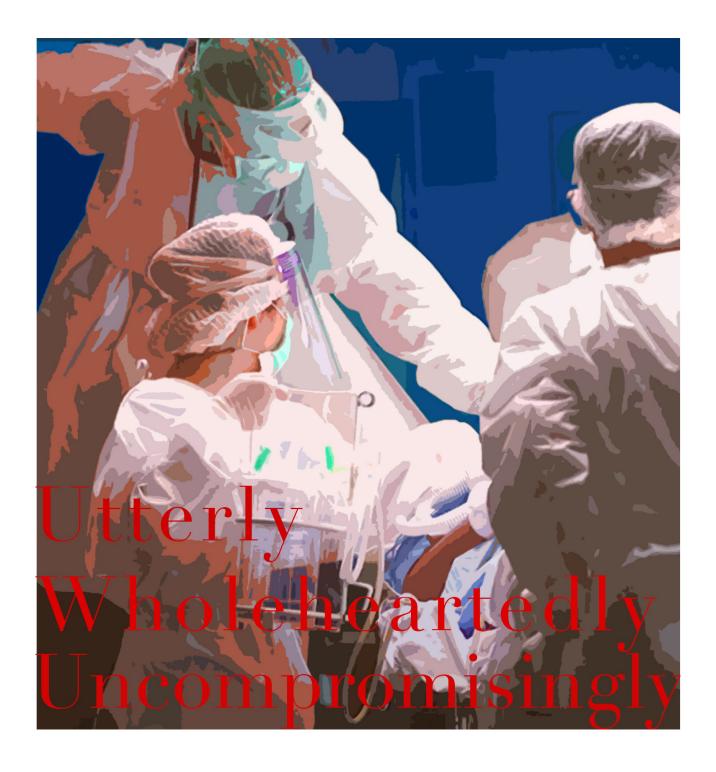


# SIRIRIE C

## INTERNATIONAL NEWS

32<sup>nd</sup> Issue April - June | 2021 | to the benefit of mankind |











## First page

If we viewed the COVID-19 pandemic as a crisis, it surely is a massive crisis. But, if you look at it as an opportunity, it is a huge opportunity to understand the true meaning and the benefits of the philosophy of "Sufficiency Economy Philosophy" as well. SEP is based on three principles:

"Moderation" means sufficiency at a level of not doing something too little or too much at the expense of oneself or others.;

"Reasonableness" means evaluating the reasons of any action, understanding the full consequences of the action, applying accumulated knowledge and experience along with analytical capability, and having self-awareness and foresight;

"Self-immunity" means the ability to withstand shocks, to adjust to external changes, and to cope with events that are unpredictable or uncontrollable;

All of these must be conducted by appropriate knowledge, ethics & virtues, to applying the Sufficiency Economy Philosophy to achieve a balance between health, economy, society, which will lead to the stability of the country during the Covid-19 crisis.

Prof. Dr. Prasit Watanapa

Dean

Faculty of Medicine Siriraj Hospital, Mahidol University



### Faculty of Medicine Siriraj Hospital, Mahidol University



Since 1888 (**133** years now)



#252 QS World University #44 QS Asian University

#1 Thailand University

#116 by subject Medicine (as of 2022)



WFME-certified undergraduate program since 2015

18 postgraduate programs (2020)



Advanced HA accreditation since 2014, JCI (SiPH) (2017)

Thailand Quality Class award (2017) Thailand Quality Class Plus Award (2021)



4,300+ students, 160+ international students, 927 staffs,

4 Bachelor degrees, 28 Master & Doctorate degree programs,

28 Residency training programs, 106 Sub-specialty & Fellowship training programs,

7 Dual Doctorate degree programs, 2 Joint Doctorate degree programs



13 research centers, 700+ publications / yr, citation index = 6.05 AAHARP-certified since 2014



3.2 m OPD cases /yr; 85,000+ IPD cases /yr

2,054 beds, 114 general wards, 69 OR, 16 I.C.U., case mix index = 2.96



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## China-Thailand 5G Medical Technology Exchange and Learning



### Siriraj Hospital - CAS ICCB Online workshop

China-Thailand 5G medical technology exchange and learning, for China and Thailand's 5G medical experts

29 April 2021

On April 29th, 2021, Prof. Dr. Prasit Wattanapa, Dean of Faculty of Medicine Siriraj Hospital, Mahidol University, together with the administrative members of the Faculty of Medicine Siriraj Hospital, Mahidol University, joined an online meeting with a group of experts from Innovation Cooperation Center Bangkok, Chinese Academy of Sciences to discuss on the topic "China-Thailand 5G Medical Technology Exchange and Learning for China and Thailand's 5G Medical Experts" focused on three directions: smart hospital, research, and medical education.





### Siriraj Joined Asia Pacific Forum on Global Health



On May 10th, 2021, Assoc. Prof. Cherdchai Nopmaneejumruslers, Vice Director of Siriraj Hospital, attended a hybrid event via Zoom platform called "Asia Pacific Forum on Global Health – Through and Beyond the Pandemic" as a guest speaker on the session "Scientific Research – Reveal Discoveries and Look Forward for Future Medicine on COVID-19 Pandemic".

This Forum is an in-depth look at the medical research, medical education, and global healthcare, from viral and host genomics to vaccines R&D; from infectious disease prevention and control to population and health; from digital education to online international collaboration, as well as reflections and lessons learned in the COVID-19 age. The physicians, researchers, global health experts, policymakers, educators shared ideas and exchanged knowledge at the one-day hybrid event to further explore what they can contribute to advance human health through innovative discovery, education, and health care to address big challenges facing human beings in the Post-Pandemic Era.



## Online Academic Conference Between Siriraj and Guangxi







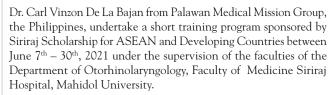


On June 23<sup>rd</sup>, 2021, Prof. Dr.Prasit Watanapa, Dean of Faculty of Medicine Siriraj Hospital, Mahidol University, together with the administrative members of the Faculty of Medicine Siriraj Hospital, Siriraj's Department of Surgery, and Siriraj's Thalassemia Center, attended an online academic conference on medical cooperation with the First Affiliated Hospital of Guangxi University led by President Jungqiang Chen and the Vice Presidents Lang Li and Yan Ping Ying. The conference is focused on the topic of Hospital Management, Medical and Nursing techniques, 5G Appliance, and Specialties Communication.



## Clinical Fellowship and Electives at Siriraj







Dr. Sumi Singh from Nepal Medical College and Teaching Hospital, Nepal, undertake the short-training program at the Department of Otorhinolaryngology, Faculty of Medicine Siriraj Hospital, Mahidol University under Siriraj Scholarship for ASEAN and Developing Countries between April 19<sup>th</sup> – May 16<sup>th</sup>, 2021.





On March 30<sup>th</sup> - 31<sup>st</sup>, 2021, the Department of Rehabilitation Medicine, Faculty of Medicine Siriraj Hospital, held a workshop "2-day hands-on Cadaveric Workshop of Musculoskeletal Ultrasonography" at Siriraj Training and Education Center for Clinical Skills (SiTEC) to develop the procedures for rehabilitation of musculoskeletal pain, and neurological for the residency trainees.



## Siriraj Use 5G Technology To Lights Up Healthcare's Future



CNBC (Consumer News and Business Channel), the recognized world leader in business news, has reported that Siriraj uses 5G technology (with technological support by HUAWEI) to accelerating diagnosis, expands R&D capabilities, and enables telemedicine. In this report, Prof. Dr. Prasit Watanapa, Dean of Faculty of Medicine of Siriaj Hospital also highlights how 5G networks will take Thailand's healthcare to the next level! Watch the re-run program via https://www.facebook.com/HuaweiCarrier/videos/480726276545424/





## Siriraj Heart Team: Structural Heart Disease



### Assoc. Prof. Nattawut Wongpraparut

Division of Cardiology, Department of Medicine Faculty of Medicine Siriraj Hospital, Mahidol University





### Transcatheter Aortic Valve Replacement (TAVR)

Aortic valvular stenosis is a disease that typically affects the elderly. Its dimension is around 4-5 cm<sup>2</sup>. The aortic valve regulates one-way blood flow from the left ventricle to the aorta. It is similar to a door that opens during the systole. As a result, blood can flow through the aorta. In contrast, the valve will close during the diastole to prevent a backward flow to the left ventricle.

However, if the heart is utilized for an extended period of time, there is a risk of developing a heart problem from degeneration or damaged tissue that lead to abnormal calcification and stenosis of the valves. The valves diameter of 0.7-1 cm2 or less will impair the blood circulation and the patients can experience chest pain, syncope or pulmonary edema. In intreated cases, the mortality rate could be as high as 50%.

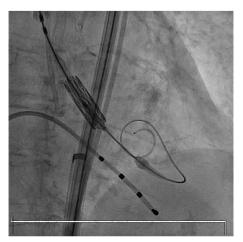
The Surgical Aortic Valve Replacement (SAVR) was a traditional standard treatment for aortic valvular stenosis. However, this invasive major surgery has significant limitation especially for those who have medical diseases or are at high risk of surgical complications. So, Transcatheter Aortic Valve Replacement (TAVR) is a breakthrough innovation that has been developed to overcome the restrictions.

### Transcatheter Aortic Valve Replacement (TAVR)'s History

Transcatheter Aortic Valve Replacement (TAVR) is an aortic valve replacement procedure performed via the blood vessels at chest or groin. Beginning in 1985, Dr. Alain Cribier performed the world's first balloon aortic valvuloplasty in cardiovascular surgery. Unfortunately, the rate of re-stenosis or regurgitation of the valves was quite high. In 1989, Dr. Henning Rud Anderson developed a transcatheter artificial valve replacement from the technique of coronary artery stent implantation. He succeeded this experiment in animals. Finally, in 2002, Dr. Alain Cribier conducted the first human transcatheter aortic valve replacement.

Transcatheter aortic valve replacement (TAVR) has been developed in terms of equipment and research through many randomized controlled trials. As a result, the patients who did not fit for SAVR can also benefit from this therapy. From the trial, the number needed to treat (NNT) was 4 indicating an excellent outcome. The continued studies showed comparable effectiveness of TAVR to SAVR in patients with high, intermediate, and low risks.







"Siriraj Heart Team" consists of an interventional cardiologist, cardiothoracic surgeon, echo-cardiologist, cardiac imaging specialist, anesthetist, and nurse coordinator who work together from the evaluation, planning, and rehabilitation process. It may appear the patients came to receive the treatment and would be able to go home the following day: That is because of the multidisciplinary healthcare team who specializes in different areas and works hard behind the scenes to promote the patient's quality of life.



### Transcatheter Aortic Valve Replacement's Procedures

Transcatheter aortic valve replacement (TAVR) is now considered as a new standard for treating patients with aortic valve stenosis who have intermediate or high risks for SAVR.

Siriraj Hospital performed Thailand's first transcatheter aortic valve replacement (TAVR) operation in 2010. At the beginning, this kind of innovation would be utilized only in inoperable SAVR patients and only 1-2 operations could be performed per year. One example was our 103-year-old man, who had heart failure due to aortic valve stenosis, was effectively treated and was able to live many more years with a decent quality of life.

From the results of many researches conducted across diverse populations, Siriraj heart team has been expanding our abilities in transcatheter aortic valve replacement (TAVR) for the patients with intermediate risk for SAVR and those who are over 80 years of age. In recent years, we've been operating roughly 40 instances per year.

### Difference between TAVR and SAVR

Transcatheter aortic valve replacement (TAVR) is a catheter-based, minimally invasive procedure while SAVR requires a large chest wall incision and a medication to stop heart beating and a heart-lung machine to take over the function of the heart and lungs during the surgery. In some condition such as porcelain aorta that is fragile due to calcification and cannot be clamped, the SAVR will not be possible. The TAVR is carried out by creating a small incision at the groin or chest and inserting a small catheter through a blood vessel to place an artificial aortic valve onto the biological aortic valve. After the procedure the patients who received TAVR recover faster. If there are no complications, the patient can be discharged home on the next day.

### Siriraj's performance

Since each patient's age, physiology and medical condition along with the heart valve condition vary, the operation must be well planned based on the limitations of each patient and the risk of complications, which requires the coordination of a multidisciplinary healthcare team.

### Our future

Siriraj Heart Team, in collaboration with UCLA TAVR Heart Team, is working to improve the efficacy and effectiveness of transcatheter aortic valve replacement (TAVR). Last year, the Siriraj Heart Team held a conference monthly with the UCLA TAVR Heart Team to discuss about the plan of treatments in challenging cases. As a result, even if the treatment is challenging due to the patient's physical limitations, the treatment outcome continues to improve.



## Fetal Shunting Training Model (This model has been patented to Mahidol University, Bangkok, Thailand.)





Assoc. Prof. Nisarat Yamaphai Phithakwatchara, MD. Division of Maternal-Fetal Medicine Department of Obstetrics and Gynecology Faculty of Medicine Siriraj Hospital Mahidol University

### Background

Fetal shunt placement is an image guided procedure for fluid drainage in some fetal thoracic abnormalities and lower urinary tract obstruction, in order to decrease fluid collection and relieve some physiologic disturbances. Outcomes following shunt placement in selected cases seem promising. Even with its minimal invasiveness, complications may occur, especially those related to catheter displacement or preterm labor. Simulation training is useful for skill acquisition and patient safety. This may be even more beneficial for rare procedures, including fetal interventions. Practicing fetal shunting on the simulation model to accomplish the level of competency may increase the success rate and reduce the procedural time and adverse events.

#### Whom is it suitable for?

This model is designed for the inexperienced fetal surgeon to practice the simulation.

### When to use?

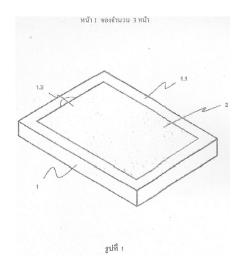
It can be used to achieve the competency for fetal shunting and also maintain this surgical skill in order to reduce the complications associated with fetal intervention.

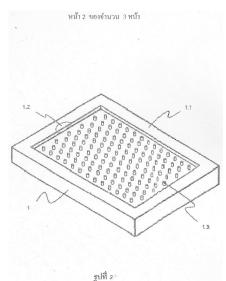
### How to use?

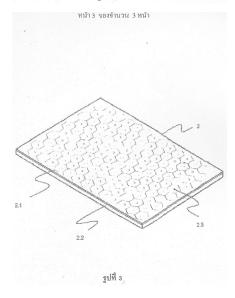
- 1. Prepare the Harrison fetal bladder stent set (Cook Medical Inc. Bloomington, Indiana), including a double pigtail stent with a usable length of 3.5 cm, a diameter of 0.97 mm, a tetrafluoroethylene coated stainless steel guide wire of 40 cm long, a 5.0 French positioner of 24 cm long, and a 13 gage Echotip trocar needle of 18 cm long.
- Assemble the stent set by loading the positioner and stent onto the guide wire with 3 to 4 mm of the guide wire extending beyond the distal coil of the stent.
- Set up a box model by using the rubber sheet to simulate the maternal abdominal wall.
- Create a simulated fetus by using a fresh, cored cucumber with both ends sliced off, surrounded by a rubber sheet.
- Place the simulated fetus into the box model fully filled with tap water.
- Practice the intervention step by step under ultrasound guidance.
- Check the stent position after finishing the procedure.



## Artificial Skin for Intradermal Injection Training (This model has been patented to Mahidol University; Bangkok, Thailand.)







### Background

The purpose of this development was to create and develop an assisted models for practicing intradermal injection skills; in the past, a medical training had to practiced on chicken skins or grapefruit peels but, it can't make a skin-like feel. The Department of Dermatology, Faculty of Medicine Siriraj Hospital in collaboration with Medical Education Technology Center, Mahidol University have developed a simulator that resembles the skin in terms of visuality, tactile perception and feedback by using affordable local materials. The simulator is made of rubber which gives an elasticity similar with the skin. When injected with normal saline the volume beneath the rubber increases resulting in a circular elevation of the rubber reflecting wheal in real patients.

Assoc. Prof. Rungsima Wanitphakdeedecha, MD.

Lecturer Dr. Weeranut Phothong, MD.

Department of Dermatology

Mr. Somchai Jongpipatchaiyaporn

Medical Education Technology Center



Therefore, simulator-based training benefits learning environment and improves cognition by decreasing stress and anxiety from the clinical settings. It allows a safe environment where students can assess, fail, and practice skills before encountering a real patient. A study has found that skills gained from simulator-based training help stimulate clinical practice and education. High-fidelity simulators are characterized by visual and tactile perceptions, ability to feedback and interact with the apprentice. However, the cost of a high-fidelity commercial simulator is expensive and insufficiently affordable. Department of Dermatology and Medical Education Technology Center hereby introduced an intradermal injection simulator made from affordable polyester resin materials that is simple to use and reproducible. Furthermore, the intradermal injection simulator can interact and feedback learners by resulting in an elevation of the artificial skin which resembles a wheal after injection. This feedback is an important key for apprentice in learning.



## Prince Mahidol Award Youth Program



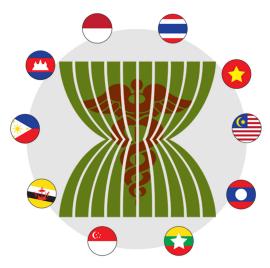
Our 6<sup>th</sup>-year medical students will be the representatives of the Faculty of Medicine Siriraj Hospital, Mahidol University, for the prestigious prized "Prince Mahidol Award Youth Program Scholarship 2021". The successful applicants will obtain a scholarship for research study, professional training or community development abroad or in the country with full support for 12-month overseas placement. The period of overseas placement of the scholarship recipients will be considered as a part of their three-year working period for the government of Thailand.

(from left to right) Mr. Phurin Areesawangkit, will present on the topic "Generation of induced pluripotent stem cells-derived CAR T cell therapy for a treatment of CD-133 in unresectable cholangiocarcinoma patients", Ms. Nicharee Munkongpitukkul, on the topic "The optimal stimulation strategies of retinal prosthesis as a solution to restore vision in untreatable blind patients", and Mr. Nontapat Sukhonpanich, on the topic "Genetic Variation in Stroke - A Novel Approach for Precision Public Health in Thailand ".



## AMSN Webinar Series by Siriraj Faculty 2020

June 10<sup>th</sup>, 2021, **Assoc.Prof. Tripop Lertbunnaphong**, Assistant Dean of Postgraduate Education, Faculty of Medicine Siriraj Hospital, Mahidol University, joined the webinar series hosted by the **ASEAN Medical Schools Network** on the theme of "Innovation in Online Learning". On this webinar, Assoc.Prof. Tripop has delivered a lecture on the topic "New Pedagogy Style in Pandemic Era: Experience at Siriraj Hospital", and **Assoc. Prof. Alfred Kow Wei Chieh**, Assistant Dean (Education), Yong Loo Lin School of Medicine, National University of Singapore (NUS), also delivered a lecture on the topic "Technology-Enhanced Medical Education: COVID-19 Pandemic as a Catalyst". Access the past webinars for this series at http://bit.ly/amsn-classroom



-INNOVATION IN ONLINE LEARNINGDATE: THURSDAY, 10 JUNE 2021
11.30AM (+7 GMT)/12.30PM (+8 GMT)

Technology-Enhanced Medical Education: COVID-19 Pandemic as The Catalyst

Alfred Kow Wei Chieh
Associate Professor Alfred Kow is a practicing HPB and Liver Transplant surgeon at the National University Hospital Singapore. In addition to his clinical work, AProf Kow spends a lot of his time planning medical school curriculum for the Yong Loo Lin School of Medicine in NUS as the Assistant Dean of Education at the Deanery. He has also received many teaching awards for teaching excellence from the hospital, medical school as well as at the university level. He is also actively involved in surgical training for postgraduate surgical program at the hospital as well as a ten the university of Health of Singapore. He is also actively involved in developing advanced technology in education using VR. NR and Al with machine learning models in medical training.

In this talk, he will share our experience in digitally transforming medical education using technology in education using VR. NR and Al with machine learning models in medical training.

In this talk, he will share our experience in digitally transforming medical education using technology to enhance the experience. They constitute crucial steps forward in ensuring uniformity in learning and allowing students to build a strong foundation in the new post-pandemic era: experience at Siriraj Hospital

Tripop Lertbunnaphong
Assistant Dean for Postgraduate Education, Siriraj Hospital, Mahidol University, Thailand since 2014 and in 2016 was appointed to be an Assistant Dean of Quality development, Department of Obstetrics and Gynaecology, He received the Certificate in Learning to teach online from the University of New South Wales (online course). He is also a lecturer on the Teaching Offine Learning Workshop at the Faculty of Medicine Siriraj Hospital.

Changes have occurred since March 2020 after the spread of COVID-19 and government's lock down. Synchronous and Asynchrono



## Faculty Abroad at Yonsei University

[Severance Academy] Interview with Dr. Thanya (Dec 2020)

120 | Severance Academy | 20.12.08







Lecturer Dr. Thanya Techapichetvanich from Dermatosurgery Division has successfully completed the "Clinical Fellowship Train ing in Mohs Micrographic Surgery & Reconstruction, Scar Surgery" and "Clinical Fellowship Training in Mesenchymal Stem Cells and Fat Grafting" from Yonsei University College of Medicine, Korea, between July 1<sup>st</sup>, 2019 – March 31<sup>st</sup>, 2021. After her graduation, Lecturer Dr. Thanya will continue her position at the Dermatosurgery Division and will responsible for Cutaneous Cancer Surgery & Reconstruction and Scar Clinic.



## Faculty Abroad at Duke





**Lecturer Dr. Yodying Kaolawanich** of Division of Cardiology, Department of Medicine, has completed his role as a "Visiting Scholar at Duke Cardiovascular Magnetic Resonance Center", **Duke University Medical Center, USA,** between April 1st, 2019 – March 31st, 2021. During his services, Lecturer Dr. Yodying has co-conducted a research project (still ongoing) "Native T1 Mapping in the Diagnosis of Myocardial Replacement Fibrosis with Versus without Fatty Metaplasia in Patients with Chronic Myocardial Infarction". After completing, he will continue his role at the Division of Cardiology and conduct a cardiovascular MRI research project.



## Faculty Abroad at 19th PRCP 2021

Onsite & Online

## PRCP 2021 Seoul

The 19th International Congress of the Pacific Rim College of Psychiatrists

April 8 (Thu) – 10 (Sat), 2021 Swiss Grand Hotel Seoul, Seoul, Korea

Towards effective, safe and equitable mental health care for all





Lecturer Dr. Maytinee Srifuengfung of Department of Psychiatryattended and delivered a research oral presentation on the topic "Impact of the COVID-19 Pandemic on Older Adults Living in Long-term Care Centers in Thailand, and Risk Factors for Post-traumatic Stress, Depression, and Anxiety" at the 19<sup>th</sup> International Congress of the Pacific Rim College of Psychiatrists (PRCP 2021). This congress was held as a hybrid platform, both online and onsite, at the Swiss Grand Hotel Seoul, Republic of Korea, between April 8<sup>th</sup> - 10<sup>th</sup>, 2021.



## Siriraj Faculty Abroad in USA



Asst. Prof. Tachjaree Panchalee from Division of Maternal-Fetal Medicine, Department of Obstetrics and Gynecology, has completed her "Postdoctoral Fellow in Cell-based Prenatal Testing Study" at Department of Molecular and Human Genetics, Baylor College of Medicine (BCM), USA, between June 2019 - May 2020, and complete her role as a Visiting Scholar (Research Fellow) of Clinical Research in Prenatal Therapy for Fetuses with Alpha Thalassemia Major at Center for Maternal-Fetal Precision Medicine, University of California San Francisco (UCSF), USA, between June 2020 - March 2021!



## Siriraj Attended IASP World Congress on Pain® 2021



June 11th, 2021, Assoc. Prof. Nantthasorn Zinboonyahgoon, Director of Siriraj Clinical Pain Management Training Center, was invited as a guest speaker at "The International Association for the Study of Pain (IASP) World Congress on Pain®" on the topical workshop session about Chronic Pain "Implementation of the Chronic Pain Classification as Part of the 11th Revision of the International Classification of Diseases (ICD-11) in Clinical Settings: Classification Issues and Measures for More Effective Use". Assoc. Prof. Nantthasorn has delivered a presentation on the topic "Experiences from Early Use of the ICD-11 Chronic Pain Classification in Thailand".

The IASP World Congress on Pain® is the world's largest gathering of pain professionals. This premier event brings together more than 6,500 scientists, clinicians, and healthcare providers from around the world and across pain disciplines. This 2021 event marks the 18<sup>th</sup> IASP World Congress on Pain which will be presented virtually due to the pandemic.



### Mark Your Calendar

