	(IARC, France)
Curtis C. Harris	(U.S.A.)	Robert H. Wiltrout	(U.S.A.)

Invited Speakers (Partial list):

Nobel Laureate Speaker:

Aaron Ciechanover ***(Nobel Laureate, Tumor and Vascular Biology Research Center, Israel)***

Invited Speakers:

Jan Alexander	*(Norwegian Institute of Public Health, Norway)*
James P. Allison	*(M.D. Anderson Cancer Center, U.S.A.)*
William W. Au	*(Shantou University Medical College, Shantou, P.R. China)*
Herman N. Autrup	*(University of Aarhus, Denmark)*
Jennifer Lyn Baker	*(Institute of Preventive Medicine, Denmark)*
Jordana Bell	*(King's College London, U.K.)*
Bruce Blumberg	*(University of California, Irvine, U.S.A.)*
Alan R. Boobis	*(Imperial College London, U.K.)*
Flemming R. Cassee	*(National Institute for Public Health and the Environment, The Netherlands)*
Chunying Chen	*(National Center for Nanoscience and Technology, P.R. China)*
Gwen Collman	*(National Institute of Environmental Health Sciences, U.S.A.)*
Daniel R. Dietrich	*(University of Konstanz, Germany)*
Tariq Enver	*(University College London, U.K.)*
Susan E. Erdman	*(Massachusetts Institute of Technology, U.S.A.)*
John M. Essigmann	*(Massachusetts Institute of Technology, U.S.A.)*
Ellen Fritsche	*(University of Düsseldorf, Germany)*

Invited Speakers: *(continued)*

Rebecca Fry	*(University of North Carolina at Chapel Hill, U.S.A.)*
Peter R. Galle	*(Mainz University Medical Centre, Germany)*
Mary Gamble	*(Columbia University, U.S.A.)*
Timothy W. Gant	*(Public Health England, U.K.)*
Joseph Graziano	*(Columbia University, U.S.A.)*
John D. Groopman	*(Johns Hopkins Bloomberg School of Public Health, U.S.A.)*
Curtis C. Harris	*(National Cancer Institute, U.S.A.)*
Bernhard Hennig	*(University of Kentucky, U.S.A.)*
Denis L. Henshaw	*(University of Bristol, U.K.)*
Jun Kanno	*(National Institute of Health Sciences, Japan)*
Philip J. Landrigan	*(The Mount Sinai Hospital, U.S.A.)*
L.H. Lumey	*(Columbia University, U.S.A.)*
Susan Preston-Martin	*(University of Southern California, U.S.A.)*
Ram Sasisekharan	*(Massachusetts Institute of Technology, U.S.A.)*
Martyn T. Smith	*(University of California, Berkeley, U.S.A.)*
Sir Michael R. Stratton	*(Wellcome Trust Sanger Institute, U.K.)*
William A. Suk	*(National Institute of Environmental Health Sciences, U.S.A.)*
Young-Joon Surh	*(Seoul National University, South Korea)*
Duncan S. Sutherland	*(University of Aarhus, Denmark)*
Cathy Vaillancourt	*(Institut national de la recherche scientifique, INRS, Canada)*
Marco Vinceti	*(University of Modena, Italy)*
Xin Wei Wang	*(National Cancer Institute, U.S.A.)*
Victor Wepener	*(North-West University, South Africa)*
Kurt S. Zänker	*(University of Witten/Herdecke, Germany)*

SCIENTIFIC PROGRAM

The program will feature Nobel Laureate Lecture, Plenary Lectures, Symposia, Roundtable Discussion, and Platform and Poster Presentations. Concurrent symposia/workshops on issues relating to the focus of the Congress are also organized.

Nobel Laureate Lecture:

- **The Critical Role of the Ubiquitin Pathway in the Development of Human Disease,** ***Aaron Ciechanover (Nobel Laureate, Israel)***

Lectures (Partial list):

- **Environmental Chemical Exposure and Infectious Agents**
- **Liver Cancer**
- **The Role of the Environment - Precision Medicine; Liver and Lung Cancer**
- **Emerging and Recurrent Infectious Diseases**
- **Using Exposomics to Assess Cumulative Risks from Multiple Environmental Stressors**
- **Immune Checkpoint Blockade in Cancer Therapies: New Insights and Opportunities for Cures**
- **Interdisciplinary Stratagems to Advance Fundamental Scientific Knowledge are Required to Reduce the Double Burden of Disease**

Symposia (To be confirmed):

- **Environmental Toxicants / Health Problems**
- **Pollution: the Single Largest Cause of Death and Disability**
- **Inflammation / Disease Development**
- **Environmental Causes of Chronic Diseases Studied in International Cohorts**
- **Global Epidemic of Obesity**
- **The Role of Nutrition / Diet to Reduce Disease Risks Associated with Environmental Exposures**
- ***In Utero* and Early Childhood Exposure and Cancer in Children**
- **Epigenetic Roadmap of Inflammation-related Disorders and Therapy Options**
- **Chemical-biological Synergism**
- **Infectious Diseases and Biotechnology**
- **New Technologies – Nanoscience**
- **New Approaches in Risk Assessment**

For further information, please visit the Congress website at **https://pc8.cri.or.th**

CALL FOR ABSTRACTS

All congress participants are invited to submit abstracts for platform or poster presentations. Authors should select the appropriate area(s) from the "List of Topics" and indicate this on the registration form. Selection of the submissions to be presented as platform or poster presentations will be made by the Scientific Program Committee.

Deadline: **Abstracts should be submitted to the secretariat by *September 15, 2016*.**
Platform presentation: 15 minutes including discussion.
Poster Board dimensions: 1.0 m. (width) x 2.0 m. (height).

List of Topics for Platform and Poster Presentations:

1. **Chemical and Infectious Agents**
   - Infectious agents
   - Food contaminants
   - Emerging pollutants
   - Nanomaterials
   - Air pollutants
   - E-waste
   - Pesticides
   - Metals
   - Toxins derived from microorganisms / fungi / animals / plants
2. **Exposure**
   - Early life exposure/ disease development
   - Exposure pathways
3. **Diseases Resulting from Environmental Exposure**
   - Emerging / re-emerging diseases
   - Cancer
   - Diabetes
   - Asthma
   - Chronic obstructive pulmonary disease (COPD)
   - Obesity
   - Ageing and neurodegenerative disease (Alzheimer's disease, ALS, etc.)
4. **Mechanisms and Pathways of Disease Development**
   - Inflammation
   - Oxidative stress
   - Chemical-biological synergism
   - Modulation of immune response
   - Genetics / epigenetics
5. **Modifiers of Susceptibility and Disease Outcomes**
   - Environmental factors
   - Environmental changes / climate change
   - Microbiome
   - Nutrition / diet
   - Susceptible populations
6. **Tools and Technologies**
   - New approaches in environmental/ health risk assessment of chemicals
   - Tools and technologies to study exposure to environmental agents
   - Informatics for exposure biology
   - Diagnostics
   - Metabolomics
7. **New and Emerging Therapy**
   - Precision medicine
   - Nanoparticles in treatment of diseases
   - Chemoprevention
   - Healthful nutrition
   - Cancer immunotherapy
   - Gene therapy

Please note that:

- These abstract categories are used only for program planning and may or may not be used as session titles at the Congress.

FELLOWSHIPS:

A limited number of fellowships are available to participants whose abstracts have been selected by the Scientific Program Committee; this will cover:

1. **Registration fee and/or accommodation at the Chulabhorn Research Institute (ONLY for participants from developing countries).**

AND/OR

2. **Partial or discount airfare by low cost airlines (ONLY for participants from Asian countries).**

Preparation of Abstracts:

- The abstract must **not exceed 300 words in total**, including the title, author's names and affiliations.
- Use **ENGLISH** only.
- The document must be **single-spaced, using the Times New Roman font and a 12 pt. font size.**
- Type title in **bold CAPITAL LETTERS.**
- The presenting author's name is underlined.
- Abstracts with figures and/or tables will not be accepted.
- The abstract file should be submitted as a Microsoft Word 2010 or newer, using the author's name as the file name e.g., **nakareangrit_w.docx**

ARSENIC INDUCED MAPK SIGNALING IN BREAST CANCER

Watanyoo Nakareangrit[1], Daranee Visitnonthachai[2], Piyajit Watcharasit[1,2,3], Jutamaad Satayavivad[1,2,3], Apinya Thiantanawat[1,2,3]

[1]Environmental Toxicology Program, Chulabhorn Graduate Institute, [2]Laboratory of Pharmacology, Chulabhorn Research Institute, [3]Center of Excellence on Environmental Health, Toxicology and Management of Chemicals (ETM), Bangkok, Thailand

Arsenic (As) is considered as a serious health threat worldwide according to its ad contamination in drinking water. Chronic exposure to arsenic is associated with increase ypically skin, lung and bladder cancer. Recently, several studies reported that arsenic vironmental estrogen as it interfered with the action of estrogen (E2) and estrogen rece g. In addition to classical genomic ER signaling, membrane ER (mER) and GPR30/E ling has been recently found to mediate the rapid non-genomic estrogen signaling an participate in growth-stimulation of breast cells. Therefore, our study aimed to invest enic activates proliferation of hormone-dependent (ER positive) breast cancer cells b signaling activating MAPK pathway. Arsenic dose-dependent increased viability of b breast cancer MCF-7 and T47D cells either in presence or absence of steroid horm rts have shown that exposure to E2 induced down-regulation of ERα protein expression. T dulation of ER expression was studied by Western immunoblot. Arsenic decreased ERα protein e ssion but not ERβ in both MCF-7 and T47D cells suggesting similar function of arsenic and steroid hormone estrogen on ERα. Further studies demonstrated that arsenic triggered rapid and sustained activation of MAPK (ERK1/2) which can be inhibited by MAPK inhibitor, U0126. These results indicated that in addition to the genomic pathway, arsenic also activates rapid non-genomic signal transduction through ERK1/2 pathway which may contribute to its proliferative effect on hormone-dependent breast cancer cells.

SAMPLE ABSTRACT

Abstract Submission:

- **Online:** Please go to the Registration Page at https://pc8.cri.or.th/registration and log in to submit abstract online.
- **E-Mail:** submit as an attached file to: **pc_abstract@cri.or.th**

Note:

- The content of the abstracts will be the basis for acceptance of the presentation at the Congress.
- The members of the Scientific Program Committee will review the abstracts, and authors will be informed about acceptance of their abstracts for platform or poster presentation ***by September 30, 2016.***
- The accepted abstract cannot be processed until full payment of the registration fee has been received by the registration office before the early registration deadline: ***October 15, 2016.***

REGISTRATION

Registrations can be processed by:

1. ***Online Registration:*** will be available at https://pc8.cri.or.th/registration
   The registrations will be confirmed by e-mail at the time of registration.
2. ***Mail/Fax Registration:*** Registration forms can be downloaded at the Congress website. Registrations will be confirmed within two weeks after registration forms and payment have been received.
   Participants should complete the registration process online or send by Mail/Fax to the Registration Office ***by October 31, 2016.***
3. ***On-site Registration:*** On-site registration will be available at the Shangri-La Hotel, from ***November 13-17, 2016.*** *(9:00-14:00, November 13, 2016 and 8:00-17:00, November 14-17, 2016)*

Registration Fee:

Registration fee	*Early Registration by October 15, 2016*	*Late Registration and On-site after October 15, 2016*
Active Participant	500 USD	600 USD
Accompanying person	150 USD	150 USD
Student	200 USD	250 USD

Registration Fee includes admission to all scientific sessions, the Program and Abstract book, lunch, the Opening Ceremony and Reception on November 13, 2016 and the Congress Dinner on November 17, 2016.

The Accompanying Person's fee is only for social activities (including Opening Ceremony, Reception, and the Congress Dinner). It does not admit individuals to scientific sessions.

Payment:

All fees must be paid in U.S. currency using credit card (VISA or MASTER). Only registration forms with full payment will be processed.

Cancellations and Refunds:

Registered participants who cannot attend the Congress will receive a refund of registration fees as follows:

- Cancellation received ***before October 15, 2016: 80% refund.***
- ***No refunds can be made for cancellations received on and after October 31, 2016.***
- Refunds will not be made until after the Congress.
- Please note that request for cancellation must be made in writing to the registration office (e-mail is preferable).

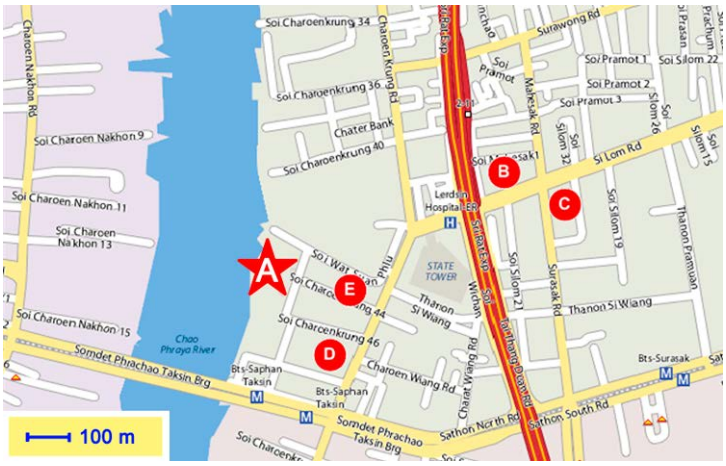
CONGRESS VENUE

Congress Venue:

Shangri-La Hotel Bangkok

89 Soi Wat Suan Plu
New Road, Bangrak
Bangkok 10500
THAILAND

Tel: +66 2 236 7777
Fax: +66 2 236 8570
Website: www.shangri-la.com



A. Shangri-La Hotel (★★★★★)
B. Novotel Bangkok Fenix Silom (★★★★)
C. Holiday Inn Bangkok Silom (★★★★)
D. Centre Point Silom (★★★★)
E. Bossotel (★★★)

Accommodation:

- Hotel reservations (reduced rates) at hotels A to E can be made through the Congress Website at https://pc8.cri.or.th/venue/accommodation

GENERAL INFORMATION

Tours and Excursions:

- Arrangements for optional tours during the Congress are being handled by Oriental Thai Heritage Co., Ltd.
- Tours that can be arranged include local visits to cultural sites in Bangkok and the surrounding areas (half-day or full-day tours), or to destinations outside Thailand. These tours are not included in the registration fee for the Congress, but can be arranged for an additional fee.
- Reservations may be made online at https://pc8.cri.or.th/tours or at the travel agency's desk onsite at the Congress.

Visa Regulations:

- All delegates visiting Thailand must be in possession of valid passports or travel documents endorsed and valid for Thailand.
- It is recommended, however, that enquiries regarding visa and entry regulations should be made to the Royal Thai Embassy or Consulate nearest to you before your departure.
- For more information, please visit https://pc8.cri.or.th/about-bangkok/visa-regulations

Official Carrier:

- **Thai Airways International Co., Ltd. (TG)** has been designated as the official carrier for the Congress. Participants are requested to contact their nearest Thai Airways International Office for advice and assistance on reservations, itinerary planning and ticketing.

THAI

CORRESPONDENCE:

The Secretariat

THE 8th PRINCESS CHULABHORN
INTERNATIONAL SCIENCE CONGRESS (PC VIII)

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Congress Website - https://pc8.cri.or.th