Celebrating the Legacy of His Royal Highness Prince Mahidol of Songkla:

A Century of Progress in Public Health and Medicine in Thailand









August 25, 2016



August 27, 2016 is the 100th Anniversary of His Royal Highness Prince Mahidol of Songkla's arrival in Gloucester, Massachusetts. Prince Mahidol came to study Public Health at Harvard School of Public Health. He stayed at Hotel Moorland in Gloucester, which is now one of the historic homes in the Trail of Thai Royalty in Massachusetts. Gloucester is a long time summer residence of the Siamese legation for more than 50 years since 1897.

Thursday August 25, 2016

The Francis A. Countway Library of Medicine, Harvard University Longwood Campus, The Minot Room, 5th floor,10 Shattuck Street, Boston, MA Public Health and Medicine In Thailand: The Past, Present, and Future:

- Posters and Presentations by the Global Thai Community
 - 7:30 am Registration, Continental breakfast
 - 8:00 am Opening, Welcome
 - Symposium sessions

12:00 am Lunch

Global Expert Provide a Perspective

Symposium by the Harvard T.H. Chan School of Public Health, Harvard Medical School, and Thai Physician Association of America

- 1:00 pm Opening, Welcome
 - Unveiling of the portrait of His Royal Highness Prince Mahidol of Songkla
 Remarks by Prince Mahidol Award recipient, Sir Michael Gideon Marmot
- Symposium sessions 4:45 pm Closing Remarks by TPAA, Nurse Association, and KTBF
- 5:00 pm Reception, Performance

Saturday August 27, 2016

Gloucester Inn by the Sea, 85 Atlantic Road, Gloucester, MA

1:00 pm Unveiling of the plaque of The Hotel Moorland

Gloucester City Hall, Kyrouz Auditorium, 9 Dale Avenue, Gloucester, MA

- 1:30 pm Historic exhibition
- 2:00 pm Ceremony and celebration, Historic overview
- 4:30 pm Refreshments and Thai Performance
- 5:30 pm Tour of Siamese Legation Historic residences and Trail of Thai royalty in Massachusetts

Free admission, please R.S.V.P. by email at KTBF@Thailink.com

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Ms. Cholthanee Koerojna President, King of Thailand Birthplace Foundation

ON BEHALF OF THE CITIZENS OF THE COMMONWEALTH OF MASSACHUSETTS, I EXTEND WARM GREETINGS TO YOU ON THE JOYOUS OCCASION OF YOUR 100TH ANNIVERSARY OF THE ARRIVAL OF PRINCE MAHIDOL OF SONGKLA, IN GLOUCESTER MA PRIOR TO STUDYING PUBLIC HEALTH AT HARVARD UNIVERSITY, HIS LEGACY OF A CENTURY OF PROGRESS IN PUBLIC HEALTH AND MEDICINE IN THAILAND; HIS EXAMPLE OF DEVOTION TO COUNTRY, INTERNATIONAL FRIENDSHIP AND HIGHER EDUCATION.

THIS TWENTY-SEVENTH DAY OF AUGUST IN THE YEAR 2016

CHARLES D. BAKER GOVERNOT

KARON E. POLITO Lieutenant Governor



Harvard University

Tn

The Kingdom of Thailand

Greetings: We have the honor of congratulating you on the occasion of the 100th anniversary of the arrival in Massachusetts of Kis Royal Highness Prince Mahidol of Songkla.

We celebrate his career in Massachusetts and his legacy here and in his homeland. His years here led to profound and persistent achievements in the fields of medicine and public health in Thailand.

We celebrate the enduring connections he fostered between Thailand and the Harvard T.H. Chan School of Public Health and the Harvard Medical School. We have worked together to improve the health and safety of our citizens for many decades.

We acknowledge the commitment of the Kingdom of Thailand to scientific excellence as well as to the important goal of improving the health of all citizens in Thailand, Asia, and globally.

We honor you as valued friends and colleagues of Karvard University.

On this important occasion, please accept the best wishes of Harvard University for your continued success.

> Given at Cambridge, Massachusetts This twenty-fifth day of August In the Year of Our Lord Two thousnd and sixteen, And of Harvard College Three hundred and eighty.

Harvard University Au acone

Jacqueline O'Neill University Marshal

REMARKS: THE 100TH ANNIVERSARY CELEBRATION OF PRINCE MAHIDOL OF SONGKLA'S VISIT TO MASSACHUSETTS AND HARVARD UNIVERSITY

Jonathan M. Samet, M.D., M.S. Distinguished Professor and Flora L. Thornton Chair Department of Preventive Medicine Keck School of Medicine of USC Director, USC Institute for Global Health Recipient Prince Mahidol Award for Public Health, 2004

I regret not being with you today as you celebrate the life and contributions of Prince Mahidol, influenced by Harvard at the start of his career and whose legacy endures in Thailand. And, of course, I share an institution with Prince Mahidol—the now Harvard T.H. Chan School of Public Health where I received my master's degree in epidemiology in 1977. Prince Mahidol and I both received our training at this fabled institution and were influenced forever by what we learned—the critical importance of preventing disease and advancing the health of all. We also share being clinicians who understood the need to give the best care possible to all and to take broader actions to improve the health of the populations from which our patients came.

One of the high points of my career was receiving the 2004 Prince Mahidol Award for Public Health. I was honored to join the spectacular group of winners of the Award and to receive an award bearing the name of Prince Mahidol. The Award medal is displayed with pride and prominence in my home. And now, I feel like a citizen of Thailand. My connections there predate my receiving the Prince Mahidol Award, as I joined with Thai colleagues in an effort to reduce tobacco use in southeast Asia from 2000 on. Following the lead of Prince Mahidol, Thailand has long been a regional and global leader in tobacco control, among other areas in public health. The tradition of the Prince, advancing the health of all, was evident in the work of my colleagues and their commitment mirrored his. He has set a model that will endure and always benefit the Thai people.

KTBF *"Preserving Thai history"* The King of Thailand Birthplace Foundation

15 Given DrivePhone: (781) 365-0083Email: ktbf@thailink.comBurlington, Massachusetts 01803-4761 Fax: (781) 365-0083http://www.thailink.com/ktbf/

August 25, 2016

Today we celebrate The Legacy of His Royal Highness Prince Mahidol of Songkla: A Century of Progress in Public Health and Medicine in Thailand. Our goal is to Commemorate His Royal Highness Prince Mahidol of Songkla's arrival in Massachusetts and to strengthen the longtime relationship of Massachusetts and Thailand. 100 years ago on August 27, 1916 Prince Mahidol came to Massachusetts to study Public Health at Harvard School of Public Health (formerly The Harvard-MIT School of Health Officers, The Harvard-Technology School of Public Health).

During that time he also studied to prepare for Medical degree. He graduated in Public Health degree in 1921 and came back to study doctor of medicine in 1926 and graduated in 1928.

Though he did not have much time to work in medicine after returning to Thailand, Prince Mahidol contributed his vision and secured funding for the future development and improvement of medical and public health of Thailand. Prince Mahidol's philosophy that: "True success is not in the learning, but in its application to the benefit of mankind" became a motto for many doctors and medical teaching institutions.

Welcome to all of you today for this special event, and thank you to all our partners for working with us to make today's symposium a success: the Harvard T.H. Chan School of Public Health, Harvard Medical School, Thai Physicians Association of America, Thai Nurse Associations of Illinois and Southern California, Mahidol, Chulalongkorn, Prince of Songkla and Khon Kaen University of Thailand. We are so pleased for your support and for your being with us today.

Many thanks to KTBF team and to many of you who fulfilled many requests; every co-organizer's representative has been very helpful. Thanks to everyone who supported our efforts financially and with your talents. And a special thanks to participants from the other side of the world, Thailand. And also thanks to US and Canada participants. Your presence helps make this event worthy of the memory of Prince Mahidol and the inspiration that he provided as the "Father of Thai Medicine."

The symposium on August 25th is not just about the distinguished history the Prince created, but it's also about the future that lay ahead. You will experience with the new, fresh ideas from younger generations of public health workers, physicians, and scientists at this important meeting.

The King of Thailand Birthplace Foundation (KTBF) is a non-profit corporation and a public charity, incorporated in 1998 under 501(c)(3) in Massachusetts, U.S.A. Our proven tracked record is valuable to the community and Thailand and recognized by citizens and media in both counties.

Sincerely, chal tonjua

Cholthanee Koerojna, KTBF President and Event Chairman

Dear Colleagues,

August 25th, 2016

Tomorrow is the 100th anniversary of the arrival in Massachusetts of Prince Mahidol of Songkla. This event is worth celebrating. His decade in Massachusetts changed his life, influenced the Harvard Medical School, the Harvard T.H. Chan School of Public Health, and especially Thailand. He arrived with powerful instincts about health and its social determinants. His training here reinforced his belief that major health problems, such as infant mortality, were multi-disciplinary concerns that required diverse fields to work together.

His Royal Highness Prince Mahidol of Songkla is one of the School of Public Health's most famous graduates and one of its earliest international students. Later he graduated from the Harvard Medical School. For both schools at Harvard, he exemplifies the best of our graduates. He mastered academic disciplines and translated learning into improved health and welfare for all citizens of Thailand, East Asia, and the world. In his own words, "True success is not in learning, but in its application to the benefits of mankind."

We applaud his courage to cross the Pacific Ocean by boat and to take trains across the United States to come to Boston. We are delighted that the Siam Consulate enjoyed Gloucester in the summer and that they welcomed him to Massachusetts. His decision to seek training in Boston led to a series of changes which continue to this day. That his legacy continues for a century is remarkable. Improvements in life expectancy, infant mortality, and maternal mortality, can be attributed to the vision that he and his wife, Princess Srinagarindra, had for the people of Thailand.

The Harvard T.H. Chan School of Public Health and the Harvard Medical School are honored to welcome the participants to this Symposium. This has been a long, productive journey and it is not over.

Sincerely,

Joseph D. Brain Cecil K. and Philip Drinker Professor of Environmental Physiology Harvard T.H. Chan School of Public Health



Scott H. Podolsky Associate Professor of Global Health and Social Medicine Director of the Center for the History of Medicine Harvard Medical School





THAI PHYSICIANS ASSOCIATION OF AMERICA Siriporn Kulkamthorn, M.D. TPAA 2016 President 12609 Conway Downs, St Louis, MO 63141 Tel: 314-780-8019, Home: 314-434-6258 Email: skulkam@gmail.com, Website: www.tpaa.us

2016

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Immediate Past-President Chintana Paramagul, MD President-Elect Siripom Kulkanthorn, MD August 25, 2016

With Century of Aspiration of His Royal Highness Prince Mahidol of Songkla's Enthusiastic Effort for the advancement of medicine in Thailand, many generations of physicians and scientists emerge and bring forth new methodological investigation for the benefit of mankind. Today we gather and celebrate his Royal Highness' Legacy. It is an utmost honor for the Thai Physicians Association of America to have an opportunity to participate in this historic event.

This gathering shall pave the way for new tradition in further collaboration for life time learning, mindful development, and reinvestigation to explore new insight in medicine. To fulfill His Royal Highness' wishes, science from benches to the public shall provide application in solving new challenges in medicine. One needs a perpetual effort in funding and development of young blood with intellectual enthusiasm. Being interdependent creatures on earth, we are obligated to participate in these efforts whenever opportunity permitted. It is gratified that many participants at this symposium have done so. His Royal Highness has shed his compassion light as ordinary practicing physician in rural health at his latter part of his life. His sacrifice indeed inspires many of us who wish to follow his footsteps.

We would like to express our sincere thanks to the Harvard T.H. Chan School of Public Health, Harvard Medical School, The King of Thailand Birthplace Foundation, Thai Nurse Associations of Illinois and Southern California, Benedictine University, Mahidol, Chulalongkorn, Prince of Songkla and Khon Kaen University of Thailand, Speakers, and Investigators from North America, Thailand and other part of the world. We wish everyone continuation in the success of their exciting projects.

Grade f Received

Usah Lilavivat, M.D. Chairman, CME Committee

State

Siriporn Kulkamthorn, M.D. President, TPAA 2016

The Committee members

For

Celebrating The Legacy of His Royal Highness Prince Mahidol of Songkla: A Century of Progress in Public Health and Medicine in Thailand

On

August 25 and August 27, 2016 Boston and Gloucester Massachusetts

- 1. Ms. Cholthanee Koerojna Chairman President, The King of Thailand Birthplace Foundation (KTBF) Executive Office of Labor and Workforce Development/ DCS, Commonwealth of Massachusetts, Boston
- 2. Dr. Joseph Brain Co-chair Cecil K. and Philip Drinker Professor of Environmental Physiology Harvard T.H. Chan School of Public Health (HSPH), Boston
- 3. Dr. Scott Harris Podolsky Co-chair Associate Professor of Global Health and Social Medicine Harvard Medical School (HMS), Boston
- Dr. Usah Lilavivat Co-chair TPAA Chairman of Medical Education committee Carolina Diabetes & Kidney Center & Sumter Medical Specialist, PA, Sumter, SC
- 5. Dr. Chusak Limtrakul Co-chair President, Prince of Songkla University (PSU), Thailand
- 6. Dr. Udom Kachintorn Co-chair President, Mahidol University (MU), Thailand
- 7. Dr. Pirom Kamolratanakul Co-chair President, Chulalongkorn University (CU), Thailand
- 8. Dr. Kittichai Triratanasirichai Co-chair President, Khon Kaen University (KKU), Thailand
- 9. Ms. Sefatia Romeo Theken Co-chair Mayor, City of Gloucester
- Dr. Sanjai Sangvichien Prince Mahidol's Historian, Professor of Anatomy, Faculty of Medicine Siriraj Hospital, Mahidol University, Thailand
- 11. Dean of the Faculty of Medicine

Harvard Medical School (HMS), Boston

- 12. Dr. David Hunter Acting Dean, Harvard T.H. Chan School of Public Health (HSPH), Boston
- 13. Dr. Michelle Williams Dean, Harvard T.H. Chan School of Public Health (HSPH), Boston
- 14. Ms. Orachorn Nannar President, Thai Nurse Associations of Illinois (TNAI)
- 15. Ms. Varaporn Gorr Chairman of the Board of Directors, Thai Nurse Associations of Illinois (TNAI)
- 16. Ms. Soodchit Phophairat Former President, Thai Nurse Associations of Illinois (TNAI)
- 17. Ms. Sarita Sungcheu President, Thai Nurse Associations of Southern California
- 18. Sarah Dunlap Archivist, City of Gloucester
- Mr. Mana Sanguansook Director The King of Thailand Birthplace Foundation (KTBF)
- 20. Ms. Amy Shapiro-Kaznocha KTBF Director, Wellness Coordinator; Juice Plus/ Tower Garden Co
- 21. Mr. Edward Kaznocha KTBF Director, Retired Labor Market Economist, Commonwealth of Massachusetts, Boston
- 22. Mr. James Lesnick KTBF Director, President, James Lesnick Associates, Boston
- 23. Ms. Chadamanee Lesnick Committee, The King of Thailand Birthplace Foundation (KTBF)
- 24. Dr. Trirat Hongsmatip Committee, The King of Thailand Birthplace Foundation (KTBF)
- 25. Mr. Thongchai Hongsmatip KTBF Director and Sr. Principal Engineer, BAE System, Nashua, NH
- 26. Mr. Teeradech Vechthanakorn President, Teeranid Shipping Corp, Watertown

SYMPOSIUM PROGRAM and PROCEEDINGS

Celebrating The Legacy of His Royal Highness Prince Mahidol of Songkla: A Century of Progress in Public Health and Medicine in Thailand

Goal: To Commemorate His Royal Highness Prince Mahidol of Songkla's arrival in Massachusetts and to strengthen the longtime relationship of Massachusetts and Thailand

Thursday August 25, 2016



The Francis A. Countway Library of Medicine, Harvard University Longwood Campus 10 Shattuck Street, Boston, MA 02115, The Minot Room, 5th Floor, Overflow Room with Video Link

Morning: Public Health and Medicine in Thailand: The Past, Present, and Future Posters, Panels, and Presentations by the Global Thai Community

07:30 am	Registration and Continental Breakfast
08:00 am	Opening/Welcoming Remarks, Cholthanee Koerojna- KTBF, Joseph Brain- HSPH, Usah Lilavivat- TPAA
	Session I: Medicine Chair: Usah Lilavivat, MD, FACP, FACE, ECNU, CDE Thai Physicians Association of America, Inc., CME Committee Chair
08:15 am	Development of Medical Education in Thailand and the Role of Thailand on Medical Education among ASEAN: Prasit Watanapa, MD, PhD, FRCS, FACS Dean, the Faculty of Medicine Siriraj Hospital, Mahidol University, Thailand

08:40 am	Chronic Hepatitis B: ASEAN Perspective: Teerha Piratvisuth, MD Associate Professor of Medicine, Prince of Songkla University, Thailand
09:05 am	Precision medicine in Thailand & opportunities for international collaborations: Vorasuk Shotelersuk, MD Professor of Pediatrics, Associate Dean for Research, Chulalongkorn University, Thailand
09:30 am	A legacy of leadership for women's health in Thailand and throughout Asia: Unnop Jaisamrarn, MD, MHS Associate Professor in Ob/Gyn, Associate Dean for International Affairs, Chulalongkorn University, Thailand
09:50 am	Coffee Break
	Session II: Public Health Chair: Usah Lilavivat, MD, FACP, FACE, ECNU, CDE
10:05 am	Improving Ethical Models for Global Health: Alan Gorr, PhD MPH Professor of Public Health, Benedictine University, Lisle, IL Thai Nurse Association of Illinois
10:30 am	Digital Dentistry: Jenny Chang, DMD, DMSc President, Chang Dental Group, Natick, MA
10:55 am	Liver Fluke-associated Cholangiocarcinoma: Milestones of Tackling a Unique Public Health Challenge of Northeast Thailand: Banchob Sripa, PhD
	Professor and Head, Tropical Disease Research Center, Chair, Tropical Medicine Graduate Program, Khon Kaen University, Thailand
11:30 am	Vector Birth Control: A New Strategy to Fight Vector-Borne Diseases: Pattamaporn Kittayapong, PhD Director, Center of Excellence for Vectors and Vector-Borne Diseases, Faculty of Science, Mahidol University at Salaya, Thailand
11:50 am	Concluding Remarks
12:00 pm	Luncheon, Sack Lunches Distributed Outside the Minot Room and Eaten in the Minot Room, Allen Room, or Outside in the Courtyard

Afternoon: Public Health and Medicine in Thailand: The Past, Present, and Future Global Experts Provide a Perspective

Symposium by the Harvard T.H. Chan School of Public Health, Harvard Medical School, Thai Physician Associations of America

1:00 pm Opening Ceremony and Welcome: Clinical Professor Udom Kachintorn, MD President, Mahidol University, Thailand

> Scott Podolsky, MD Associate Professor of Global Health and Social Medicine, Harvard Medical School

Welcome from the Harvard T.H. Chan School of Public Health and Presentation of a Greeting from Harvard University Dean Michelle Williams

Prince Mahidol's Legacy: Video from Sir Michael Gideon Marmot, FBA, FMedSci, FRCP Director, UCL Institute of Health Equity, Professor of Epidemiology and Public Health, University College of London, London University, United Kingdom; Visiting Professor, Harvard T.H. Chan School of Public Health; Prince Mahidol Award recipient, Thailand

Introduction to the Symposium and unveiling of the portrait of His Royal Highness Prince Mahidol of Songkla: Presentation of the Course Catalogs He Used to Thai Representative, Cholthanee Koerojna Joseph D. Brain, SD Cecil K. and Philip Drinker Professor of Environmental Physiology Harvard T.H. Chan School of Public Health



Session 1 Chair: Scott Harris Podolsky, MD

- 1:30-1:55 pm New Strategies for Medical Education: Edward M. Hundert, MD Dean for Medical Education, Harvard Medical School, Boston, MA
- 1:55-2:20 pm Strengthening Thailand's Health Systems: Lessons Learned from the Second Decade of Thailand's Universal Health Coverage: Borwornsom Leerapan, MD, PhD, SM Assistant Professor, Mahidol University, Thailand
- 2:20-2:45 pm Universal Healthcare in Thailand and Asia: Prevention and Public Health: Rifat Atun, MBBS, MBA, FRCGP, FFPH, FRCP Professor of Global Health Systems and Director of Global Health Systems Cluster, Harvard T.H. Chan School of Public Health, Boston, MA
- 2:45-3:00 pm General Discussion
- 3:00-3:30 pm Coffee Break

Session 2 Chair: Joseph Brain, SD

- 3:30-3:55 pm Inner-City Asthma Prevention: Wanda Phipatanakul, MD, MS Associate Professor of Pediatrics, Harvard Medical School, Director, Asthma Clinical Research Center, Boston Children's Hospital, Boston, MA
- 3:55-4:20 pm Health in Thailand: The Legacy of Prince Mahidol Lincoln C. Chen, MD, MPH President, China Medical Board, Cambridge, MA
- 4:20-4:45 pm Thailand's Role in Promoting Health Among Asian Neighbors: Somsak Pitaksanurat, PhD Dean, Faculty of Public Health, Khon Kaen University, Thailand Sastri Saowakontra, MD, DTM&H, PhD, DSc University Council, Khon Kaen University, Thailand
- 4:45-5:00 pm General Discussion
- 5:00 pm Closing Remarks by the Thai Physician Association of America, Thai Nurse's Association & KTBF
- 5:15 pm Reception, Performance in the Lahey Room

Sponsors:

Harvard T.H. Chan School of Public Health (HSPH), Harvard Medical School (HMS), City of Gloucester, Thai Physician Associations of America (TPAA), Thai Nurses Associations of Illinois (TNAI), and Thai Nurses Associations of Southern California, From Thailand: Prince Mahidol University (MU), Chulalongkorn University (CU), Prince of Songkla University (PSU), Khon Kaen University (KKU)

WITH THE KING OF THAILAND BIRTHPLACE FOUNDATION (KTBF)

Significance:

August 27, 2016 is the 100th Anniversary of His Royal Highness Prince Mahidol of Songkla's arrival in Gloucester, Massachusetts. Prince Mahidol came to study Public Health at Harvard School of Public Health (formerly The Harvard-MIT School of Health Officers, The Harvard-Technology School of Public Health). In Gloucester he stayed at Hotel Moorland near the Headquarter of Siamese Legation at 3 Page Street. The house at 3 Page Street is now one of the historic homes in the Trail of Thai Royalty in Massachusetts that KTBF placed the historic plaque to mark the history of the summer Siamese Legation Headquarter and the residence where Prince Mahidol spent much time during his stay before entering Harvard.

Gloucester is a long time summer residence of the Siamese legation for more than 50 years since 1897. In the past the legations of many countries including Siam relocated their offices to Gloucester in summer from May to October. There are still many existing residences where the Siamese legations stayed in the past.

HISTORIC DEDICATION AND CEREMONY



Saturday August 27, 2016 – dress code: Business casual or Thai traditional

Celebrating the 100th Anniversary of the Arrival in Massachusetts of

His Royal Highness Prince Mahidol of Songkla Thailand's Father of Modern Medicine and Public Health



The historic venue: Gloucester Inn by the Sea, 85 Atlantic Rd, Gloucester, MA 01930 where the Hotel Moorland was located.

01:00 PM Unveiling of the historic plaque of The Hotel Moorland

Presentations to Historic property owner, Mr. Peter and Mrs. Elizabeth Cavallaro



Gloucester City Hall, 9 Dale Avenue, Gloucester, MA 01930

- 01:30 PM Historic Exhibition KTBF, Gloucester Archives, Mahidol University Museum
- 02:00 PM Welcome by City of Gloucester Mayor Sefatia Romeo Theken Ceremony and Celebration:

-American Flag/ National Anthem by Ms. Caroline Haines

- -Thai flag/National Anthem by Dr. Sirinun Ploadpliew Blaignan
- Program Overview

Introduction: Cholthanee Koerojna, KTBF President

Citation from Charlie Baker, Governor of Commonwealth of Massachusetts, Ann-Margaret Ferrante, State Representative

Proclamation - State of MA by State Representative and City of Gloucester by Mayor Sefatia Romeo Theken

Presentations to supporters - KTBF

Recognition for historic preservation and restoration in Gloucester - KTBF Historic overview of significance:

- 1- Relationship of Massachusetts; Gloucester and Cambridge with Thailand:
- 2- Prince Mahidol's and Siamese Legation in Gloucester: Sarah Dunlap, Gloucester Archivist

3- Simple Life of Prince Mahide	ol's in Massachusetts: Amy Shapiro-
Kaznocha; "Our Love Is Her	e To Stay" ~ Mr. Henry-Cameron Allen
4- Gloucester resident's story o my mother: Judy Walcott	f Prince Mahidol's life in Gloucester from
5- Prince Mahidol at The Harve	ard-MIT School of Health Officers, The
Harvard-Technology School	of Public Health: Dr. Joseph Brain, Cecil
K. and Philip Drinker Profes	sor of Environmental Physiology,
Department of Environmenta	al Health, Harvard T.H. Chan School of
Public Health	
6- Prince Mahidol's Life in Can	nbridge: Charles Sullivan, Cambridge
Historical Commissioner	
7- A letter from my mother mee	ting with Prince Mahidol at his residence
in Brookline: Judith A. Vose	
8- Prince Mahidol's Life and W	ork in Thailand: Sanjai Sangvichien,
M.D., Prince Mahidol's Histo	orian, Professor of Anatomy, Faculty of
Medicine, Siriraj Hospital, M	lahidol University, Bangkok, Thailand
9- Medical and Healthcare Deve	elopment in Thailand: Charnchai
Panthongviriyakul, MD, Dea	n of the Faculty of Medicine, Associate
Professor, Khon Kaen Unive	rsity, Khon Kaen Thailand
10-Medical and Healthcare Dev	elopment in Thailand: A highlight in
Public Health Research: Mul	tiple disease control through vector
sterilization- Dr. Pattamapor	n Kittiyapong, Director, Center of

Excellence for Vectors and Vector-Borne Diseases, Faculty of Science, Mahidol University at Salaya, Thailand

11- Q & A: all speakers

05:00 pm Refreshment: Thai food by Thai Hut Restaurant, Somerville, MA Performance:

- Thai performance by Wat Nawamintararachutis Thai Buddhist Sunday School
- 5:30 pm Siamese Legation Historic residences and Trail of Thai Royalty in Massachusetts Tour in Gloucester







Cook Cottage -111 Bass Ave Blue Shutters Beachside Inn- Harding Cottage -3 Page Street 1Nautilus Road





Sherman Cottage - 24 Bass Rocks Rd & The Williamson Cottage -17 St. Louis Ave

Committee Chairman and Co-Chairs



Cholthanee Koerojna, President & Event Chairman, The King of Thailand Birthplace Foundation (KTBF) 15 Given Drive Burlington, MA 01803 Phone: 781-365-0083, cell: 781-351-1885, email: ktbf@thailink.com

Biographical Sketch

Cholthanee Koerojna has worked in management for over 40 years in Thailand and the U.S. As a computer scientist with the Commonwealth of Massachusetts (MA) in Boston, she processes compliance verification and MA Eligible Training Providers List for Workforce Investment

Opportunity Act funding. She also helps with Foreign Labor Certification on agricultural (H2-A) and non-agricultural (H-2B) visas.

To preserve Thai history, Cholthanee began researching the history of Thai royalty and the Siamese legation in MA in 2000. Her *King of Thailand Birthplace Foundation* (KTBF) educates the public on ties between MA and Thailand. *Trail of Thai Royalty in Massachusetts* covers the history of 1916 to 1928. The Birthplace Monument in King Bhumibol Square reminds visitors that the King of Thailand was born in MA. KTBF has helped 100's of Thai students exchange culture with American students in MA public and private schools during Thai school vacations.

Earlier, Cholthanee worked at Mass. Bay Community College as an Assistant VP for Computing Services in a CIO role. An expert in Management Information Systems (MIS) and Enterprise Resource Planning (ERP) Application Development Project Admin, she utilized e-business in education. She earned a Comm. of MA Citation for Outstanding Performance; won the World Application Contest on "Real World, GUI Client/Server Application Development" at Computer Associates World Conference; and Top Ten Award of INGRES application.

Cholthanee applies her vision of cultural promotion through nonprofit groups. The crisis of 9/11 led her to establish One World in 2003 to educate children and adults about all cultures at a 4-day International Festival at Boston Bayside Expo Center.

In 2001 she co-founded Thai Assoc. of Boston, and later other non-profit 501(c) (3): Wat Nawamintararachutis and International Shakyamuni Buddha Vihara & Vipassana Center, etc. In 1998 she founded the non-profit 501(c)(3) The King of Thailand Birthplace Foundation (KTBF) <u>www.thailink.com</u>/ktbf/. She is still KTBF president, focusing on education, cultural exchange and preserving Thai history.

In 1995 she established Thai Link Reverse Brain Drain (RBD) Project of Thailand to aid Thailand and Thai people living abroad. She led RBD Seminars, Workshop and career fairs in the US and London, inspiring Thais around the world to return home.

Since 1991, Cholthanee has inspired Thais, Americans, companies in Thailand and Thais living in N. America, Japan, and Europe to return to Thailand. She worked with Thai universities, government and private agencies for computer technology and curriculum exchanges, and with the Thai government in Computer Technology and Autonomous University Strategic Planning.

Through the Thai Trains Thai project, she helped train Thai students and professionals in Boston and Thailand in Information Technology (IT); in the Reverse Brain Drain, promotional media and Management Information System (MIS).

From 1991 to 1995, Cholthanee was a founder and active with Thai Professionals in America and Canada (ATPAC) in many roles: Acting President, Exec. VP, and VP of the Eastern Region, Membership Drive Chair and Advisory Board member.

Cholthanee earned her Bachelor's degree in 1971 and later Certificate of Educational Measurement and Evaluation from Srinakarinwirot Prasarnmit U. She completed another Bachelor program in Computer Science and received two Master degrees in Computer/Mathematics and Computer Sciences from U. of MA Lowell in 1985 and 1987 and a Doctor of Science (ABT) in Computer Science in 1986.



Joseph Brain, SD

Cecil K. and Philip Drinker Professor of Environmental Physiology, Harvard T.H. Chan School of Public Health

Biography

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Research

Dr. Brain's research emphasizes responses to inhaled gases, particulates, and microbes. His studies extend from the deposition of inhaled particles in the respiratory tract to their clearance by respiratory defense mechanisms. Of particular interest is the role of lung macrophages; this resident cell keeps lung surfaces clean and sterile. Moreover, the lung macrophage is also a critical regulator of inflammatory and immune responses. The context of these studies on macrophages is the prevention and pathogenesis of environmental lung disease as well as respiratory infection.

His research has utilized magnetic particles in macrophages throughout the body as a noninvasive tool for measuring cell motility and the response of macrophages to various mediators and toxins. Other experiments deal with the use of lung lavage to obtain and characterize macrophages. A rodent bioassay utilizing lung lavage has been developed; the assay has been used to estimate the relative toxicity of new and complex mixtures such as molds, urban dusts, welding fume, new materials being used in the workplace, as well as drugs and excipients administered by inhalation, including nanomaterials. Respiratory infection is emphasized and includes mechanistic studies of the lung's defenses against *Pseudomonas aeruginosa*, an important pulmonary pathogen for patients with cystic fibrosis. Related studies deal with opportunistic lung infections in AIDS such as *Pneumocystis carinii*.

Another area of study is drug delivery to and through the lungs. The amount and anatomic distribution of an inhaled radioactively-tagged asthma mediator antagonist and an elastase inhibitor have been measured. Other experiments focus on the fact of recombinant proteins such as macrophage colony stimulating factors, neutral endopeptidase, surfactant apoproteins, antibodies, interleukins, and hormones delivered to and through the lungs.

Education

S.D., 1966, Harvard University S.M., 1963, Harvard University S.M., 1962, Harvard University

Publications

Brain JD, Heilig E, Donaghey TC, Knutson MD, Wessling-Resnick M, Molina RM. Effects of iron status on transpulmonary transport and tissue distrubiton of Mn and Fe. *Am J Respir Cell Mol Bio.* 2006; 34: 330-7.

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• NIEHS Center for Environmental Health

•

Center for Children's Environmental Health and Disease Prevention Research



Scott Podolsky, MD

Associate Professor of Global Health and Social Medicine Director of Center for the History of Medicine Department of Global Health and Social Medicine Harvard Medical School Global Health 641 Huntington Ave

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Biography

Dr. Podolsky is an associate professor in the Department of Social Medicine and a primary care physician at Massachusetts General Hospital. Since 2006, he has served as the director of the Center for the History of Medicine based at the Countway Medical Library.

Dr. Podolsky graduated *summa cum laude* from Harvard College with a bachelor's degree in history and science. He graduated *magna cum laude* from Harvard Medical School.

Research Interests

History of 19th- and 20th-century therapeutics and medical evolution, with a focus on the history of antibiotics, the evolving authority of the controlled clinical trial, and relationships among physicians, medical journals, the pharmaceutical industry, and governmental agencies.

Dr. Podolsky has co-authored Generation of Diversity: Clonal Selection Theory and the Rise of Molecular Immunology (1997), authored Pneumonia before Antibiotics: Therapeutic Evolution and Evaluation in Twentieth-Century America (2006), co-edited Oliver Wendell Holmes: Physician and Man of Letters (2009), and most recently authored The Antibiotic Era: Reform, Resistance, and the Pursuit of a Rational Therapeutics (2015).

Publication: access publications on http://ghsm.hms.harvard.edu/person/faculty/scott-podolsky



Usah Lilavivat, MD, FACP, FACE, ECNU, CDE Thai Physicians Association of America, Inc., CME Committee Chair

Biographical Sketch

Medical Director, President Address: Office: Carolina Diabetes & Kidney Center, LLC 625 W. Wesmark Blvd. Sumter, S.C. 29150

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Dr. Lilavivat attended Faculty of Medicine, Siriraj Hospital Mahidol University in Bangkok, Thailand and received his M.D. in 1970. He subsequently spent his internships both at Ramathibodi Hospital Mahidol University and Wayne State University Detroit General Hospital. He completed his medical residency at the St. Mary's Hospital in Rochester, NY in 1974, and completed his fellowship in Endocrinology at the University of Rochester School of Medicine and Dentistry in 1978. He participated in endocrinology research and teaching while serving as Assistant Professor at University of Rochester till 1981. He then moved to Sumter, SC and cofounded Sumter Medical Specialists, PA with his wife Dr. Pusadee Suchinda. He is board certified in Internal Medicine, Endocrinology and Metabolism, certified Diabetes Educator and received his Endocrine Certification of Neck Ultrasound.

Dr. Lilavivat is an active member of numerous professional organizations including the American Medical Association, the American Diabetes Association, and the Endocrine Society. He is a past president of the Sumter Clarendon Lee Medical Society, the American Diabetes Association, SC Affiliated, the Southern Chapter of TPAA, and the Carolinas Chapter of the American Association of Clinical Endocrinologists. He is past Chief of Staff and a member of the Board of Trustees of Tuomey Healthcare System. Since 1998, he has served several terms on the Board of Directors of the Diabetes Initiative of South Carolina. In addition, he has served as the Council Coordinator of the Endocrine, Bone and Mineral Council and on the Board of Directors of the American College of Nutrition. In 2004, he was named the Physician of the Year by the South Carolina Department of Health, Education, and Environmental Control.

In addition to clinical practice, Dr. Lilavivat actively participates in many clinical trials related to diabetes medications. His passion is teaching and he enjoys participating in numerous lectureships while busy in medical practice. He and his wife cofounded Carolina Diabetes & Kidney Foundation providing fund in diabetes education and research, and conducted community wide Diabetes Fair for nineteen consecutive years since 1996 in Sumter South Carolina. Dr. Lilavivat belongs to the 1824 Society of the Medical University of South Carolina.

Title: Development of Medical Education in Thailand and the Role of Thailand on Medical Education among ASEAN



Speaker: Prasit Watanapa, MD, PhD, FRCS, FACS Dean, the Faculty of Medicine Siriraj Hospital, Mahidol University, Thailand

Abstract

Development of Medical Education in Thailand and the Role of Thailand on Medical Education among ASEAN

Prasit Watanapa, MD, PhD, FRCSEd, FACS Faculty of Medicine Siriraj Hospital, Mahidol University, Thailand

Siriraj Hospital and its medical school are the oldest in Thailand and Southeast Asia. The hospital was founded in 1888 and the medical school in 1890. The medical school was established because of the urgent need to recruit resident physicians for the newly-built hospital. In 1901, the school was given the title of "Royal Medical College". The initial course of instruction was 3 years in 1903, and this was gradually extended to 6 years by 1915. In 1918, the Royal Medical College was amalgamated with Chulalongkorn University and became the Faculty of Medicine and Siriraj Hospital. The premedical part of the course was taught at Cholalongkorn University. Through the generosity of His Royal Highness Prince Mahidol and the assistance of the Rockefeller Foundation, the medical school was reorganized in 1923 to bring medical education up toward the international standard. The first group of 18 students of the reorganized medical school graduated in March 1929. As the request of the Government,

student admission increased yearly from 19 in 1925 to 195 in 1946. There are now 22 medical schools in Thailand, only two are private.

In September 2012, 14 medical schools from the 10 ASEAN countries joined a meeting at the Faculty of Medicine Siriraj Hospital, and the idea of establishing an ASEAN Medical School Network was introduced by the Dean of the Faculty of Medicine Siriraj Hospital with the purposes to improve the standard of medical education in the region. The concept was well accepted and the meeting was therefore recognized as the first ASEAN Medical School Network meeting. The second meeting took place in Kuala Lumpur in Malaysia in 2013, then Singapore in 2014, Manila of the Philippines in 2015, and Indonesia in 2016. Thailand also plays a significant role to introduce the medical school accreditation system using World Federation for Medical Education to south-east Asia.

Biographical Sketch

Name : Prasit Watanapa

Present Position : Professor of Surgery Dean, Faculty of Medicine Siriraj Hospital, Mahidol University Present Appointment :Faculty of Medicine Siriraj Hospital, Mahidol University

Degrees and Qualifications :

Degree/Qualifications	Year of Graduate	Institute/University
Fellow of the American College	1998	American College of
Surgeons, of Surgeons (F.A.C.S)		of Surgeons, USA
Doctor of Philosophy	1992	University of London,
		United Kingdom
Fellow of the Royal College of	1991	Royal College of Surgeons of
Surgeons of Edinburgh (F.R.C.S.Ed)		Edinburgh United Kingdom
MD (Hon)	1981	Faculty of Medicine Siriraj Hospital
		Mahidol University
BSc (Hon)	1979	Faculty of Medicine Siriraj Hospital
		Mahidol University
Academic Position		
Surgical Instructor	1989 – 1993	Department of Surgery,
		Faculty of Medicine Siriraj Hospital
		Mahidol University
Associated Professor of Surgery	1993 – 1996	Department of Surgery
		Faculty of Medicine Siriraj Hospital
		Mahidol University
Professor of Surgery	since 1996	Department of Surgery
		Faculty of Medicine Siriraj Hospital
		Mahidol University

Administrative/Management Qualification :

Certificate : Stanford Executive	2004	Graduate School of Business, Stanford University California
Tiogram		U.S.A
Previous Positions/Appointm	ents in the Univ	ersity :
Assistant Dean on Education	1998 - 2000	Faculty of Medicine Siriraj Hospital
		Mahidol University
Deputy Dean on Human Resource	2000 - 2004	Faculty of Medicine Siriraj Hospital
		Mahidol University
Director of Siriraj Hospital	2004 - 2007	Faculty of Medicine Siriraj Hospital
		Mahidol University
Vice President on Human Resource	2007 - 2011	Mahidol University
and Quality Development		
Deputy Dean and Director of	2011 - 2015	Faculty of Medicine Siriraj Hospital
Siriraj Medical School		Mahidol University
Dean	2015 – present	Faculty of Medicine Siriraj Hospital
		Mahidol University
Other Positions/Appointment	ts:	
President, ASEAN Medical School	since 2015	
Chairman of the Scientific Advisory Board of Prince		since 2013
Mahidol Award, Prince Mahidol Aw	vard Foundation	
Member of the International Award	Committee of Princ	e since 2013
Mahidol Award, Prince Mahidol Aw	vard Foundation	
Vice Chairman of the Scientific Adv	visory Board of Prin	ce 2010 – 2012
Mahidol Award, Prince Mahidol Aw	vard Foundation	
Member of the Scientific Advisory I	Board of Prince Mal	nidol since 2004
Award, Prince Mahidol Award Four	ndation	
Member of the Board of the Healthc	are Accreditation	since 2009

Title: Chronic Hepatitis B: ASEAN Perspective



Institute of Thailand

Speaker: Teerha Piratvisuth, MD Associate Professor of Medicine, Prince of Songkla University, Thailand

Abstract

Chronic Hepatitis B: Asian Perspectives Teerha Piratvisuth MD, Prince of Songkla University

Among the 350 million chronic hepatitis B virus (HBV)-infected patients worldwide, 70% of them live in Asia. Chronic hepatitis B is one of the leading causes of liver-related morbidity and mortality in Asia. The prevalence of chronic hepatitis B in Thailand declined significantly over the last two decades due to implementation of universal HBV vaccination in newborns. HBV genotype C is a predominant genotype in Thai patients (C 66%, B 32% and other genotypes 2%).

Perinatal transmission is the important route of transmission; therefore, proper management of HBsAg-positive mothers to reduce the risk of mother to child transmission is critical. Currently, there are two treatment strategies for patients with chronic hepatitis B: immunomodulation with interferon and inhibition of HBV replication with nucleoside or nucleotide analogues. According to our cost-effectiveness study within the available budget, we recommend lamivudine as the first line therapy for chronic hepatitis B in Thai patients and add-on tenofovir in those who remain detectable HBV DNA after 24 weeks of therapy in order to prevent emergence of drug resistance. However, highly potent agents with high genetic barrier, such as entecavir and tenofovir are preferred treatment options in patients with favorable baseline predictors such as young female, HBeAg-positive, high serum ALT and low HBsAg level. According to the results of our other recent studies, the role of serum HBsAg level in predicting treatment response and guiding treatment strategy could show promise in the future direction of personalized therapy.

Hepatitis C is also one of the leading causes of chronic liver disease including liver cirrhosis and hepatocellular carcinoma in Asia. Approximately 90 million chronic hepatitis C virus (HCV)infected patients are in Asia. The prevalence of chronic hepatitis C in Thailand ranges from 1% to 6%. Higher prevalences are detected in the North and Northeastern parts of the country. HCV genotype 3 is the predominant genotype in Thailand (G3 53%, G1 33%, G6 33% and G2 4%). Treatment of hepatitis C is available through the universal coverage scheme for Thai patients who have significant liver disease defined as F2 fibrosis by METAVIR or transient elastography > 7 kPa. Due to the common favorable host genome, IL-28 CC, Thai patients achieve higher response rates of 85% in genotypes 2 and 3 and 70% in genotypes 1 and 6 to pegylated interferon plus ribavirin therapy better than Caucasians. Currently, sofosbuvir and daclatasvir are the only approved direct acting antivirals in Thailand. Sofosbuvir/ledipasvir fixed-dose combination and simeprevir are in the process of approval. Thailand Practice Guideline 2016 recommends 12week sofosbuvir in combination with pegylated interferon plus weight-based ribavirin as the treatment option for all HCV genotype in both cirrhotic and non-cirrhotic patients. Twelve-week sofosbuvir plus daclatasvir is another treatment option for all genotypes particularly in patients who have contraindications or cannot tolerate interferon. In cirrhotic patients, ribavirin needs to be added in the 12-week sofosbuvir/daclatasvir treatment regimen or the treatment needs extended duration to 24 weeks in those who cannot receive ribavirin. According to the costeffectiveness analysis, 12-week sofosbuvir in combination with pegylated interferon and ribavirin is a cost savings in patients infected with genotype 3 and 12-week sofosbuvir/ledipasvir or sofosbuvir/daclatasvir therapy is the most cost-effective therapeutic regimen in patients infected with genotype 1 or 6.

Routine HBV and HCV screening is not currently recommended in Thailand but we advise screening in high risk populations such as family members of HBV- or HCV-infected patients, IV drug users, patients who are on chronic hemodialysis, those who received a blood transfusion prior to 1996 and healthcare providers. Public education to create an awareness and understanding of viral hepatitis including transmission, treatment, self-care and prevention is strongly supported and endorsed by the Thai government, Thai Association for the Study of the Liver and the Liver Foundation of Thailand.

Biographical Sketch

Dr. TeerhaPiratvisuth Position: Associate Professor Institution NKC Institute of Gastroenterology and Hepatology 8th floor Charlermprabaramee Building Department of Medicine Songklanagarind Hospital, Prince of Songkla University Hat Yai, Songkhla 90110 Thailand. Tel: +66-74-451965-9 Ext 115 , Fax: +66-74-429436 email: teerha.p@psu.ac.th

Dr. Teerha Piratvisuth is an Associate Professor of Medicine at the Prince of Songkla University, Hat Yai, Thailand. He completed his medical degree with first class honors at the Prince of Songkla University in 1985. From 1993–94, he studied as a Clinical Fellow in hepatology at King's College School of Medicine and Dentistry in London, UK. In 1995 he moved to the USA, where he spent a further year as a Clinical Fellow in hepatology and endoscopy at the University Texas, Houston, Medical School. He currently holds the positions of Vice Dean at Prince of Songkla University and Director of the NKC Institute of Gastroenterology and Hepatology. Dr.Piratvisuth was President of the Liver Society of Thailand from 2011-2012. He was President of the APASL in 2011 and Vice President of the APDW in 2012. He is currently Scientific Committee Chairman of the APLD. Dr.Piratvisuth is a member of the steering committee of the APASL and a member of the Working Party for the APASL consensus on Management of Chronic Hepatitis B. He is also a member of the Working Party for the APASL consensus on Management of Chronic Hepatitis C. Dr.Piratvisuth has an extensive publication history on liver disease, particularly hepatitis B&C, and is on the editorial board of Hepatology International, the Korean Journal of Gastroenterology, and Chinese Journal of Infectious Disease. Furthermore, he is a reviewer for the Journal of Gastroenterology and Hepatology, the Journal of Alimentary Pharmacology and Therapeutics, the Journal of Hepatology, Hepatology, Liver International, Hepatology International, the Journal of Viral Hepatitis, Antiviral Therapy, and the Journal of Antimicrobial Chemotherapy.

Title: Precision medicine in Thailand & opportunities for international collaborations



Speaker: Vorasuk Shotelersuk, MD Professor of Pediatrics, Associate Dean for Research, Chulalongkorn University, Thailand

Abstract Clinical Applications of Advanced Molecular Techniques in Thailand

Vorasuk Shotelersuk, MD

Molecular techniques have rapidly advanced in recent years and have played an important role in both fundamental and applied researches. I will present clinical applications of two technologies in Thailand. First, next generation sequencing (NGS) revolutionizes a molecular diagnostic method. Etiologic mutations of rare genetic disorders such as factor 7 deficiency or disorders with many possible causative genes such as intellectual disabilities can be efficiently identified by whole exome sequencing (WES). Common mutations of several diseases in the Thai populations were found. This enables diagnostic laboratories to screen for common mutations, instead of searching the entire coding regions of many genes for causative mutations. The identified mutations could also be used for prenatal diagnosis of the next pregnancies. Identification of new human disease genes is facilitated by NGS. We found that mutations in MBTPS2 caused X-linked osteogenesis imperfecta and those in DICER1 caused pituitary blastoma. Pharmacogenetics and pharmacogenomics helps to predict whether a patient would have severe adverse drug reactions to a certain medication, such as anticonvulsants. Our team also studied drugs for HIV and leukemia, and found that the appropriate doses of some drugs for Thai patients should be different from Caucasians because of the different genetic composition. With definite diagnoses and classification of diseases by its mutated genes, more accurate and precise genetic counselling can be given. This also leads to new and hopeful preventive and treatment strategies.

Secondly, techniques of genome editing give new hopes for definite treatment of genetic diseases. They have been developed for decades, from zinc-finger endonucleases (ZFNs), transcription activator-like effector nucleases (TALENs), to the most recent one, clustered regularly interspaced short palindromic repeats (CRISPR)/CRISPR-associated (Cas) protein 9 system. One of the most important features distinguishing CRISPR/Cas 9 system from ZFNs and TALENs is that ZFNs and TALENs use protein to guide the DNA cleavage, while CRISPR/Cas 9 system uses small RNA for sequence-specific cleavage. RNA, required to generate sequence specificity, is much easier to be designed. CRISPR/Cas9, therefore, is readily adopted to several laboratories around the world and develops very fast over the past few years. However, "off targets" are its major limitation. I will discuss about our experience in using genome editing techniques in gene therapy of rare genetic diseases and our attempt to generate universal cell or tissue donors.

Biographical Sketch

VORASUK SHOTELERSUK, M.D.

Current PositionProfessor
Associate Dean for Research Affairs
Director of the Center of Excellence for Medical Genetics
Department of Pediatrics, King Chulalongkorn Memorial Hospital,
Faculty of Medicine, Chulalongkorn University, Bangkok, Thailand
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EDUCATION:

1992 Doctor of Medicine (First Class Honors) from Faculty of Medicine, Chulalongkorn University, Thailand **1996** Diplomate of the Thai Board of Pediatrics from the Medical Council of Thailand.

1999 Graduate diploma in Clinical Genetics and Clinical Biochemical Genetics from Metropolitan Washington, DC Medical Genetics Residency Program,

National Human Genome Research Institute, NIH, USA.

1999 Diplomate of the American Board of Medical Genetics as a Clinical Geneticist and Clinical Biochemical Geneticist

HONORS AND AWARDS:

- **2002** Young Scientist Award from the Foundation for the Promotion of Science and Technology under the Patronage of His Majesty the King.
- **2006** Awards for Outstanding Research Work and Outstanding Scientist from Chulalongkorn University
- 2010 Thailand Research Fund Senior Research Scholar
- **2012** Outstanding Researcher of Thailand (Medical Science) from National Research Council of Thailand

INTERNATIONAL PUBLICATIONS:

Professor Shotelersuk has 132 publications in PubMed database, with >2,600 citations and an H-index of 25 in Scopus database.

He has been a member of the editorial boards for many international journals including *Molecular Genetics and Genomic Medicine* (Wiley Publishing Group) and *Human Genome Variation* (Nature Publishing Group).

SELECTED PUBLICATIONS:

- 1. N Engl J Med. 1998 Apr 30;338(18):1258-64.
- 2. Mol Cell. 1999 Jan;3(1):11-21.
- 3. Nat Commun. 2016 Jul 6;7:11920.

Title: A legacy of leadership for women's health in Thailand and throughout Asia



Speaker: Unnop Jaisamrarn, MD, MHS Associate Professor in Ob/Gyn Associate Dean for Inter

Associate Professor in Ob/Gyn, Associate Dean for International Affairs, Chulalongkorn University, Thailand

Abstract

A legacy of leadership for women's health in Thailand and throughout Asia

Unnop Jaisamrarn MD, MHS

Women's health in Thailand during the 1950s and early 1960s was comparable to most underdeveloped countries, having a high fertility rate, high infant and maternal mortality rates.

The first Family Planning Clinic in Thailand was founded at Chulalongkorn University Faculty of Medicine in 1965. Mobile clinics to remote rural areas were then introduced 2 years later. The success of family planning services initiated by Chulalongkorn experts have contributed to the adoption of the National Family Planning Program by the government of Thailand in 1970. Significant progress in women's and reproductive health was achieved well after that. The contraceptive prevalence rate increased from 14.8 % in 1970 to 79.3 % in 2012. The total fartility rate has dropped from 5.9 in the 1970s to 1.6 in 2011. Properties of pregnant women in

fertility rate has dropped from 5.9 in the 1970s to 1.6 in 2011. Proportion of pregnant women in Thailand who attend prenatal clinics has now reached 100%. Likewise, 100% of deliveries are done by skilled birth attendants. These lead to a dramatic decrease in infant and maternal mortality.

Lessons from the Thai experience have been adopted by many countries to address their reproductive health problems. Thai experts have worked with international organizations to help shaping programs related to women's health in the region.

Despite such achievements, certain challenges still persist and have emerged, which include increasing adolescent birth rate and poor access to safe abortion. Cervical cancer is still a leading cause of death for women in Thailand despite preventable by vaccination and early detection. Furthermore, health care for the elderly will become an important challenge for Thailand in the near future. Chulalongkorn intellectuals are now working with the Ministry of Health and international partners to find appropriate strategies to solve these problems.

Biographical Sketch

Dr Unnop Jaisamrarn is an Associate Professor and Head of the Family Planning and Reproductive Health Unit in the Department of Obstetrics and Gynaecology at the Faculty of Medicine of Chulalongkorn University in Bangkok where he is also Associate Dean for International Affairs and Vice-Chairman of the Institutional Review Board. He teaches and trains medical students, residents and nurses at King Chulalongkorn Memorial Hospital

Associate Professor Jaisamrarn received his medical degree with First Class Honours from Chulalongkorn University in 1986 where he did postgraduate medical training between 1989 and 1992. He obtained a Certificate in Epidemiology at the University of California in Los Angeles (UCLA) and at the University of Hawaii at Manoa in 1994. He was trained in Reproductive Endocrinology at Johns Hopkins Hospital and received a Master Degree in Health Science (Reproductive Health) from Johns Hopkins University in Baltimore, Maryland, USA in 1996. Since graduating he has conducted research and has been working in the field of reproductive medicine and reproductive health. His research interests include contraception, HPV vaccine, menopause and osteoporosis.

Dr Jaisamrarn has been a Secretary of the Forum for Multicenter Research of the World Health Organization (WHO) since 2006 and Secretary General of the WHO Collaborating Centre for Research in Human Reproduction since 2007. He has been Secretary General of the Thai Menopause Society since 1998 and Secretary General of the Thai Osteoporosis Foundation since 2008.

He has been a prolific author and co-author of medical publications and has been invited to speak at a number of international and domestic medical events.

Title: Improving Ethical Models for Global Health



Speaker: Alan Gorr, PhD MPH

Professor of Public Health, Benedictine University, Lisle, IL Thai Nurse Association of Illinois

Abstract

Improving Ethical Models for Global Health Alan Gorr, PhD MPH, Professor of Public Health Benedictine University, Lisle, IL

In the second half of the twentieth century, ethical models for

health and health care were dominated by three concerns; the patient, the human research subject, and the universal right to health. At that time, it was largely assumed that economic progress could become universal, science could provide answers to infectious diseases, and that the remaining burden of disease would be of the chronic type. In the twenty-first century life has become more complex.

The environment has become despoiled, irreplaceable natural resources overused, and new patterns of disease have emerged owing to the changing environment, resistance to drugs and pathogens carried by insect vectors and world travelers. We commonly see references to SARS, MERS, MRSA, Ebola, swine flu, H5N1 flu, XDR-tb, e. COLI, 0157-H and Zika. The field of Global Health is quickly developing to meet these challenges, but it lacks any universally subscribed ethical framework like those which deal directly with patients or research subjects.

I will examine many of the common systems of ethics and show how they help to choose among alternatives approaches. However they lack an endpoint and for that reason they are not dynamic or independent. I will suggest and endpoint that has been used by scientists in fields other than the health sciences and explore how the use of such endpoints that can give life and energy to ethics in Global Health

Biographical Sketch

Alan Gorr is Professor of Public Health. His professional interests include health promotion, international health manpower development and ethics. His professional preparation includes a BA from University Iowa, MA from University of Toronto, PhD from University of Iowa and MPH from University of Illinois at Chicago.

Gorr began his career at Augustana College, Rock Island, IL, where he became Chair of Professional Studies and initiated the Health Education Program. He then moved to the University of Illinois at Chicago where he was an Associate Professor in the Center for Educational Development (now the Department of Medical Education). The Center was a partner with the World Health Organization. While there he advised several nations at the health
ministry level and worked as a consultant in Egypt, Sudan, India, and Myanmar. Gorr helped design the PhD in Nursing and the Health Education program for the School of Public Health where he held joint faculty appointments. He was co-editor of the *Handbook of Health Professions Education*.

At Benedictine University he became Chair of Public Health and then Dean of the College of Education and Health Services. While chair he initiated the online MPH program as well as Health Policy, Social Context of Health Care, and updated the Ethics course. He is the founder and director of the Benedictine University's MPH program in cooperation with Dalian Medical University in China.

Title: Digital Dentistry & Design beauty and function for the ultimate treatment outcome



Speaker: Jenny Chang, DMD, DMSc President, Chang Dental Group, Natick, MA Abstract CHANG DENTAL GROUP

Digital Dentistry

This lecture is to discuss how technology improves diagnosis, treatment planning and delivery of dentistry. With the utilization of digital workflow, dentists can have more predictable outcome and improve the overall health for patients.

Design beauty and function for the ultimate treatment outcome

In today's world, patients have high expectation of the function, comfort, and longevity of their treatment. They also expect a highly esthetic outcome. This lecture is designed for clinicians to consider important criteria in esthetic and function treatment planning to ensure the best possible outcome.

Biographical Sketch

Jenny Chang, DMD, DMSc

Dr. Jenny Chang is a Prosthodontist and Founder and CEO of Chang Dental Group. A specialist in the esthetic restoration and replacement of teeth, Dr. Chang has expertise in restoring optimum appearance and function to her patients' smiles. She has advanced training in esthetic procedures, dental implants, oral plastic and reconstructive surgery, TMD disorders, traumatic injuries to the mouth, congenital anomalies, sleep apnea treatment, and oral cancer reconstruction. She has earned a strong reputation for excellence by providing individualized care with state-of-the-art techniques that combine both form and function to design a smile. With her extensive research in esthetics in conjunction with her vast clinical work, Dr. Chang understands the art of creating a beautiful smile and functional results. Dr. Chang graduated Magna Cum Laude from Harvard Dental School of Dental Medicine. She continued her education and received her degree in Prosthodontics from Harvard School of Dental Medicine. In 2002, she opened the doors to her practice in Natick, specializing in comprehensive care, dental implants, and high-end esthetic dentistry. Dr. Chang's reputation quickly grew, as many dentists trust her to treat their patients who require specialized care. In 2012, Dr. Chang's expanding practice relocated to the world-class International Place of Boston's historic Financial District.

Dr. Jenny Chang is the recipient of the prestigious Dentist Scientist Award from the National Institute of Health from 1997-2000. She was part of the Faculty at Harvard University for 16 years and has been a lecturer on implant dentistry.

In her free time, Dr. Chang enjoys spending time with her two daughters. She has also just completed her first triathlon and looks forward to continuing her training.

Title: Liver Fluke-associated Cholangiocarcinoma: Milestones of Tackling a Unique Public Health Challenge of Northeast Thailand



Speaker: Banchob Sripa, PhD

Professor and Head, Tropical Disease Research Center, Chair, Tropical Medicine Graduate Program, Khon Kaen University, Thailand

Abstract

Liver Fluke-associated Cholangiocarcinoma: Milestones in Tackling a Unique Public Health Challenge of Northeast Thailand

Banchob Sripa*

^{*}WHO Collaborating Centre for Research and Control of Opisthorchiasis (Southeast Asian Liver Fluke Disease) – Tropical Disease Research Laboratory, Faculty of Medicine, Khon Kaen University, Thailand

Human liver fluke infection caused by *Opisthorchis viverrini* is a major foodborne parasitic zoonosis in Thailand and neighboring Mekong countries with over 10 million people infected. The infection is associated several hepatobiliary diseases including cholangiocarcinoma (CCA), a fatal bile duct cancer. Khon Kaen province in northeast Thailand, where *O. viverrini* is endemic, has reported the highest incidence of CCA in the world. Despite efforts at liver fluke control program in recent decades, the current status of *O. viverrini* endemicity is still high in the northeastern provinces. The complex life cycle of *O. viverrini* involves several hosts and environments, which make it difficult to control by conventional methods. For sustainable control we need community participation, multisectoral collaboration and the commitment of policy makers. Therefore, a new control strategy for liver fluke infection using the EcoHealth approach was introduced into the Lawa Lake area in Khon Kaen province eight years ago. This program is based on these three principles: 1) parasite control in human, reservoir and intermediate hosts, 2) ecological/environmental monitoring, and 3) behavioral change using novel intensive health education methods. These novel methods involve going door-to-door with a variety of media, encouraging active community participation, and use of the "Liver Fluke and

Cholangiocarcinoma Curriculum" in schools to raise the awareness of the younger generation about the liver fluke. Also essential is stakeholder involvement from policy makers at the local, provincial, regional levels. As a result of the program, the infection rate in more than 10 villages surrounding the Lake has declined to less than 10% from an average of 60% estimated by a baseline survey. This decline in incidence is no doubt related to people's increased understanding of the disease and its consequences. Strikingly, Cypriniid fish species, the intermediate host, have a prevalence of less than 0.1% compared with a maximum of 70% during the baseline survey. This liver fluke control program, now named the "Lawa model," has become recognized nationally and internationally. The principles of the model are now officially documented in the recently launched national agenda against liver fluke and cholangiocarcinoma for 2016, and the program is being expanded to other parts of Thailand. This campaign aims to eliminate opisthorchiasis and CCA as well as other related hepatobiliary diseases in the next 10 years. Internationally, the "Lawa model" is one of two showcases of successful control programs for helminths by WHO Neglected Zoonotic Diseases (WHO-NZD) and is being recognized as a potential solution by neighboring Mekong countries where the liver fluke is also endemic.

BIOGRAPHICAL SKETCH

NAME: Sripa, Banchob

POSITION TITLE: Professor of Pathology; Director, WHO Collaborating Centre for Research and Control of Opisthorchiasis (Southeast Asian Liver Fluke Disease).

EDUCATION/TRAINING

Khon Kaen, University, Khon Kaen, Thailand	B.Sc. 1981	Biology
Mahidol University, Bangkok, Thailand	M.Sc. 1984	Pathobiology
University of Queensland, Australia	Ph.D. 1995	Tropical Health

A. Colleagues and I have undertaken extensive research on the association of infection with the Asian liver fluke *Opisthorchis viverrini* and cholangiocarcinoma, bile duct cancer for more than 20 years. Additional research profile extends to epidemiology and control of the liver fluke using EcoHealth approach during the past few years. I am a past/current panel member on the World health Organization's International Agency for Research on Cancer (IARC) panel of experts for biological agents of cancer, Disease Reference Group on Helminths (DRG), and Foodborne Disease Burden Epidemiology Reference Group (FERG).

Over ten years our research on this liver fluke induced biliary diseases has been supported by a NIH-NIAID International Centers for Infectious Diseases Research (ICIDR) entitled "Pathogenesis of liver fluke induced cancer in Thailand", AI065871, on which I serve as the Major Foreign Collaborator, a NCI National Cancer Institute-NIH "*Biomarkers of Opisthorchis viverrini-induced cholangiocarcinoma*" as a co-investigator and recently the TMRC grant on "*Pathogenesis, carcinogenesis and ecology of opisthorchiasis in Thailand*" (P50) which I serve as a Principal Investigator. Research outputs of NIH funded research by our international research team (Drs. Paul Brindley, Jeffrey Bethony and other experts) have been published for more than 60 articles and reviews in high impact journals.

Lastly, Tropical Disease Research Laboratory (<u>http://tdr.kku.ac.th</u>) at Khon Kaen University, that I am a Director, has been working on neglected tropical diseases and serve as a reference lab for foodborne trematodiases in Mekong region. Recently our lab was designated as WHO Collaborating Centre for Research and Control of Opisthorchiasis (Southeast Asian Liver Fluke Disease). The new TMRC (2016) grant, if awarded, will greatly strengthen our activities in research and control of liver fluke in this region that support the NIH strategy. All above, I believe myself and our team is well situated with the relevant experience, expertise and capacity to accomplish the goals of the proposal.

B. Positions and Honors

1984	Lecturer, Department of Pathology, Khon Kaen University, Khon Kan, Thailand
1990	Assistant Professor, Department of Pathology, Khon Kaen University, Khon Kan,
Thailand	
2000	Associate Professor, Department of Pathology, Khon Kaen University, Khon Kan,
	Thailand
2013	Professor, Department of Pathology, Faculty of Medicine, Khon Kaen University,
	Khon Kaen, Thailand
2002	Executive Committee, Liver Fluke and Cholangiocarcinoma Research Center
	(LFCRC), the Excellent Center of Khon Kaen University, Thailand.
2007-present	Deputy Editor, PLoS Neglected Tropical Diseases
2009-2011	WHO Panel Member, Disease Reference Group on Helminths (DRG)
2010-present	WHO Panel Member, Foodborne Disease Burden Epidemiology Reference Group
(FERG)	
2011-present	President, Regional Network for Asian Schistosomiasis and Other Helminth
	Zoonoses (RNAS+)
2012-present	Editorial Board, Infectious Diseases of Poverty
2012-present	Head, WHO Collaborating Centre for Research and Control of Opisthorchiasis
*	(Southeast Asian Liver Fluke Disease)

\underline{Honors} (selected)

2001	The First Prize Biomedical Science Research Award, Faculty of Medicine, Khon Kaen University, Thailand
2003	Guest Editor of Acta Tropica Special Issue, Volume 88, Number 3 (2003)
	"Opisthorchis viverrini and opisthorchiasis: the 21st Century Review"
2004	Certificate of Research Outstanding, Khon Kaen University, Thailand
2009	Distinguished Research Award in Health Science, Khon Kaen University, Thailand
2010	Plenary lecture: Role of liver flukes in human carcinogenesis. The XII
	International Congress of Parasitology (ICOPA), 15-20 August 2010, Melbourne,
	Australia
2010	National Faculty Award, Council of University Faculty Senate of Thailand
2011	Special lecture: Cholangiocarcinoma: lessons from Thailand. The 21 th Conference
	of the Asian Pacific Association for the Study of the Liver (APASL), 17-20
	February 2011, Bangkok, Thailand
2012	Guest Editor-Special Issue on "Opisthorchiasis and Clonorchiasis: Major
	Neglected Tropical Diseases in Eurasia", Parasitology International (January-
	March. 2012)

2012	Sarasin	Honorary	Scientist	Award,	Khon	Kaen	University, Thailand	
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- 2013 Outstanding Scientist Award, Khon Kaen University
- 2013 Outstanding Scientist Award (National), the Foundation for the Promotion of Science and Technology under the Patronage of H.M. the King, Thailand
- 2013 The Thailand Research Fund (TRF) Senior Research Scholar

C. Significant contributions to science:

Our Tropical Disease Research Laboratory at Khon Kaen University has been working on neglected tropical diseases (NTDs) in collaboration with our collaborators worldwide with emphasis focus on human liver flukes and related cancer for over 30 years. During the past decades, we significantly contribute to science of liver fluke-induced cancer, specifically pathogenesis of Opisthorchis viverrini associated cholangiocarcinoma, the bile duct epithelial cancer. This cancer is highly prevalent in liver fluke endemic Mekong countries, where Khon Kaen Province in Thailand is reported the world highest incidence and we are among world authorized in this cancer. In addition to the pathogenesis, we also work for our people in controlling of this liver fluke by using integrated control model using Ecosystem Health approach. Details are summarized below.

1. **Pathology of liver fluke infection**. Human liver fluke infection induces several hepatobiliary diseases including inflammation, biliary hyperplasia, periductal fibrosis, gallstones and cholangiocarcinoma mainly described in the liver. My lab has additional documented the pathology of the gallbladder systematically both in human and animal model of opisthorchiasis. In addition, we also reported the pathology and pathogenesis of liver fluke induced gallstones.

- Sripa B, Kaewkes S. Gall bladder and extrahepatic bile duct changes in *Opisthorchis viverrini*-infected hamsters. Acta Trop. 2002;83(1):29-36.
- Sripa B. Pathobiology of opisthorchiasis: an update. Acta Trop. 2003;88(3):209-20.
- Sripa B, Haswell-Elkins MR, Sinawat P. Histological analysis of gallbladder diseases in relation to opisthorchiasis in endemic areas of Thailand. Acta Trop. 2003;88(3):239-46.
- Sripa B, Kanla P, Sinawat P, Haswell-Elkins MR. Opisthorchiasis-associated biliary stones: light and scanning electron microscopic study. World J Gastroenterol. 2004;10(22):3318-21.
- Sripa B, Kaewkes S, Intapan PM, Maleewong W, Brindley PJ. Food-borne trematodiases in Southeast Asia epidemiology, pathology, clinical manifestation and control. Adv Parasitol. 2010;72:305-50.
- Mairiang E, Laha T, Bethony JM, Thinkhamrop B, Kaewkes S, Sithithaworn P, Tesana S, Loukas A, Brindley PJ, **Sripa B**. Ultrasonography assessment of hepatobiliary abnormalities in 3359 subjects with *Opisthorchis viverrini* infection in endemic areas of Thailand. Parasitol Int. 2012;61(1):208-11.

2. **Immunopathology and immunopathogenesis of opisthorchiasis**. We are pioneer in advancing the pathogenesis of liver fluke infection in the new era both in animal and human opisthorchiasis. We proved for the first time that inflammation and other pathologies related to the infection are immune-mediated. Inflammatory response to the liver fluke antigens is the key process. We further proved that IL-6 is the key inflammatory cytokine that associated with periductal fibrosis in opisthorchiasis. Molecular pathogenesis of liver fluke induced

cholangiocarcinoma involves cytokine gene alterations rather than growth factor dysregulation as in the cholangiocarcinoma from the West.

- Sripa B, Kaewkes S. Relationship between parasite-specific antibody responses and intensity of *Opisthorchis viverrini* infection in hamsters. Parasite Immunol. 2000;22(3):139-45.
- Sripa B, Kaewkes S. Localisation of parasite antigens and inflammatory responses in experimental opisthorchiasis. Int J Parasitol. 2000;30(6):735-40.
- Sripa B, Kaewkes S, Sithithaworn P, Mairiang E, Laha T, Smout M, Pairojkul C, Bhudhisawasdi V, Tesana S, Thinkamrop B, Bethony JM, Loukas A, Brindley PJ. Liver fluke induces cholangiocarcinoma. PLoS Med. 2007;4(7):e201.
- **Sripa B**, Pairojkul C. Cholangiocarcinoma: lessons from Thailand. Curr Opin Gastroenterol. 2008;24(3):349-56.
- **Sripa B**, Mairiang E, Thinkhamrop B, Laha T, Kaewkes S, Sithithaworn P, Tessana S, Loukas A, Brindley PJ, Bethony JM. Advanced periductal fibrosis from infection with the carcinogenic human liver fluke *Opisthorchis viverrini* correlates with elevated levels of interleukin-6. Hepatology. 2009;50(4):1273-81.
- Ninlawan K, O'Hara SP, Splinter PL, Yongvanit P, Kaewkes S, Surapaitoon A, LaRusso NF, Sripa B. *Opisthorchis viverrini* excretory/secretory products induce toll-like receptor 4 upregulation and production of interleukin 6 and 8 in cholangiocyte. Parasitol Int. 2010;59(4):616-21.
- Sripa B, Thinkhamrop B, Mairiang E, Laha T, Kaewkes S, Sithithaworn P, Periago MV, Bhudhisawasdi V, Yonglitthipagon P, Mulvenna J, Brindley PJ, Loukas A, Bethony JM. Elevated plasma IL-6 associates with increased risk of advanced fibrosis and cholangiocarcinoma in individuals infected by *Opisthorchis viverrini*. PLoS Negl Trop Dis. 2012;6(5):e1654.
- Ong CK, Subimerb C, Pairojkul C, ..., **Sripa B**, Wongkham C, Yongvanit P, Futreal PA, Bhudhisawasdi V, Rozen S, Tan P, Teh BT. Exome sequencing of liver fluke-associated cholangiocarcinoma. Nat Genet. 2012;44(6):690-3.

3. Cellular and molecular biology, and carcinogenesis of *O. viverrini*. For better understanding of the pathogenesis and carcinogenesis of the liver fluke, we need to know about its cellular and molecular biology. With collaboration with our TMRC team over 10 years, we know that the liver fluke produces hundreds of proteins; some of which are secreted and induce inflammation, cell proliferation, anti-apoptosis, and fibrosis. All are involved in pathogenesis and carcinogenesis. Over 50 papers from our team published on this aspect.

- Suttiprapa S, Loukas A, Laha T, Wongkham S, Kaewkes S, Gaze S, Brindley PJ, **Sripa B**. Characterization of the antioxidant enzyme, thioredoxin peroxidase, from the carcinogenic human liver fluke, *Opisthorchis viverrini*. Mol Biochem Parasitol. 2008;160(2):116-22.
- Laha T, Pinlaor P, Mulvenna J, **Sripa B**, Sripa M, Smout MJ, Gasser RB, Brindley PJ, Loukas A. Gene discovery for the carcinogenic human liver fluke, *Opisthorchis viverrini*. BMC Genomics. 2007;8:189.
- Smout MJ, Laha T, Mulvenna J, **Sripa B**, Suttiprapa S, Jones A, Brindley PJ, Loukas A. A granulin-like growth factor secreted by the carcinogenic liver fluke, *Opisthorchis viverrini*, promotes proliferation of host cells. PLoS Pathog. 2009;5(10):e1000611.

- Mulvenna J, **Sripa B**, Brindley PJ, Gorman J, Jones MK, Colgrave ML, Jones A, Nawaratna S, Laha T, Suttiprapa S, Smout MJ, Loukas A. The secreted and surface proteomes of the adult stage of the carcinogenic human liver fluke *Opisthorchis viverrini*. Proteomics. 2010;10(5):1063-78.
- Young ND, Jex AR, Cantacessi C, Campbell BE, Laha T, Sohn WM, **Sripa B**, Loukas A, Brindley PJ, Gasser RB. Progress on the transcriptomics of carcinogenic liver flukes of humans--unique biological and biotechnological prospects. Biotechnol Adv. 2010;28(6):859-70.
- **Sripa B**, Brindley PJ, Mulvenna J, Laha T, Smout MJ, Mairiang E, Bethony JM, Loukas A. The tumorigenic liver fluke *Opisthorchis viverrini*--multiple pathways to cancer. Trends Parasitol. 2012;28(10):395-407.
- Smout MJ, Sotillo J, Laha T, Papatpremsiri A, Rinaldi G, Pimenta RN, Chan LY, Johnson MS, Turnbull L, Whitchurch CB, Giacomin PR, Moran CS, Golledge J, Daly N, Sripa B, Mulvenna JP, Brindley PJ, Loukas A. (2015) Carcinogenic parasite secretes growth factor that accelerates wound healing and potentially promotes neoplasia. *PLoS Pathogens* 20;11(10):e1005209.
- Matchimakul P, Rinaldi G, Suttiprapa S, Mann VH, Popratiloff A, Laha T, Pimenta RN, Cochran CJ, Kaewkes S, **Sripa B**, Brindley PJ. Apoptosis of cholangiocytes modulated by thioredoxin of carcinogenic liver fluke. Int J Biochem Cell Biol. 2015 May 23;65:72-80.
- Chaiyadet S, Sotillo J, Smout M, Cantacessi C, Jones MK, Johnson MS, Turnbull L, Whitchurch CB, Potriquet J, Laohaviroj M, Mulvenna J, Brindley PJ, Bethony JM, Laha T, **Sripa B**, Loukas A. Carcinogenic Liver Fluke Secretes Extracellular Vesicles That Promote Cholangiocytes to Adopt a Tumorigenic Phenotype. J Infect Dis. 2015 May 17. pii: jiv291. [Epub ahead of print]
- Chaiyadet S, Smout M, Johnson M, Whitchurch C, Turnbull L, Kaewkes S, Sotillo J, Loukas A, Sripa B. Excretory/secretory products of the carcinogenic liver fluke are endocytosed by human cholangiocytes and drive cell proliferation and IL6 production. Int J Parasitol. 2015; 45(12):773-81. doi: 10.1016/j.ijpara.2015.06.001.
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- Brindley PJ, Costa JM, **Sripa B**. (2015) Why does infection with some helminths cause cancer? *Trends in Cancer* 1, 174-182. PMC4657143

4. Liver fluke co-infected with Helicobacter spp. induced cancer! We are the first group who reported the link between *H. pylori* and cholangiocarcinoma. Moreover, we showed that the liver fluke is a reservoir of *H. pylori*. The more the liver fluke infection intensity, the higher the number of *H. pylori*. Strikingly, we preliminary observed that periductal fibrosis in opisthorchiasis is associated *H. pylori* virulence CagA. These findings are very novel and can have paradigm change in liver fluke induced cancer. We will work in details in this TMRC application.

• Chomvarin C, Namwat W, Chaicumpar K, Mairiang P, Sangchan A, **Sripa B**, Tor-Udom S, Vilaichone RK. Prevalence of *Helicobacter pylori* vacA, cagA, cagE, iceA and babA2 genotypes in Thai dyspeptic patients. Int J Infect Dis. 2008 ;12(1):30-6.

- Boonyanugomol W, Chomvarin C, Baik SC, Song JY, Hahnvajanawong C, Kim KM, Cho MJ, Lee WK, Kang HL, Rhee KH, **Sripa B**. Role of cagA-positive *Helicobacter pylori* on cell proliferation, apoptosis, and inflammation in biliary cells. Dig Dis Sci. 2011;56(6):1682-92.
- Boonyanugomol W, Chomvarin C, Song JY, Kim KM, Kim JM, Cho MJ, Lee WK, Kang HL, Rhee KH, **Sripa B**, Hahnvajanawong C, Baik SC. Effects of *Helicobacter pylori* gamma-glutamyltranspeptidase on apoptosis and inflammation in human biliary cells. Dig Dis Sci. 2012;57(10):2615-24.
- Boonyanugomol W, Chomvarin C, **Sripa B**, Bhudhisawasdi V, Khuntikeo N, Hahnvajanawong C, Chamsuwan A. *Helicobacter pylori* in Thai patients with cholangiocarcinoma and its association with biliary inflammation and proliferation. HPB (Oxford). 2012;14(3):177-84.
- Boonyanugomol W, Chomvarin C, **Sripa B**, Chau-In S, Pugkhem A, Namwat W, Wongboot W, Khampoosa B. Molecular analysis of *Helicobacter pylori* virulent-associated genes in hepatobiliary patients. HPB (Oxford). 2012;14(11):754-63.
- Plieskatt JL, Deenonpoe R, Mulvenna JP, Krause L, **Sripa B**, Bethony JM, Brindley PJ. Infection with the carcinogenic liver fluke Opisthorchis viverrini modifies intestinal and biliary microbiome. FASEB J. 2013 Nov;27(11):4572-84.
- Deenonpoe R, Chomvarin C, Pairojkul C, Chamgramol Y, Loukas A, Brindley PJ, Sripa B. The carcinogenic liver fluke *Opisthorchis viverrini* is a reservoir for species of *Helicobacter*. Asian Pac J Can Prev. 2015;16(5):1751-8.

5. Successful integrated liver fluke control using EcoHealth. We introduced EcoHealth approach to control *O. viverrini* infection in endemic Lawa Lake region in Northeast Thailand with a great successful after 6 years of implementation. "Lawa model" is one of the two successful showcases of WHO parasitic control programme using One health/EcoHealth (2015).

- Sripa B, Tangkawattana S, Laha T, Kaewkes S, Mallory FF, Smith JF, Wilcox BA. Toward integrated opisthorchiasis control in northeast Thailand: The Lawa project. Acta Trop. 2015 Jan;141(Pt B):361-7.
- Echaubard P, **Sripa B**, Mallory FF, Wilcox BA (2016) The role of evolutionary biology in research and control of liver flukes in Southeast Asia. Infect Genet Evol. 2016; 43:381-97.

6. From science to policy. As I am a panel member of academic committee of the National Elimination of Liver Fluke and Cholangiocarcinoma, we introduced integrated control using EcoHealth principle in the control program operating this year 2016. Moreover, as a panel member of WHO Disease Reference Groups on Helminths and also Foodborne Diseases (FERG), I pushed neglected liver fluke to the list of WHO NTDs (2010). I also contribute to foodborne trematodes at local, national, regional and international at large.

- Sripa B. Concerted action is needed to tackle liver fluke infections in Asia. PLoS Negl Trop Dis. 2008;2(5):e232.
- **Sripa B**, Hong ST. Tribendimidine: an alternative anthelmintic for liver flukes? Lancet Infect Dis. 2011;11(2):77-8.
- Sripa B. Global burden of food-borne trematodiasis. Lancet Infect Dis. 2012;12(3):171-2.
- Boatin BA, Basanez MG, Prichard RK, Awadzi K, Barakat RM, Garcia HH, Gazzinelli A, Grant WN, McCarthy JS, N'Goran EK, Osei-Atweneboana MY, **Sripa B**, Yang GJ,

Lustigman S. A research agenda for helminth diseases of humans: towards control and elimination. PLoS Negl Trop Dis. 2012;6(4):e1547.

- Lustigman S, Geldhof P, Grant WN, Osei-Atweneboana MY, **Sripa B**, Basanez MG. A research agenda for helminth diseases of humans: basic research and enabling technologies to support control and elimination of helminthiases. PLoS Negl Trop Dis. 2012;6(4):e1445.
- D. Ongoing Research

1P50 AI098639 NIH-NIAID Tropical Medicine Research Center 8/01/2012 - 7/31/2017 Pathogenesis, carcinogenesis and ecology of opisthorchiasis in Thailand Sripa B (PI)

The TMRC includes two scientific projects and two cores. Project 1: Pathogenesis of opisthorchiasis induced persistent periductal fibrosis. The research to be undertaken here involves characterizing the inflammatory phenotype of individuals infected with *Opisthorchis viverrini* and its role in the development of advanced bile duct fibrosis and bile duct cancer using the Khon Kaen Cancer Cohort. Project 2: *Opisthorchis viverrini* ES proteins and the tumorigenic environment. This project focuses on potentially carcinogenic mediators and activities of the liver fluke. The two cores deal with (A) Administration and (B) Data and Biostatistics management for the TMRC.

Interdisciplinary Research on Human Liver Flukes

1/10/2013-31/09/2016 Agency: The Thailand Research Fund PI: Banchob Sripa The major goal of this project is to apply interdisciplinary approach in basic medical research and control of *Opisthorchis viverrini* infection. Role: PI

Title: Vector Birth Control: A New Strategy to Fight Vector-Borne Diseases



Speaker: Pattamaporn Kittayapong, Ph.D Director, Center of Excellence for Vectors and Vector-Borne Diseases, Faculty of Science, Mahidol University at Salaya, Nakhon Pathom, Thailand

Abstract

Arboviral diseases such as dengue and Zika viral infections are considered important global public health problems. These diseases are transmitted mainly by *Aedes aegypti*, domestic daytime biting mosquitoes, which are distributed through out tropics and sub-tropics. In Thailand alone, 144,952 dengue incidences were reported in 2015 while seven Zika cases were uncovered between 2012 and 2014 in various provinces, which was considered the highest number of cases reported in the Southeast Asian region. The national vector control programs have been emphasized the use of thermal fogging in disease outbreak areas, and chemical larvicides are routinely applied in potential breeding containers. So far implemented vector control programs have not yet proved successful. The main objective of our research is to develop an alternative environmental friendly approach that could suppress mosquito vector populations and eventually reduce disease incidences. Development of the birth control method for mosquito vectors is achieved by combining the *Wolbachia*-induced incompatibility approach with sterile insect technique (SIT), using radiation, in order to create super-sterile males. When these males are released in nature, they are not only sterile but also could induce sterility in females after mating. Mated females will lay eggs that cannot hatch resulting in significant reduction in natural vector populations. *Wolbachia*-transinfected *Ae. aegypti* lines have recently been developed by direct microinjection using double *Wolbachia* strains from *Ae. albopictus*. Only males from these newly developed lines were selected for radiation at 70 Gy to induce complete sterility. Our experiments demonstrated no difference in competitiveness of irradiated males when compared to normal ones, as well as the complete sterility of females after mating with super-sterile males. A proof-of-concept of this strategy in suppressing natural vector populations is currently ongoing in Chachoengsao Province, eastern Thailand. One-year data on household abundance and egg hatching rate of the targeted mosquito vectors were used to form the baseline for monitoring the release of super-sterile males. Community engagement and public awareness through media have resulted in positive support for practical application of this strategy in wider areas.

Biographical Sketch

Pattamaporn Kittayapong, Ph.D.

Director, Center of Excellence for Vectors and Vector-Borne Diseases (CVVD), Faculty of Science, Mahidol University at Salaya, Nakhon Pathom, Thailand, Email: <u>pkittayapong@gmail.com</u>

EDUCATION: B.Sc. (Hons.) in Biology, Khon Kaen University, Khon Kaen, Thailand; M.Sc. in Environmental Biology, Mahidol University, Bangkok, Thailand; Ph.D. in Medical Entomology, University of Massachusetts, Amherst, MA, U.S.A. (1989); Postdoc in Molecular Arbovirology, Yale University, New Haven, CT, U.S.A. (1994)

PROFESSIONAL EXPERIENCE: Visiting Scientist, Dept. of Entomology, Division of Communicable Diseases and Immunology, Walter Reed Army Institute of Research (WRAIR), Silver Spring, MD, U.S.A. (2000-2001); Deputy Head, Dept. of Biology, Faculty of Science, Mahidol University, Bangkok, Thailand (2004-2007); Director, Center of Excellence for Vectors and Vector-Borne Diseases, Faculty of Science, Mahidol University at Salaya, Nakhon Pathom, Thailand (2007-Present); Chair, Ecohealth Network Asia (2011-Present)

RESEARCH INTEREST: >25-year of research experience in the field of vectors and vectorborne diseases, especially on surveillance, prevention and control of dengue and chikungunya.

MEMBERSHIP: WHO/TDR Steering Committee on Molecular Entomology (2005-2007); Charter Board of Director, International Association for Ecology and Health (2007-2008); WHO/TDR/BL5 Scientific Advisory Committee on Innovative Vector Control Intervention (2007-2009); Regional Core Group, IDRC/FBLI/Field Building Leadership Initiative: Advancing Ecohealth in Southeast Asia (2011-2016); Scientific Advisory Board, EU/FP7/DengueTools Consortium (2011-2016)

EDITORIAL ROLE: Associate Editor, PLoS Neglected Tropical Diseases (2008-Present)

PUBLICATIONS: >100 articles published in international peer-reviewed journals (1990-Present)

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Recent work published in The Nation Volume: 41 No: 54800 Date: Thursday 16 June 2016 Section: First Section/ASEANplus Page: 1A(Left), 3A Headline: Sterilised mosquitoes released MANY FOREIGN COUNTRIES INTERESTED IN... News ID: C-160616003041 (16 Jun 16/05:51) Page: ¹/₂



Sterilised mosquitoes released

MANY FOREIGN COUNTRIES INTERESTED IN GROUNDBREAKING RESEARCH BY MAHIDOL SCIENTISTS

PRATCH RUJIVANAROM THE NATION

Thailand yesterday launched sterilised mosquitoes (Aedes aegypti) in the world's first open-environment trial of a new method to control mosquitoborne diseases.

The experiment in Chachoengsao marked Asean Dengue Day.

Dengue is a serious health threat in tropical countries, especially the Asean region. Since New Year in Thailand, 18,337 patients were hospitalised with dengue and there were 16 deaths.

However, research by Mahidol

University's Centre of Excellence for Vectors and Vector-Borne Diseases, has resulted in what it sees as a new mosquito-control method.

It distributes sterilised mosquitoes to naturally reduce the mosquito population, aiming at fighting mosquito-borne diseases such as yellow fewer, dengue, chikungunya, and zika.

Dr Pattamaporn Kittayapong, leading researcher at the centre, said this was the world's first project using sterilised mosquitoes in a trial in an open environment. If the experiment is a success, it will be a turning point for mosquito-borne-disease control.

"The trial period is three months long and we will release 100 sterilised male mosquitoes per house in Ban Nongsatit Village in Chachoengsao's Plangyao district once a week. Then we will monitor the change in mosquito population," Pattamaporn explained.

"The sterilised male mosquitoes that we released will mate with female mosquitoes, which are the vector for the diseases. After that, the females' eggs will be unfertilised so they cannot reproduce. The result will be the mosquito population will decline without any impact on other mosquito species or the environment."

For the sterilising method, the mosquitoes were injected with two strains of bacteria from the garden mosquito, which make them unable to transmit the virus. Then researchers select male mosquitoes to irradiate with mild levels of radiation to sterilise them. [The procedure] can control the mosquito population without any environmental harm.

"This is the safest way to control the mosquito population and reduce the disease infection. There is no genetic modification at all during the process and the

released mosquitoes will also die within three weeks without reproducing the new strain of mosquito," she said. She disclosed that if the trial were

She disclosed that if the trial were successful, the university would inform the World Health Organisation and consult with them about introducing this new mosquito-control method to



Sterilised mosquitoes, developed by Mahidol University, are being released in an attempt to control the mosquito population. It is the first trial in an open environment at **Ban Nongsatit** School in Chachoengsao province.

dengue hot spot areas. Some countries such as Singapore and Brazil have contacted the university to learn about this

tacted the university to learn about this technology, she said. Dr Vu Sinh Num, senior expert in Vector Borne Diseases and Training of the Vietnamese Health Ministry, congratulated Thailand on reaching the successful research to this level. He said he was interested to learn the techniques to

adapt to the Vietnamese mosquitoborne diseases prevention programme.

"We also have our own research about modified mosquitoes that cannot transmit viruses and we have a slightly different idea from Thailand, so it is very inter-

esting to learn from the Thai programme to develop our research," Num said. Dr Somphon Sulapee from the Lao Diseases Control Department said the Thai project to sterilise mosquitoes could also be an example for Lao mosquito ster-ilising by using radiation as well.

"Lao has just started research into this kind of mosquito control and I think this experiment will be successful and be a good example for the Lao project to learn from," Somphon said.

Opening Ceremony and Welcome



Speaker: Clinical Professor Udom Kachintorn, MD President, Mahidol University, Thailand Scott Podolsky, MD

Associate Professor of Global Health and Social Medicine, Harvard Medical SchClinical Professor Udom Kachintorn is a professional gastroenterologist and an alumnus of Mahidol University's Faculty of Medicine Siriraj Hospital. His main research interests include functional dyspepsia, *Helicobacter pylori* infection, gut microbiota, upper GI bleeding and gastric cancer.

Throughout his distinguished career, Clinical Professor Kachintorn held several executive positions at the Faculty of Medicine Siriraj Hospital. These included Dean of the Faculty from 2012 to 2014 - where he took a leading role in transforming its medical curriculum. In January 2015, Clinical Profesor Kachintorn was appointed President of Mahidol University - one of Thailand's top academic and research institutions.

In recognition of his leadership and achievements, Clinical Prof. Kachintorn received several awards, including Best Hospital Administrator Thailand 2013. He also served as an executive of various professional medical associations and organizations. These include President of the Gastroenterological Association of Thailand (2009-2010) and President of ASEAN Medical School Network (2014-2015).

Title: Prince Mahidol's Legacy



Speaker: Sir Michael Gideon Marmot, FBA, FMedSci, FRCP Director, UCL Institute of Health Equity, Professor of Epidemiology and Public Health, University College of London, London University, United Kingdom; President of the World Medical Association; Visiting Professor, Harvard T.H. Chan School of Public Health; Prince Mahidol Award recipient, Thailand

Biographical Sketch

Sir Michael Gideon Marmot, Ph.D. Director, UCL Institute of Health Equity Professor of Epidemiology and Public Health, University College London, London University, United Kingdom President of the World Medical Association

Sir Michael Gideon Marmot has been a pioneer in the field of social epidemiology for over 35

years. His research focuses on the effects of race, lifestyle, socioeconomic status, inequalities and the environment on the health, life expectancy and risks for diseases both within and between countries globally.

He is most recognized for his evidence-based evaluation on the Social Determinants of Health (SDH), i.e. the conditions affecting health, disease prevention and long-term capability development of people from birth through old age, which include socio-economic levels, schooling, fair employment, standards of living and access to healthy environments. This concept of SDH was employed by the British Government to address health inequity issues and strengthened the capacities to provide better well-being, and later spread throughout the European communities. Recognizing the importance of SDH, World Health Organization has adopted it for public policy planning and appointed the Commission on Social Determinants of Health in March 2005, which Sir Marmot was chaired from its inception. His contribution has changed the practices in the formation of health policies to the health equity, thus saving hundreds of millions by reducing the gap of inequities around the world.

Sir Marmot graduated with a Bachelor of Medicine, Bachelor of Surgery (MBBS) degree from the University of Sydney in 1968. He earned a Master of Public Health in 1972 and a PhD in 1975 from the University of California, Berkeley (USA).

Contact Information

Sir Michael Gideon Marmot, Ph.D. UCL Department of Epidemiology & Public Health 1-19 Torrington Place London, United Kingdom, WC1E 7HB **Phone:** +442076791717 **Fax:** +442076791717 **email:** m.marmot[at]ucl.ac.uk

Title: New Strategies for Medical Education

Abstract

Virtually every medical school in the world is actively rethinking its curriculum, due to dramatic changes in the way medicine is practiced, the continued acceleration of biomedical research discoveries, the advent of new educational technologies, advances in research on the way young adults learn best, and outcome studies on medical education itself. In this talk, Dr. Hundert will describe the way Harvard Medical School has adapted to these changes by creating an entirely new medical student curriculum. After three years of planning and development, this curriculum is already in its second year of implementation, with tremendous response from both students and faculty.



Speaker: Edward M. Hundert, MD Dean for Medical Education, Harvard Medical School, Boston, MA

Biographical Sketch

Edward M. Hundert, MD, Dean for Medical Education

Edward M. Hundert is the Dean for Medical Education and the Daniel D. Federman, M.D. Professor in Residence of Global Health and Social Medicine and Medical Education at Harvard Medical School.

Dr. Hundert also serves as Associate Director of the HMS Center for Bioethics at HMS. Over the past 25 years, he has served as President of Case Western Reserve University, Dean of the University of Rochester School of Medicine and Dentistry, and Associate Dean for Student Affairs at Harvard Medical School. An internationally known scholar, educator, psychiatrist, and ethicist, he has held professorial appointments in psychiatry, medical ethics, cognitive science, and medical humanities. His most recent duties at Harvard before serving as Dean for Medical Education included directing the Academy Fellowship in Medical Education for HMS faculty and the Medical Ethics and Professionalism curriculum for HMS students.

Dr. Hundert is a leader in developing innovative curricula and institutional affiliations both in academic medical centers and across all levels of higher education. While Dean of the University of Rochester School of Medicine and Dentistry, he led the school's creation of the "Double Helix Curriculum," a sweeping integration of the basic and clinical sciences across the four-year medical school experience. During his tenure as President of Case Western Reserve, the medical school expanded to create the Cleveland Clinic Lerner College of Medicine, a unique 5-year program dedicated to training future clinical researchers. His work on the "hidden curriculum" helped frame the national discussion of professionalism in medicine.

Dr. Hundert earned his bachelor's degree in mathematics and the history of science and medicine, *summa cum laude*, from Yale University, where he received Yale's Chittenden Prize "to the graduating senior with highest standing in mathematics or the natural sciences." He attended Oxford University as a Marshall Scholar, receiving the Batterbee Prize from Hertford College for "highest first class honours in philosophy, politics and economics." Four years later he earned the M.D. from Harvard Medical School, receiving the Sanger Prize for "excellence in psychiatric research." He completed his psychiatric residency at McLean Hospital, where he served as chief resident. He has received numerous teaching, mentoring, and diversity awards, and he was voted the "faculty member who did the most for the class" by Harvard Medical School graduates in five different years.

Dr. Hundert is a member of the board of TIAA-CREF. He has previously served on the boards of the Association of American Universities, the American Association of Medical Colleges, the Liaison Committee on Medical Education, and the Rock and Roll Hall of Fame. He co-chaired the Institute of Medicine's National Summit on Health Professions Education. Dr. Hundert has written dozens of articles and chapters on a variety of topics in psychiatry, philosophy, medical ethics, and medical education, as well as two books: *Philosophy, Psychiatry and Neuroscience: Three Approaches to the Mind* (Oxford University Press) and *Lessons from an Optical Illusion: On Nature and Nurture, Knowledge and Values* (Harvard University Press).

Research

Dr. Hundert has written dozens of articles and chapters on a variety of topics in psychiatry, philosophy, medical ethics, and medical education, as well as two books: *Philosophy, Psychiatry, and Neuroscience: Three Approaches to the Mind* (Oxford University Press, 1989) and *Lessons from an Optical Illusion: On Nature and Nurture, Knowledge and Values* (Harvard University Press, 1995). The latter was translated into Chinese and published by the Beijing University Press (2000).

Dr. Hundert's contributions to the literature on medical education include writings on the informal curriculum, curriculum design and management, specific curriculum reform experiences, and defining and assessing professional competence. His article, "Characteristics of the Informal Curriculum and Trainees' Ethical Choices" (*Academic Medicine* 1996; 71) was included in the 2010 "Academic Medicine's AM Classics Collection" of articles cited 50 or more times since 1990.

Publication: Access publications at http://ghsm.hms.harvard.edu/person/faculty/edward-hundert

Title: Strengthening Thailand's Health Systems: Lessons Learned from the Second Decade of Thailand's Universal Health Coverage



Speaker: Borwornsom Leerapan, MD, PhD, SM Assistant Professor, Mahidol University, Thailand

Abstract

Strengthening Thailand's Health Systems: Lessons Learned from the Second Decade of Thailand's Universal Health Coverage

Author/Speaker:

Borwornsom Leerapan, MD, PhD, SM'06 Assistant Professor, Department of Community Medicine Faculty of Medicine Ramathibodi Hospital, Mahidol University, Bangkok, Thailand

Thailand's health systems have been gradually developed for decades before achieving the Universal Heath Coverage (UHC) in 2001. Because at that time Thailand was a lower middleincome country in the wake of the 1997 Asian financial crisis, this healthcare reform was considered very ambitious and its early success even more remarkable. Additional healthcare reforms have been implemented during the first decade of Thailand's UHC, including the establishment of the new mechanism for healthcare financing known as the Universal Coverage Scheme (UCS). With a significant increase of governmental health expenditures, the UHC implementations led to better access to care, more equitable public subsidy to healthcare, more equitable utilization of health services, and less medical impoverishment.

Although evidence shows a considerable success of Thailand's UHC in the first decade, many important aspects of the healthcare reforms leave a lot to be desired. The examples of its underachievement include the suboptimal quality of primary prevention, primary health care, and referral systems. A lack of harmonization between the new UCS and other existing health

financing schemes was also problematic. In 2011, a team of international scholars conducted a comprehensive assessment of Thailand's UHC during its first decade. Two sets of policy recommendations were proposed to address both the unfinished businesses and the future agenda of Thailand's UHC. Currently we are in the middle of the second decade of Thailand's UHC, and this present paper aims to update what has been done in corresponding to such policy recommendations. Programs and projects with a focus on crucial aspects of health systems strengthening, including governance and strategic purchasing, managing the purchaser-provider split, harmonizing the three public health insurance schemes, involvement of private sector, decentralization, epidemiological transition and the ageing of the population, quality monitoring, quality assurance and health technology assessment, are described and discussed. Policy implications for the UHC in other countries are also discussed.

Biographical Sketch

Borwornsom Leerapan is an MD-PhD and currently an assistant professor in the department of Community Medicine at Ramathibodi Medical School, Mahidol University. His research interests are in the field of healthcare organization studies especially an application of complexity science in health systems governance and healthcare quality management. He obtained his Doctor of Medicine (MD) with honors from the Faculty of Medicine Siriraj Hospital, Mahidol University in 1999, became a board-certified preventive medicine specialist in 2004, and later obtained the Certificate in Travel HealthTM from the International Society of Travel Medicine in 2011. He received his Master of Science (SM) in Health Policy and Management from Harvard University in 2006, and Doctor of Philosophy (PhD) in Health Services Research, Policy and Administration from the University of Minnesota in 2011.

From 1999 to 2003, Borwornsom had worked at Maetha hospital, a 30-bed community hospital in Lamphun province in the north of Thailand, as both a general practitioner and the hospital director. It was also during this period that Thailand started implementing two major national health policies: the continuous quality improvement program "Hospital Accreditation" (HA), and the healthcare financing program "Universal Health Coverage" (UHC). His direct work experience of managing and implementing those programs at the community hospital level had inspired him to pursue a post-graduate study in health policy and management areas later on. At Harvard, he received the Fellowship in Health Care Management and worked as an administrative fellow at Harvard University Health Services in 2006-2007. At Minnesota, he received the Howard Johnson Scholarship in 2007-2009, and the Joseph M. Juran Fellowship Award in 2010.

Since 2012, his work at Mahidol University has been focused on Thailand's health systems strengthening. The examples of his current research include the synthesis of lessons learned from the international experience on primary healthcare in urban settings, the situation analysis of Thai health services system and its quality control according to the Statute on the National Health System, the case studies of cross-subsidization of healthcare financing at the hospital level in the public hospitals of Thailand, and the evaluation of the new healthcare governance structure at the regional level of Thailand's healthcare system. He also has several administrative positions besides his teaching and research jobs. He recently worked as the Assistant Dean for Health Services, and the Deputy Director for Policy and Planning of Chakri Naruebodindra

Medical Institute Project, a new 400-bed university hospital scheduled to be opened in 2017.

Title: Universal Healthcare in Thailand and Asia: Prevention and Public Health



Speaker: Rifat Atun, MBBS, MBA, FRCGP, FFPH, FRCP Professor of Global Health Systems and Director of Global Health Systems Cluster, Harvard T.H. Chan School of Public Health, Boston, MA

Biographical Sketch

Professor of Global Health Systems 665 Huntington Avenue Building I, Room 1104A Boston, MA 02115 Phone: 617-432-1084 ratun@hsph.harvard.edu

Dr Rifat Atun is Professor of Global Health Systems at Harvard University, and the Director of Global Health Systems Cluster at Harvard T.H. Chan School of Public Health.

In 2006-13, Dr Atun was Professor of International Health Management and Head of the Health Management Group at Imperial College London. In 2008-12 he served as a member of the Executive Management Team of The Global Fund to Fight AIDS, Tuberculosis and Malaria as the Director of Strategy, Performance and Evaluation Cluster.

Professor Atun's research focuses on the design and implementation of health systems reforms and their impact on outcomes. His research also explores adoption and diffusion of innovations in health systems (e.g. health technologies, disease control programmes, and primary healthcare reforms), and innovative financing in global health. Prof. Atun is a co-Investigator and the joint lead for the innovation work stream at the <u>National Centre for Infection Prevention and Management</u> at Imperial College. He is also a co-Investigator and the Theme Lead for 'Organisational Change, Sustainability and Evaluation' at Imperial College and Cambridge University Health Protection Research Unit for Antimicrobial Resistance and Healthcare Associated Infection. He has published widely in the Lancet, PLoS Medicine, Lancet Infectious Diseases, BMJ, AIDS, and Bulletin of the World Health Organization.

Prof. Atun has worked with several governments globally as well as the World Bank, World Health Organization, and the UK Department for International Development to design,

implement and evaluate health system reform initiatives. He has led research and consultancy projects for GSK, Pfizer Inc., the Vodafone Group, Hofmann La Roche, PA Consulting, and Tata Consulting Services.

Prof. Atun was the Founding Director of the MSc in International Health Management, BSc in Management and Medical Science, and Founding Co-Director of the Masters in Public Health (MPH) Programme at Imperial College. He has been a director of Imperial College spin out companies operating in areas of health information systems and biotechnology.

Prof. Atun is a member of the MRC (UK) Global Health Group, the US Institute of Medicine Standing Committee on Strengthening Health Systems and the Research Advisory Committee for the Public Health Foundation of India. He served as a member of the PEPFAR Scientific Advisory Board, the Norwegian Research Council's Global Health and Vaccination Research Board. He was a Member of the Advisory Committee for WHO Research Centre for Health Development in Japan and the Strategic Technical Advisory Group of the WHO for Tuberculosis. He chaired the WHO Task Force on Health Systems and Tuberculosis Control and in 2009-12 he was the Chair of the STOP TB Partnership Coordinating Board.

Prof. Atun studied medicine at University of London as a Commonwealth Scholar and subsequently completed his postgraduate medical studies and Masters in business administration at University of London and Imperial College London. He is a Fellow of the Royal College of General Practitioners (UK), Fellow of the Faculty of Public Health of the Royal College of Physicians (UK), and a Fellow of the Royal College of Physicians (UK).

Education

- MBBS (Medical Diploma): University of London
- MBA: Executive MBA Programme, Imperial College London
- DIC: Diploma in Management, Imperial College London
- FRCGP: Fellow, Royal College of General Practitioners
- FFPH: Fellow, Faculty of Public Health of the Royal College of Physicians (UK)
- FRCP: Fellow, Royal College of Physicians (UK)

Title: Inner-City Asthma Prevention



Speaker: Wanda Phipatanakul, MD, MS Associate Professor of Pediatrics, Harvard Medical School, Director, Asthma Clinical Research Center, Boston Children's Hospital, Boston, MA

Abstract

Boston Children's Hospital, Harvard Medical School, Asthma Clinical Research Center-

Director, Wanda Phipatanakul, MD, MS

School Inner-City Asthma Intervention Study

Asthma is the most common chronic disease of childhood in the United States, causes significant morbidity, accounts for over 14 million missed school days per year (and associated missed days of work among caregivers), and is the number one cause of school absences in America. It accounts for billions of dollars in health care utilization, despite aggressive measures to identify Our work builds upon our established, successful school/community remediable causes. relationships to determine whether a school/classroom intervention will efficiently and effectively improve asthma morbidity by reducing school specific environmental asthma triggers that we have shown to be important. We have had long-standing efforts in urban homes of children with asthma utilizing our techniques in getting rid of pests and rodents in urban homes in efforts to reduce asthma morbidity. Our goal is to determine the efficacy of school/classroom based environmental intervention consisting of classroom/school air purifiers and integrated pest management to reduce school-specific pollutants, mold and pest allergens and in efficiently reducing asthma/allergic disease morbidity in inner-city schoolchildren. This is critical because the school environment is where nearly every child spends the majority of his/her day and could potentially be considered as an effective target for the prevention of inner-city asthma morbidity by reducing exposures to many symptomatic children through a school-based environmental intervention.

Long-Term Public Policy Implications: Our school-based pest management and air cleaner trial will have particular relevance to long-term public policy and planning for disadvantaged urban U.S. schools with similar indoor environments, where, as we found in Boston, 17% of all elementary school children wake up at night because of asthma and 15% have missed school or medical care for asthma in the past year. Our proposed interventions will likely result in net savings, where implementation costs are offset by fewer symptom-days and improved quality of life for children, less health care utilization and less loss of work-days (greater economic productivity) for caregivers. Previous indoor environment intervention trials focused on individuals in single homes. If we demonstrate that reduction of classroom-specific exposures leads to improved asthma outcomes, then our findings can be translated into efficient and cost-effective strategies to benefit communities of children through improving the school environment, where children in America spend the majority of their day.

Future Directions: Her work is focused on school and community outreach to benefit children and families in underserved communities. Her established community relationships enables her to expand her work towards evidence based interventions to make a difference. Already she is expanding her work into preschools, daycares, and Head Start Programs and furthering our understanding not only in childhood asthma, but other allergic diseases such as food allergy, allergic rhinitis and eczema. She has a passion towards clinical investigations to further our understand AND intervention strategies that improve health and potentially modify the disease course down the road towards prevention.

Biographical Sketch

Wanda Phipatanakul, MD, MS

Dr. Wanda Phipatanakul, Associate Professor of Pediatrics at Harvard Medical School and Director/Principal Investigator (PI) of the NIH funded Asthma/Allergy Clinical Research Center at Boston Children's Hospital received her medical degree at Loma Linda University in California. She did her pediatric residency Children's Hospital of Los Angeles allergy fellowship at Johns Hopkins University in Baltimore, before taking a faculty position at Harvard, where she simultaneously received a Masters in Clinical Epidemiology from the Harvard School of Public Health. Dr. Phipatanakul leads her own school and home-based community inner-city asthma studies and is Boston Pediatric PI of NIH funded asthma clinical research networks tackling practice management knowledge gaps and prevention. She also utilizes the knowledge from these clinical research studies to provide evidence-based care for her patients, whom she sees primarily at Boston Children's Hospital. Her research interests also include early interventions in young children, particularly prevention and immunologic/biologics and other interventions targeted towards the allergic, asthma pathway and was recently awarded as PI of a 7 year multicenter NIH prevention grant and leads the Boston Site on another multi-center primary prevention study utilizing killed bacterial lysate. Dr. Phipatanakul's long-standing relationship with community, comprehensively evaluating the role of school-specific exposures and asthma, allergies, and food allergies allows her to work towards incorporating public policy and schoolbased asthma/allergy management initiatives.

She has published over 150 articles in various scientific journals, and Chairs the American Academy of Allergy, Asthma, and Immunology (AAAAI) Environmental Occupational Respiratory Disorders Interest Section and the AAAAI Interest Section Coordinating Committee. Her main passion is teaching and mentoring, and she was awarded mentoring awards from the Thai Association Physician Foundation, Harvard Medical School, the Pediatric Academic Society, and holds a mid-career NIH mentoring award to support her teaching and mentoring efforts.

Title: Health in Thailand: The Legacy of Prince Mahidol



Speaker: Lincoln Chen, MD, MPH President, China Medical Board, Cambridge, MA

Biographical Sketch

Lincoln C. Chen is President of the China Medical Board. Started in 1914, the Board was endowed by John D. Rockefeller as an independent American foundation to advance health in China and Asia by strengthening medical education, research, and policies.

In 2001-2006, Dr. Chen founded and directed the Global Equity Initiative of Harvard University's Asia Center. In an earlier decade, 1987-1996, Dr. Chen was the Taro Takemi Professor of International Health and Director of the university-wide Harvard Center for Population and Development Studies.

In the five years 1997-2001, Dr. Chen served as Executive Vice-President of the Rockefeller Foundation, and in 1973-1987, he represented the Ford Foundation in India and Bangladesh.

From 2001-2007, Dr. Chen was Chair of the Board of Directors of CARE/USA, one of America's leading international relief and development organizations. He currently serves as a Board member of the Social Science Research Council, the Secretary-General's Global Advisory Board to the UN Fund for International Partnership (Ted Turner's UN Foundation), BRAC Foundation USA, the Public Health Foundation of India, the Carso Instituto de la Salud, and the Institute for Health Metrics and Evaluation. In 2004-2007, he was the Special Envoy of the WHO Director-General in Human Resources for Health, and in 2006, he was elected the first Board Chair of the Global Health Workforce Alliance, a public-private partnership with a secretariat based at the World Health Organization in Geneva.

Dr. Chen is a member of the National Academy of Sciences' Institute of Medicine, the American Academy of Arts and Sciences, the Council on Foreign Relations, and the World Academy of Arts and Sciences. He graduated from Princeton University (BA), Harvard Medical School (MD), and the Johns Hopkins School of Public Health (MPH). He was trained in internal medicine at the Massachusetts General Hospital.

Dr. Chen was the Harvard School of Public Health Taro Takemi Professor of International Health, Director of the University-wide Harvard Center for Population and Development Studies, and the founding Director of the Harvard Global Equity Initiative. Earlier, Dr. Chen served as Executive Vice-President of the Rockefeller Foundation, and he represented the Ford Foundation in India and Bangladesh. In addition to serving on many boards, Dr. Chen was the Special Envoy of the WHO Director-General in Human Resources for Health, the Founding Chair of the WHO-based Global Health Workforce Alliance, and a founding member of Advisory Board to the UN Secretary-General of the UN Fund for International Partnerships.



Health in Thailand: The Legacy of Prince Mahidol

1) Thai health in comparative perspective

2) Influence of Prince Mahidol?

3) Challenges: Prince Mahidol's Legacy?

August 25, 2016 Countway Library, Harvard Medical School



Thailand is Good but Average: Life Expectancy vs GDP



Good Health at Low Cost



Better Health for Less Money Health Expenditure and <5 Mortality



East Asian and Pacific countries
 Rest of the world
Source: WHO. World health statistics [online database]. Geneva: World Health Organization; 2010 (http://www.who.int/whosis/whostat/en/index.html,
accessed 7 June 2010).

Basic Messages

- Good health at low per capita spending
- Economy, poverty, education, gender
- Basic prevention-therapeutic services
- Excellent education system
- Health system insurance UHC
- Leadership and commitment

Influences of Prince Mahidol

- Royal influences
- Medical education
- Public health system

History of Royal Influences

- 17th century Ayuttaya Hospital founded Royalty
- 19th century (1850) King Rama III/IV
 - Krom Luang Wongsa Traditional to NY Academy Medicine
 - (1870) King Rama V
 - MR Suvabhan Sanitwongsa MD Edinborough 1884
 - 1888 Siriraj Hospital
- 20th century (1922) King Rama VI
 - Prince Mahidol Songkla MD/Certificate Harvard
 - Prince Jainad & Rockefeller Foundation
 - 21st century Princess Maha Chakri Sirindhorn





Her Majesty Queen Sri Savarindira 150th birthday, Sept 17, 2012, Siriraj Medical School

Thai Medical Schools

Mahidol University

Siriraj Hospital



Chulalongkorn University





Prince of Songkla University



Siriraj and China



Thailand-China Cooperation



HRH Princess Maha Chakri Sirindhorn tours PUMC campus. April 6, 2012



Thailand Nurse-Doctor Ratio



Source: World Health Statistics, WHO

Thai Public Health System



Thai Public Health System



University Hospitals (500-2000 beds)



Provincial Hospitals (300-1000 beds)



Community Hospitals (10-90 beds)



Health centers (no bed)

Challenges: Prince Mahidol's Legacy

- Equity vs excellence
- Justice vs commercialism
- National vs global Health
- Spirit of Prince Mahidol

Historical Debate about Equity

- 1920s Debate elite vs people's medicine
- Excellence Rockefeller-Mahidol-Siriraj
 Siriraj graduated only 70 MDs 1920-1930
- Equity Grassroot health workers?
 - Thai adjustments
 - Rural recruitment, local training, hometown base
 - 3-year MD compulsory rural service

Geographic Mal-distribution doctors and nurses (2008)



Source: Churnrurtai Kanchanachitr et al, Lancet 2011



Commercialism: Medical Tourism

Spirit of Prince Mahidol

- Committed Leaders
- Civil Society
- Spirit & Dedication



Prince Mahidol's Three Mottos

- 'I don' t want you to be only a doctor, but I also want you to be a man'
- 'True success is not in learning, but in its application to the benefits of mankind'
- 'Put the public interest as first priority and maintain professional spirit, then you will lead a happy and prosperous life



The Legacy of Prince Mahidol Lincoln Chen Lecture (Continuation after powerpoint) August 25, 2016

I would like to conclude this talk by moving from the scientific examination of health in Thailand and the influence of the Royalty, especially Prince Mahidol, to human questions. As a 1968 graduate of Harvard Medical School (exactly 40 years after Prince Mahidol), my curiosity naturally turns to two questions:

- 1) How did a Royal Prince practice medicine? Thai patients could find themselves in an uncomfortable situation, and even the Royalty could consider such activities inappropriate?
- 2) What was Prince Mahidol like as a person, not just Royalty, but his manner, demeanor, attitude, and all of the other human attributes that make for a human being?

Fortunately, Madame Cholthanee Koerojna of the King of Thailand Birthplace Foundation educated me by sharing with me excerpts from a book, "Glad Adventures: Adviser to the King of Sian" by Francis Sayre who was the son-in-law of US President Woodrow Wilson. Sayre lived in both Boston and Bangkok and was a friend of and mentor to Prince Mahidol.
On Mahidol's strong desire for providing medical care to patients, Sayre wrote: "During my stay in Bangkok, I came to know and admire HRH Prince Mahidol Songkla,... son of King Chulalongkorn." "Upon the completion of his medical course, Prince Mahidol sought to become an interne in Chulalongkorn Hospital in Bangkok. But he was not permitted to do so because of his royal rank. Not many years had passed since it had been death even to touch the person of the King…" In February 1929, Mahidol wrote to Sayre: "I am still jobless. The idea of my entering into hospital service did not appeal to anybody… Evidently, they are bent on starting me into the already overcrowded career of general administration…" After a second refusal to work at Chulalongkorn, Mahidol sought out Sayre's "friend, Dr. EC Cort, a Presbyterian missionary running a mission hospital at Chiengmai in the north of Siam." From all that I can tell, Prince Mahidol was able finally to fulfill his wish to care treat people at the McCormack Hospital in Chiangmai before his untimely death.

On Mahidol as a person, Sayre observed: "As I saw Prince Mahidol during my stay in Bangkok, winning in appearance, intelligent, straightforward in his gaze, I found him a rare young man unassuming, intensely democratic, thoroughly modern in his outlook." ... "in Boston I saw much of him. A substantial part of his princely revenues he was spending to send Siamese students to America for study; occasionally he even had to borrow money from me. He and his wife were living in the simplest and most democratic way without a maid in a Boston apartment. They did their own housework...." In a letter to Sayre, Mahidol's values are reflected: "They pay more attention to things that are tangible, whereas health, education, and spiritual and moral regeneration seem so remote that much money has not been given to such subjects... The energetic suppression of crime is another feature that seems to impress. But again, here, the efforts are directed towards catching thieves rather than investigation of the economic and moral causes of the condition." "In April 1928, Prince Mahidol fell seriously ill and was taken to a Boston hospital. Fearing the illness might prove fatal, he asked me (Sayre) to come and take down a dying statement touching upon the possibility of one of his children coming to the throne of Siam. In this he asked the King not to make either of them heir to the throne... Happily, he recovered his health; and in July he returned to Bangkok."

Title: Thailand's Role in Promoting Health among Asian Neighbors

Speakers: Somsak Pitaksanurat, PhD,

Dean Faculty of Public Health, Khon Kaen University, Thailand and Sastri Saowakontra, MD, DTM&H, PhD, DSc University Council, Khon Kaen University, Thailand

51 countries in Asian, but 10 countries in ASEAN

Thailand is geographically center of the Greater Mekong Sub region (GMS) and ASEAN. Thailand has played significant roles both in term of horizontal and vertical collaborations in sub regional, regional and global health development to overcome various public health challenges. Khon Kaen University, Faculty of Public Health (FPH, KKU) as one of the top Public Health Faculty of the country has been working cooperated with Asian Neighbors to improve our people health and wellbeing. Recently, Thailand has worked to foster international partnership to attain the UN Millennium Development Goals (MDGs) and the Sustainable Development Goals (SDGs) as well as to tackle various development challenges from food security to climate changes and from environmental degradation, infectious disease to health concerns. Thailand also active in disaster prevention and management and has a long-standing tradition of humanitarian assistance.

In order to foster the efficient outcome, multilateral collaboration is needed. In 2008, the first International Conference on Public Health among the Greater Mekong Sub-Regional Countries was organized at the Faculty of Public Health, Khon Kaen University with the cooperation and participation of the University of Health Sciences, Loa PDR and Hue University of Medicine and Pharmacy, Faculty of Public Health, Vietnam. The 2nd conference was held in Hue, Vietnam, followed by the 3rd conference in Vientiane, Laos with the support of the China Medical Board (CMB) to the 4th GMS International Conference on Public Health in Kunming, China.

The conference had gained more attentions and participations by many universities in the region. During the 4th GMS Public Health Conference in Kunming, China, the Faculty of Public Health, Khon Kaen University, the University of Health Sciences, Loa PDR and Hue University of Medicine and Pharmacy, Faculty of Public Health, Vietnam have extended our collaboration to all GMS countries through the formal establishment of the Greater Mekong Subregion (GMS) Public Health Academic Network comprises members from public health academic institutions in 6 countries in the GMS namely Thailand, Vietnam, China, Cambodia, Lao PDR, and Myanmar.

One key activity by the Network to strengthen regional capacity in public health is the organization of annual international conferences among its members and the public. The vision of the network is to achieve the highest possible level of health among the people and to promote health equity in the Greater Mekong Subregion. The Mission of the Greater Mekong Public Health Academic Network is to enhance regional capacity to address major public health challenges through the delivery of education, research, and policy advocacy for the improvement of population health and for health equity in the region. The Network is committed to enhancing the quality and relevance of educational and training programs in public health in the GMS, strengthening the collaboration and partnership of the public health institutions in the GMS, and fostering collaborative actions among existing networks, policymakers, and researchers with interest in health policy and health research.

The annual conferences also an opportunity for the leaders of the institutions under the GMS Public Health Academic Network to meet in person and develop further collaboration and support in the Network. The conferences are able to increase opportunities for researchers, academics and practitioners to share research results in the field of Public Health as well as in existing health problems among greater Mekong Sub-Regional countries; to search for feasible solutions to enhance international collaboration among Public Health Faculties in Mekong Sub-Region and a wider area of the Southeast Asian countries about training and research in Public Health to strengthen evidence based health policy in globalization context and to support young researchers and students among GMS Faculties of Public Health for improving capacity on research and publications. The 8th GMS International Conference on Public Health among the Greater Mekong Sub-Regional Countries will be held in Cambodia in November 2016. There have been more cooperation and supports from various academic, public and private institutions from our activities.

In addition to the annual Conference, there are GMS Public Health Academic Network Deans' Meetings. The meetings help updating the Network on its key activities including: research collaboration, academic collaboration, staff and students exchange, scholarships for post graduate degrees, and discussion on future members of the network.

As the results, there have been very proactive collaborations among member institutions on student and staff exchanges and research collaboration, short course trainings, scholarships for master and doctoral degrees. The network activities have gained attentions and participations globally



Speaker: Somsak Pitaksanurat, PhD Dean, Faculty of Public Health, Khon Kaen University, Thailand

Biographical

Assistant Professor, Somsak PITAKSANURAT, Ph.D. E-mail : somsak_p@kku.ac.th

EDUCATION

Nov. 1993	Dr. Techn. (Umwelt Technik), University of Innsbruck, Innsbruck, Austria
Sep. 1988	Post Grade Diploma in Sanitary Engineering, Institute for Hydraulics and
	Environmental Engineering (IHE), Delft, The Netherlands.
May. 1984	M. Eng. (Sanitary) Chulalongkorn University, Thailand
Nov. 1978	B. Eng.(Civil) Khon Kaen University, Thailand
TRAINING	
Jul. 1988	Certificate "Training Program in Water and Waste Water Treatment Plant Operation" Foundation de L'eau, Limoges, France.
1995	Certificate "Administrator Development Mode 3 rd " Khonkaen University, June 2,1995-August 26,1995
May 2002	Certificate "The workshop for the leader who operate to landfill solid waste" Pollution Control Department, May 13-15, 2002.

EXPERIENCE

2004-Present	Director : Environmental and Public Health Technology academic		
	services and research center Director		
1985- Present	Assistant Professor : Department of Sanitary Science, Faculty of Public		
	Health Khon Kaen University, Thailand		

1982-1984	Project Engineer : System Engineering Co Ltd.		
	Project Engineer		
1979-1980	Engineer : Department of Planning and Design Metropolitans of Water Work Authority		
1980-1982	Engineer : TC Alpha Trading Co.,Ltd.		

Projects and Responsibilities

- 1. Solid Waste and Excreta Management Project
- 2. Waste Water Collection and Treatment Project
- 3. Environmental Impact Assessment
- 4. Consultant and Facilitator
- 5. Special instructor



Speaker: Sastri Saowakontra, MD, DTM&H, PhD, DSc University Council, Khon Kaen University, Thailand

Biographical

Emeritus Professor Dr. Sastri Saowakontha Present Position

Emeritus Professor of Community Medicine and Consultant to the Dean, Faculty of Medicine.and Aphaipubetr Thai Traditional Medicine, Burapha University

Professional Training :-

	0	
1961	M.D.	- University of Medical Sciences, Thailand.
1964	D.T.M. & H	- University of Medical Sciences, Thailand.
1968	Dip. Nutr.	- London University U.K.
1971	Ph.D.	- London University U.K.
1987	Certificate in Health Care	- Toronto University, Canada
	Management and Evaluation S	kill
2001	D.Sc. in Medicine (Hons)	- Khonkaen University
2013	Diploma in Family Medicine	Royal College of Family Medicine

Past Clinical Training :-

1961-1962	 Internship training at Siriraj Medical Hospital University of Medical Sciences, Thailand.
1962-1964	- Udorn Provincial Hospital (attached), Thailand.
1964	- Hospital for Tropical diseases University of Medical Sciences, Thailand.
1977-2000	- Department of Medicine, Faculty of Medicine, Khon Kaen Univ.

RESEARCH

Research Training :-

1962-1965	- Epidemiology of liver fluke in the north-east of Thailand.
1965-1967	- Biochemical Nutrition and Epidemiology of malnutrition in the
	North-east, Dept. of Tropical Nutrition, Faculty of Tropical Medicine, Thailand.

1967-1971	- Research student, Department of Human Nutrition London School
	of Hygiene and Tropical Medicine, London University, U.K.
1971-1975	- Researcher Department of Tropical Nutrition, Faculty of Tropical
	Medicine, University of Medical Sciences, Thailand.
1975-1990	- Researcher, Faculty of Medicine, Faculty of Public Health,
	Research and Development Institute, Khon kaen University, Thailand.
1991-2000	- Research consultants to operational field research and health
	system research in Lao PDR, and Cambodia
2001-2009	- Research consultant to health research for staff at Faculty of Public
	Health, Burapha University, Thailand.
1011	

POSITION

Academic Position :-

1962- 1966	- Lecturer, Department of Parasitology, Faculty of Tropical Medicine,
	University of Medical Sciences.
1967 - 1974	- Lecturer, Department of Tropical Nutrition, Faculty of Tropical
	Medicine, University of Medical Sciences.
1975 - 1976	- Lecturer, Department of Medicine, Faculty of Medicine,
	Khon Kaen University
1976	- Assistant Professor, Department of Medicine Faculty of Medicine,
	Khon Kaen University.
1981	- Associate Professor of Tropical Medicine, Department of Medicine,
	Faculty of Medicine, Khon Kaen University.
1994-1996	- Professor of Community Medicine, Department of Medicine,
	Faculty of Medicine, Khon Kaen University
1996-2000	- Emeritus Professor of Community Medicine, Department of
	Medicine, Faculty of Medicine, Khon Kaen University
2000-present	- Emeritus Professor of Faculty of Medicine, Burapha University.

Administrative Position :-

1978-1982	- Head Department of Medicine, Faculty of Medicine, Khon Kaen
	University.
1980-1981	- Deputy Dean for Academic Affairs, Faculty of Medicine,
	Khon Kaen University.
1981-1982	- Acting Dean, Faculty of Pharmaceutical Sciences, Khon Kaen University
1082-1086	- Dean Faculty of Public Health Khon Kaen University
1086 1080	Vice Dresident for Descerch Affairs, Khon Keen University.
1980-1989	- vice President for Research Affairs, Knon Kaen University.
1989	- Acting Director and Deputy Director Research and Development
	Institute, Khon Kaen University.
1990-1994	- Dean, Faculty of Associated Medical Sciences Khon Kaen
	University.
1995-1996	- Deputy Director, Peace Resolution Institute, Khon Kaen University.
2000-2002	- Chairperson of working committee in Postgraduate & International
	Training Courses, Faculty of Public Health, Burapha University, Thailand.
2002 2009	- Dean, Faculty of Public Health, Burapha University, Thailand
2009-2514	- A member of Supporting & Problem Solving Committee for
	Aphaiphubetr Thai Traditional Medicine college, Ministry of
	Public Health Dreahinhuri
2005-2009	- Acting Dean, Faculty of Apaiphubetr Thai Traditional Medicine
2007-present	- A member of An Academic Position & Ethical Consideration
-	

Committee, Khonkaen University
2008 - present - A member of Editorial Board, Environment Asia, The
International Journal
2009-present - Academic consultant, Faculty of Aphaiphubetr Thai Traditional
Medicine, Burapha University
2009-present – A member of Khonkaen University Council
2008-present - A member of Ethical Committee on Human Research, Burapha
University
2009- Present—academic consultant, Faculty of Medicine, Burapha University
2011- Present – Academic Consultant, Faculty of Public Health Khonkaen



Sirinun Ploadpliew Blaignan, Ph.D.

Sirinun "Sara" Ploadpliew Blaignan has been a leading vocal coach in Los Angeles area over 20 years. Sara is a highly experienced vocal trainer who has a reputation for identifying a remarkable level of detail in voices and addressing weaknesses to improve the sound produced. She coaches and develops many inspiring singers who compete at the national levels, including the NBC's "*The Voice*." Sara specializes in vocal technique, vocal styles, performance and vocal health for singers. Many singers come from different parts throughout the U.S. - San Francisco, Las Vegas, Phoenix and

New York, including some from Thailand. Sara also performs at the gathering party, birthday, graduation, wedding, sporting activity (singing both the U.S. and Thai anthems), religious activity, etc.

Before deciding to be a vocal coach, Sara taught Ceramics for the Master's Degree program at California State University, Northridge for eight years.

EDUCATION

M.F.A. and Ph.D., Fine Arts, [1997] University of California, Los AngelesLos Angeles, California B.F.A., Fine Arts, [1992] Chulalongkorn University, Bangkok, Thailand

EXPERIENCE

Sara started singing at the age of eleven. She was a singer for Ramkhamhaeng University Demonstration School's band, a lead singer for Chulalongkorn University's band (C.U. Band). Sara was a member of Thai National Youth Chorus performed in Thailand and Southeast Asia countries.

AWARDS

The winner of singing competition from five regional districts of Thailand, [1986]. A runner-up award in H.M. King Cup singing competition at Siam Motor Corporation, [1987].

CONTACT

Address: <u>3429 Country Club Drive, Los Angeles, CA 90019</u> Telephone:(<u>310) 613-6982</u> E-Mail:<u>ploadpliew@yahoo.com</u>Website:<u>www.SaraStudio1.com</u>



Alyssa Wu started learning to play viola in 2012 when she was 9 years old, a 4th grader in the East Brunswick School District of New Jersey. She joined the Greater Newark Youth Orchestra in 2014 as a co-principal violist of its chamber orchestra. In 2015, she was accepted to the Central Jersey Regional Orchestra. She also became the principal violist of the chamber orchestra of the NJSO Youth Academy (previously known as the Greater Newark Youth Orchestra) and had a concert performance in Carnegie Hall in the spring of 2016. She was the principal violist of the All-State Intermediate Orchestra of New Jersey in 2016.

With great respect to the King of Thailand, Alyssa feels honored to play two of the songs that the King has composed, "New Year's Greeting" and "Dream of Love,

As a Harvard alumnus' daughter, Alyssa is working diligently to follow her mom's footprints to realize her dream for the future.

Dream of You". She will also play the first movement of Bach's cello suite No. 1.

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EVENT SUMMARY REPORT









August 25-27, 2016

Thank you for helping to make the 100th anniversary celebration of Prince Mahidol's arrival in Massachusetts and his legacy in public health and medicine a success! We especially thank you for your participation.

With our best wishes,

chal tonjue

Cholthanee Koerojna, President, The King of Thailand Birthplace Foundation and Chairman of event

Celebrating The Legacy of His Royal Highness Prince Mahidol of Songkla:

A Century of Progress in Public Health and Medicine in Thailand, August 25-27, 2016 Worthy of the Memory of Prince Mahidol's Legacy

> By Cholthanee Koerojna, President and Event Chairman The King of Thailand Birthplace Foundation (KTBF)

This is a **summary** of our events and a *Thank-you* all who helped to make our dream come true! The events on Thursday, August 25 and Saturday, August 27 "*Celebrating The Legacy of His Royal Highness Prince Mahidol of Songkla: A Century of Progress in Public Health and Medicine in Thailand*" were highly successful. These historic events honoring the 100th anniversary of HRH Prince Mahidol's arrival in Gloucester, Massachusetts, were worthy of the memory of Prince Mahidol's legacy, and they exceeded our expectations.

Our Why and How: Every KTBF member felt that the 100th anniversary of the arrival of Prince Mahidol in MA was worthy of honor. When we consulted Dr. Brain, a representative of Harvard T.H. Chan School of Public Health, he agreed and brought in Dr. Scott Podolsky of Harvard Medical School, creating a good Massachusetts team with the City of Gloucester. Our next task was to invite medical and public health professionals, including Thai Physicians Association of America and Thai Nurses of Illinois and Southern California. We invited medical schools in Thailand to co-organize this event, and share their knowledge of Thailand's century of progress in medical and public health.

The Symposium on August 25th was unique from other educational symposiums in medicine and public health. Based on participant feedback, their goals in coming were to honor the memory of Prince Mahdol's legacy, and learn more about Thailand's progress in medicine and public health and trends for Thailand's future. Many participants were surprised at how differently they felt in the meeting rooms than at other symposiums, as it was a very touching and meaningful experience. Each presentation linked to Prince Mahidol's education and legacy from his time at Harvard School of Public Health and Harvard Medical School, his work and his motto after returning to Thailand: *"True success is not in the learning, but in its application to the benefit of mankind."* We are sure that many of the Thai participants at this event are the product of his motto.

In recognition of the centennial, we unveiled of a portrait of Prince Mahidol presented by King Bhumibol Adulyadej to Dean George Berry of Harvard Medical School at The School's International House on July 7, 1960, with a moment of silent respect. Harvard Chan School of Public Health Dean Michelle Williams delivered the University Marshal's address, which celebrated the enduring connections between Thailand and Harvard.

Many complimented our moderators, Dr. Scott Podolsky, Dr. Joseph Brain and Dr. Usah Lilavivat and speakers, who touched our hearts. Some attendees had goose bump and felt teary while hearing Dr. Brain and Dr. Usah moderate the sessions and unveil the plaque. Their messages helped us to picture Prince Mahidol's role. Dr. Lincoln Chen's amazing presentation left some of us in tears. That non-Thais know and value Prince Mahidol in so many ways left a lasting impression. The presence of Udom Kachintorn, MD, President of Mahidol U, Supat Vanichakarn, MD, Prince Mahidol Award Foundation Secretary-General, and Sanjai

Sangvichien, MD, Prince Mahidol's historian, gave this event even more significance and meaning. The post-symposium reception was very joyful with beautifully singing participation of President Udom Kachintorn and Dr. Sirinun Blaignan.

We were delighted that you came to honor the memory of the Prince and celebrate continuing health improvements for the citizens of Thailand. About 150 professionals came; 40 from four prestige universities of Thailand that co-organized this event; about 110 from Massachusetts and around the U.S; MDs, nurses and scientists; presidents, vice presidents, deans, directors and professors. It was a great honor to have all parties working with us at this event.

Many Thais and Americans now know the legacy of Prince Mahidol in the development of medical and public health in Thailand and the long relationship of Massachusetts and Thailand. We fulfilled our tasks with pride yet it seems our mission has just begun. Many participants wish to learn more and sustain this memory, and Dr. Brain envisions continuing the Prince Mahidol project, as he was so important to Harvard School of Public Health, both 100 years ago and today.

The Trail of Thai Royalty in Massachusetts Tour on August 26th educated the attendees about Prince Mahidol's family living in Massachusetts from 1916 to 1928. They also enjoyed the taste of a **Traditional New England Clambake** dinner at the end of the day.

The Historic Dedication and Celebration on August 27 was beautiful. The Moorland Hotel, now Gloucester Inn-by-the-Sea on 85 Atlantic Road, where Prince Mahidol stayed when he first arrived in Gloucester, Massachusetts was dedicated with a historic plaque to mark the first site on *The Trail of Thai Royalty in Massachusetts*. Mrs. Elizabeth Cavallaro unveiled the historic plaque with The King of Thailand Birthplace Foundation and all co-organizers. The ocean-side atmosphere was pleasant with a cooling ocean breeze, on a sunny Saturday afternoon. Gloucester Police officers did an exceptional job rerouting traffic on this busy road full of summer tourists, for this dedication.

Besides being the "Father of Thai Modern Medicine," Prince Mahidol played a role in improving the public health of Gloucester residents. His sanitary research in Gloucester for his public health degree was a guide to make Gloucester a better place to live, and shows that Prince Mahidol felt a strong personal connection to Gloucester. Commonwealth of Massachusetts (MA) officials, State Senator Bruce Tarr, State Representative Ann-Margaret Ferrante, Gloucester Mayor's representative, City Counselor, Val Gilman joined us at the historic celebration at City Hall with a resolution and proclamations, plus a Citation by Governor, Charlie Baker. It was a lovely event, rich in history of Prince Mahidol's stay in Gloucester, filled with exhibits, lectures, songs, music, dance and Thai food. Our Gloucester MC and KTBF Member, Amy Shapiro-Kaznocha kept everything on track.

Thanks to the marvelous cooperation and support of all coordinators and participants, Harvard T.H. Chan School of Public Health, Harvard Medical School, Mahidol, Chulalongkorn, Khon Kaen, and Prince of Songkla University, Thai Physicians Association of America, Thai Nurses Association of Illinois and Southern California and City of Gloucester, all of these events honored Prince Mahidol's legacy in Public Health and Medicine as the "*Father of Modern Medicine*" of Thailand.

I applaud Dr. Joseph Brain, Dr. Scott Podolsky, Dr. Usah Lilavivat and everyone who cooperated to make this event a success and a treasured memory. For any questions or further information, I can be reached via email at <u>ktbf@thailink.com</u>, my cell (781-351-1885), or home line (781-365-0083).

Link to story on HSPH web site

https://www.hsph.harvard.edu/news/features/celebrating-thailand-father-of-public-health-andmodern-medicine/

Celebrating the legacy of Thailand's "Father of Public Health and Modern Medicine"



Professor Udom Kachintorn, president of Mahidol University in Thailand, with a photo of Prince Mahidol

September 1, 2016—One hundred years ago, a young member of the Thai royal family gave up a promising military career to devote himself to the health and well-being of his people. As part of his new plan, Prince Mahidol Adulyadej of Songkla came to the U.S. to study public health at the <u>Harvard-MIT School for Health Officers</u> (as the Harvard T.H. Chan School of Public Health was originally known).

On August 25, 2016 a symposium was held to honor the Prince's contributions to public health and medicine in his country and to highlight the progress Thailand has made in public health and medicine over the past century, including improving drinking <u>water</u>, sanitation, and <u>nutrition</u>, and continuing more recently with adoption of <u>universal health coverage</u> in 2002. The event, held at the <u>Francis A. Countway Library of Medicine</u>, was co-sponsored by Harvard Chan School, <u>Harvard Medical School</u> (HMS) and the <u>King of Thailand Birthplace Foundation</u> (KTBF).

Mr. Songkla

Prince Mahidol earned a certificate in public health from Harvard in 1921 and later returned to Boston to study at HMS, where he earned his MD cum laude in 1928. Throughout his studies, he preferred to be known as "Mr. Songkla," and kept his royal identity a secret from classmates.

While at Harvard, the Prince negotiated an agreement with the Rockefeller Foundation to provide funding for education in medicine, nursing, and public health in Thailand. Upon his return home, he served in the Ministry of Education and presided over substantial upgrades to science and medical facilities in Thailand's universities and implemented national public health policies. He died at age 37 from complications of kidney disease.



Cholthanee Koerojna of the King of Thailand Birthplace Foundation (left) with Joseph Brain

Prince Mahidol exemplified the School's values, said <u>Joseph Brain</u>, Cecil K. and Philip Drinker Professor of Environmental Physiology. "He wasn't just coming to collect a Harvard degree. He understood how air and water quality, poverty, and occupation affect health, and he wanted to do something about it." Brain cited one of Prince Mahidol's quotes as a still relevant challenge for the School: "True success is not in the learning, but in its application to the benefit of mankind."

Symposium celebrates connections

The symposium, which Brain and Scott Podolsky, associate professor of global Health and Social Medicine at HMS, helped organize, was attended by a delegation of Thai academics and physicians, including Professor Udom Kachintorn, president of Mahidol University in Thailand. Participants also included faculty from Harvard Chan School and HMS, as well as Simmons College, where the Prince's wife Sangwan Talapat studied nursing. Harvard Chan School <u>Dean</u> <u>Michelle Williams</u> delivered the University Marshal's address, which celebrated the enduring connections between Thailand and Harvard.



Guests at a dinner following the symposium

On August 27, the <u>King of Thailand Birthplace Foundation dedicated a new plaque</u> at the site in Gloucester, MA where Prince Mahidol stayed prior to starting his studies at Harvard and during his time at Harvard. Gloucester was where Thai diplomats and their staff escaped the oppressive Washington, D.C., summers. It is now part of KTBF's Trail of Thai Royalty in Massachusetts, which also includes the birthplace of the reigning King of Thailand, Prince Mahidol's son Bhumibol Adulyadej, who was born at <u>Mt. Auburn Hospital</u> in Cambridge.

While a student at Harvard, Prince Mahidol often returned to Gloucester to write a report for a class in sanitation taught by one of Harvard Chan School's founders <u>Milton Rosenau</u>. The report, which Brain praised, assessed the town's water quality, and also addressed deaths from the 1918 flu epidemic, occupational health among the town's fishermen, and a range of other public health topics.

In recognition of the centennial, a portrait of the Prince presented to the School by King Bhumibol Adulyadej in 1960, which hung for decades in <u>Shattuck International House</u>, will have its frame restored by Thai craftsmen.

In another example of Harvard T.H. Chan School of Public Health's continuing relationship with Thailand, two faculty members are among recent recipients of the country's prestigious annual <u>Prince Mahidol Award</u>: <u>Michael Marmot</u> (2015), Bernard Lown Visiting Professor of Social and Behavioral Sciences, was recognized as a pioneer in the field of social epidemiology; <u>Richard Cash</u> (2006), senior lecturer on global health, was honored for his work promoting the use of oral rehydration therapy to treat cholera and other diarrheal diseases, which is credited with <u>saving millions of lives</u>.

—<u>Amy Roeder</u>

Photos: Sarah Sholes

http://www.voathai.com/a/prince-mahidol-pt/3481614.html

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26.08.2016 ; Pinitkarn Tulachom



A greeting from Harvard University to celebrating the legacy of HRH Prince Mahidol of Songkla ชาวไทยในรัฐแมสซาชูเซตส์จัดงานร่วมกับ ม.ฮาร์เวิร์ดเพื่อเฉลิมพระเกียรติวาระครบรอบ 1 ศตวรรษการเสด็จ รัฐแมสซาชูเซทส์ของ 'เจ้าฟ้ามหิดล' เมื่อครั้งเสด็จมาศึกษาวิชาการแพทย์และการสาธารณสุข ณ มหาวิทยาลัยฮาร์เวิร์ด เมื่อ วันที่ 27 สิงหาคม พุทธศักราช 2459

การเสด็จมาถึงแมสซาชูเซทส์ เมื่อ 100 ปีก่อน ถือเป็นจุดเริ่มต้นสำคัญ ที่ **'สมเด็จฯ เจ้าฟ้ามหิดลอดุลเดช กรมหลวงสงขลา** นครินทร์ พระบรมราชชนก' ทรงมีบทบาทในการนำความรู้กลับไปพัฒนา และปรับปรุง ด้านกิจการด้าน การแพทย์และการ สาธารณสุขของไทยในเวลาต่อมา

ชลธนี แก้วโรจน์ ประธานมูลนิธิสถานที่พระราชสมภพพระบาทสมเด็จพระเจ้าอยู่หัว หรือ The King of Thailand Birthplace Foundation ที่รัฐแมสซาชูเซตส์ ในฐานะผู้ริเริ่มและผู้ประสานการ จัดงานในครั้งนี้ ให้สัมภาษณ์ กับวี โอเอภาคภาษาไทยว่า รูปแบบการจัดงานนอกจากจะเน้นย้ำ ถึงวันสำคัญ ทางประวัติศาสตร์ ของการเสด็จมา ศึกษาต่อ ที่ รัฐแมสซาชูเซทส์ของพระองค์แล้ว ยังร่วมมือกับ คณะแพทยศาสตร์ และคณะสาธารณสุขศาสตร์ มหาวิทยาลัยฮาร์เวิร์ด จัดงาน ประชุมเสวนาเชิงวิชาการ ที่สะท้อนพระมหากรุณาธิคุณของพระองค์ท่าน



Cholthanee Koerojna (R), President of the KTBF at the opening ceremony session of the Symposium

พระองค์ทรงเป็นผู้วางรากฐานวงการสาธารณสุขและการแพทย์ของไทย โดยมีบุคลากรชาวไทยจากองค์กรด้าน การแพทย์ใน อเมริกา และมหาวิทยาลัยชั้นนำของไทยถึง 4 แห่ง คือมหาวิทยาลัยมหิดล จุฬาลงกรณ์มหาวิทยาลัย มหาวิทยาลัยสงขลานครินทร์ และมหาวิทยาลัยขอนแก่น ส่งตัวแทนมาร่วมงานในสัปดาห์นี้

ประธานมูลนิธิ KTBF บอกว่า การจัดงานในครั้งนี้ได้รับการตอบรับที่ดีมากจากชาวอเมริกัน โดยเฉพาะคณะผู้บริหารจาก มหาวิทยาลัยฮาร์เวิร์ด ที่มีความภูมิใจและยกย่องในพระปรีชาสามารถ ของสมเด็จเจ้าฟ้ามหิดล ในฐานะศิษย์เก่า ที่ทรงกลับไป ยกระดับการพัฒนาทางการแพทย์ ในเมืองไทย จนก้าวหน้ามาจนปัจจุบัน

ขณะที่ <mark>ศาสตราจารย์คลีนิค นพ.อุดม คชินทร อธิการบดี มหาวิทยาลัยมหิดล</mark> ท[ี]่เดินทางไปร่วมการจัดงานเสวนาที่ มหาวิทยาลัยฮาร์เวิร์ด บอกว่าถือเป็นโอกาสสำคัญที่ได้ตามรอยเสด็จ และรำลึกถึงพระมหากรุณาธิคุณของสมเด็จ เจ้าฟ้ามหิดล ที่ทรงสร้างคุโณปการอย่างมหาศาลในการวางรากฐานแพทย์แผนปัจจุบันของไทย

เช่นเดียวกับทางการเมืองกลอสเตอร์ รัฐแมสซาซูเซทส์ ซึ่งเป็นเมืองแรกที่สมเด็จฯ เจ้าฟ้ามหิดล เสด็จยัง สหรัฐอเมริกา ก็เตรียม จัดงานเฉลิมฉลองเพื่อเฉลิมพระเกียรติพระองก์ท่าน ณ อาการซึ่งเกยเป็นโรงแรม ที่พระองก์ท่านทรงประทับในกืนแรก เมื่อ 100 ปีก่อนอีกด้วย

นอกจากนี้ยังจะมีการเปิดเส้นทางตามรอยเบื้องพระยุคลบาตรของพระองก์ท่าน เส้นทางใหม่ในเมืองแห่งนี้ หลังพบข้อมูลว่า มี สถานที่หลายแห่งที่มีความเกี่ยวพันทางประวัติศาสตร์กับ เชื้อพระวงศ์ของไทย ณ นครแห่งนี้มาตลอดหลายทศวรรษที่ผ่านมา

การเสด็จทรงศึกษาต่อที่มหาวิทยาลัยฮาร์เวิร์ด ในนครเคมบริดจ์ รัฐแมสซาชูเซทส์ ของสมเด็จเจ้าฟ้ามหิดล ในครั้งนั้น ไม่เพียง จะมีส่วนสำคัญในการพัฒนาวงการสาธารณสุขและการแพทย์ของไทยแล้ว ยังทำให้นครแห่งนี้มีความเกี่ยวเนื่อง กับชาวไทย อย่างแนบแน่น เพราะได้กลายเป็น **'นครแห่งพระราชสมภพ'** ของพระบาทสมเด็จพระเจ้าอยู่หัวภูมิพลอดุลยเดช ที่ทรงประสูติ ที่โรงพยาบาลเมาท์ออร์เบิร์น ในนครเคมบริดจ์ แห่งนี้ เมื่อปี พ.ศ. 2470 ระหว่างที่สมเด็จเจ้าฟ้ามหิดล พระบรมราชชนก ทรงศึกษาในระดับปริญญาเอก ที่มหาวิทยาลัยฮาร์เวิร์ด

SYMPOSIUM





Unveiling Prince Mahidol Portrait that King Bhumibol Adulyadej presented to Dean George Berry of Harvard Medical School on July 7, 1960 at Harvard School of Public Health.