



Mahidol University
Faculty of Medicine
Siriraj Hospital

SIRIRAJ

INTERNATIONAL NEWS

33rd Issue July - September | 2021 | to the benefit of mankind



MAHIDOL DAY
2021



Since the arrival of the 21st century, the global community has faced five major pandemics:

In 2002, there was a large outbreak of the coronavirus known as SARS.

In 2009, the outbreak of Influenza A H1N1 2009.

In 2012, there was a large outbreak of the coronavirus known as MERS.

In 2015, the Zika virus epidemic.

And since last year, is the coronavirus pandemic known as COVID-19.

Each pandemic has changed how we live and work. I want everyone at Siriraj to consider our daily duties and how we can adapt things for good if another major pandemic has occurred because Siriraj's primary duty can't be stopped or reduced our working hours in the long term! Training ourselves to adapt to changes will be the new way of life for all of us at Siriraj.



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's & Doctoral degree programs,
28 Residency training programs, 106 Sub-specialty & Fellowship training programs,
7 Dual Doctoral degree programs, 2 Joint Doctoral 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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Prince Mahidol Day 2021



September 24th of every year was designated as **Prince Mahidol Day** in commemoration of his contributions to the development of medical education in Thailand and his selfless devotion to the well-being of Thai people. This year, the administrative members, staffs, students of Faculty of Medicine Siriraj Hospital and other public and private health organizations attended the ceremony to commemorate **His Royal Highness Prince Mahidol of Songkla** in front of Prince Mahidol Statue, Faculty of Medicine Siriraj Hospital, Mahidol University.



Times Higher Education's World University Rankings 2021

World University Rankings 2021 by subject: clinical and health

The clinical and health subject table uses the same trusted and rigorous performance indicators as the *Times Higher Education* World University Rankings 2021, but the methodology has been recalibrated to suit the individual fields.

It highlights the universities that are leading across medicine, dentistry and other health subjects.

Mahidol University ranked No. 126 - 150 (tied) in the **Times Higher Education's World Best University 2021** in Clinical and Health Subject (the top spot of Thailand's Medical Schools!).

The Times Higher Education's World University Rankings have been highlighting the work of world-class universities since 2004. The THE rankings are arguably the world's most prestigious and widely referenced university league tables, covered and reproduced by media around the world. This year's table includes 856 universities, up from 775 last year.

RANKING		SCORES			
Rank	Name Country/Region	No. of FTE Students	No. of students per staff	International Students	Female:Male Ratio
126-150	Mahidol University Thailand	29,296	9.7	4%	64 : 36



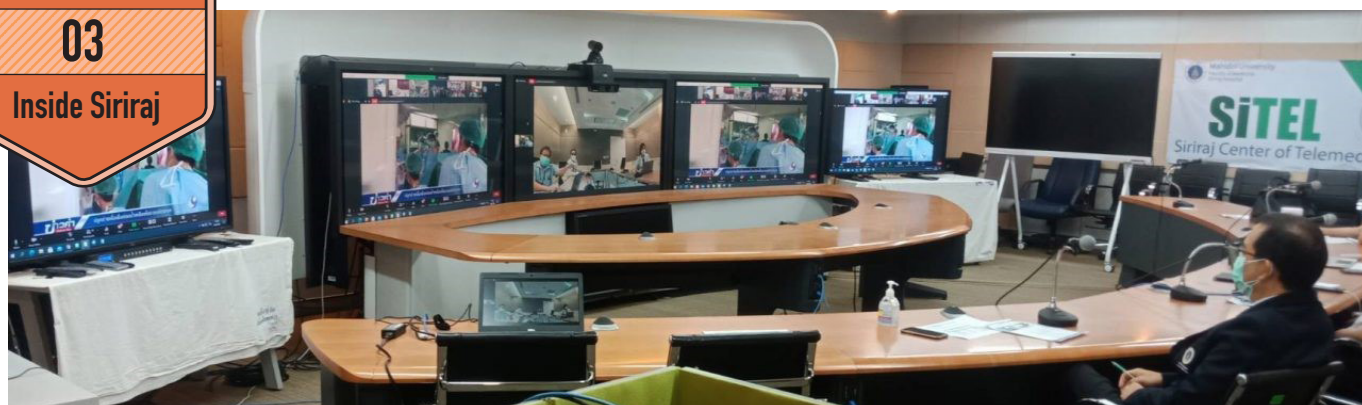
Macquarie - Mahidol Synthetic Biology Research Workshop



On September 10th, 2021, Macquarie University, Australia and Mahidol University, co-organized “*Macquarie - Mahidol Synthetic Biology Research Workshop*” focused on existing and future research interests, updating financial grants, highlighting expected outputs and collaborative activities. The Workshop has FOUR breakout rooms: Neuroscience 1; Neuroscience 2; Metabolomics and Lipidomics; Glycomics and Proteomics; and Microbiomes.



MIS - Minimally Invasive Surgery – APAN52



On August 6th, 2021, Prof. Thawatchai Akaraviputh, Assoc. Prof. Vitoon Chinswangwattanakul, and Assoc. Prof. Asada Methasate, organized an online conference as part of the “52nd ASIA PACIFIC ADVANCED NETWORK VIRTUAL MEETING” on the topic “*Advanced Minimally Invasive Surgery and Robotic Surgery*”. This conference presented 4 - 5 interesting cases from different MIS centers around the world using special devices, instruments, or new robotic systems.

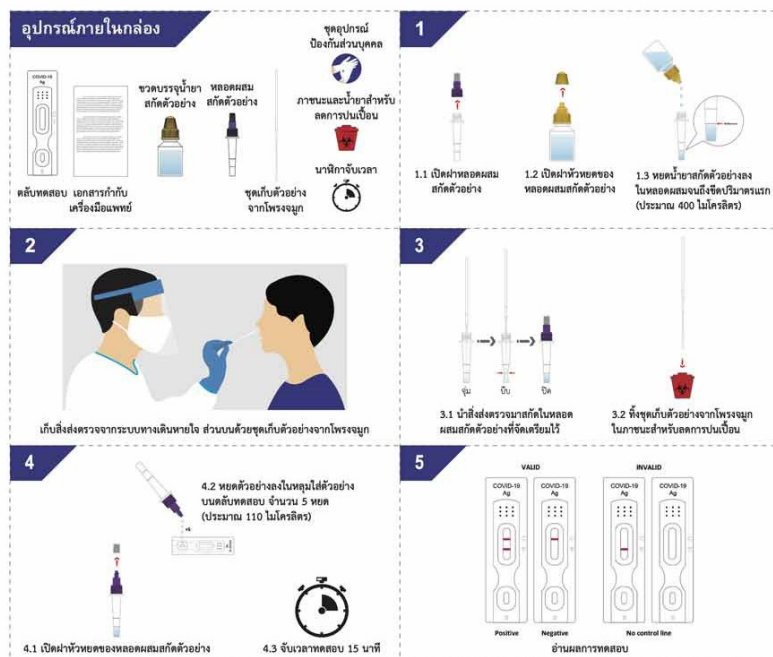


Siriraj Launched Innovative Rapid COVID-19 Antigen Test Kit



คณะทำงาน คิดค้น "นวัตกรรมชุดตรวจแอนติเจนจำเพาะต่อไวรัสโคโรนาสายพันธุ์ใหม่ 2019"

ขั้นตอนการทดสอบ



Ordering Information

Product	Cat. No.	Type	Test/Box	Specimen	Storage
COVID-19 Ag	ICOV-01	Cassette	25	Nasopharyngeal swab	2 – 30°C

Faculty of Medicine Siriraj Hospital, Mahidol University has launched an innovative rapid COVID-19 antigen test kit which can detect accurately result in just 15 minutes, at an affordable price, and easy to use!

“The COVID-19 pandemic continues to heavily and rapidly spread across the country! There is an urgent need for rapid, simple, and accurate tests to detect the COVID-19 infection compared with the ‘time and cost consuming’ gold standard real-time reverse transcription-polymerase chain reaction test (RT-PCR) in the laboratory, which requires a large number of medical personnel, which causing the limited number of suspected COVID-19 cases” **Assoc. Prof. Dr. Anchalee Tungtrongchitr**, Chairwoman of Department of Parasitology, Faculty of Medicine Siriraj Hospital, Mahidol University, told the press.

Since June 2020, the research team led by **Assoc. Prof. Dr. Nitat Sookrung**, the Director of **Biodesign Innovation Center**, Department of Parasitology, Faculty of Medicine Siriraj Hospital, Mahidol University, started developing the innovative rapid antigen test kit based on an immunochromatographic assay which can detect precisely and accurately results without the need for lab equipment! The kits have been tested on COVID-19 patients at **Siriraj Hospital** and **Ramathibodi Hospital** and takes just 15 minutes; including the solution that comes with the test kits can kill the virus within a minute, which can prevent the spread of COVID-19 during the field tests!

Assoc. Prof. Dr. Nitat said that when the approval from **FDA** has been issued, the manufacturer will producing this innovative rapid COVID-19 antigen test kit around 100,000 kits in July 2021, and another 200,000 kits in August 2021!

The first batch will be for healthcare professionals in the community hospitals and rural areas for a proactive case finding. The test kits still need some adjustment for home use and were expected to be released in August 2021, costing around 250 - 300 THB for each.

“At this moment, we’re producing an instructional video about how to use the kits for the safety and effective usage” Assoc. Prof. Dr. Nitat added. “We will use the innovative rapid COVID-19 antigen test kits to screen asymptomatic COVID-19 patients which can detect the virus in people with high viral loads early. Early detection means the patients can be treated quickly and isolated from the non-infected members of the family or in the community”.



International Fellowship at Siriraj



Welcome, **Dr. Marian Rochelle M. Bolo** (left) from Philippine Orthopedic Center, Philippines and **Dr. Mohd Suhaimi Bin Tajudin** from Hospital Selayang, Malaysia, to undertake “**International Fellowship Training in Clinical Pain Management**” at Siriraj Pain Management Clinical Training Center, Department of Anesthesiology, Faculty of Medicine Siriraj Hospital, under the supervision of **Assoc. Prof. Nantthasorn Zinboonyahoon** and his team between August 1st, 2021 - July 31st, 2022.

International Fellowship Training in Clinical Pain Management is jointly sponsored by the **International Association for the Study of Pain (IASP)** and the **World Federation of Societies for Anaesthesiologists (WFSA)**, this hands-on one-year fellowship trains the outstanding multidisciplinary clinician in pain management, treatments, and assessments for application in low-resource countries.

Siriraj Student Exchange Program 2022



During September 29th - 30th, 2021, the Committee of Siriraj Medical Student Exchange Program 2022 (academic year 2021) led by **Assoc. Prof. Prapat Wanitpongpan**, Deputy Dean for International Relations, along with the Assistant Deans for International Relations: **Prof. Woraphong Manuskiatti**, **Assoc. Prof. Sith Sathornsumetee** and **Asst. Prof. Warut Pongsapich**, conducted an English interview to select the most eligible of Siriraj 2nd & 4th-year medical students to undertake the elective study in the year of 2022. This year, total fifty Siriraj medical students (both 2nd-year and 4th-year) have applied for the elective program.



Siriraj Research Excellence Award 2021



RESEARCH AWARDS

The Research Excellence Awards highlighted the research achievements of recently tenured faculty members as the list below:

The Award of Excellence for Clinical Research:

1. **Prof. Rungroj Kittayaphong**, Department of Medicine: “Adherence to Anticoagulant Guideline for Atrial Fibrillation Improves Outcomes in Asian Population: The COOL-AF Registry”
2. **Assoc. Prof. Phunchai Charatcharoenwittaya**, Department of Medicine: “Prospective comparison of transient elastography, point shear wave elastography, APRI and FIB-4 for staging liver fibrosis in chronic viral hepatitis”
3. **Prof. Dr. Thanongchai Siriapisith**, Department of Radiology: “Pyramid graph cut: Integrating intensity and gradient information for grayscale medical image segmentation”
4. **Assoc. Prof. Torpong Thongngarm and Dr. Mongkhon Sompornrattanaphan**, Department of Medicine: “As-Needed Versus Regular Use of Fluticasone Furoate Nasal Spray in Patients with Moderate to Severe, Persistent, Perennial Allergic Rhinitis: A Randomized Controlled Trial”
5. **Assoc. Prof. Annop Piriapatsom**, Department of Anesthesiology: “Effects of intra-operative positive end-expiratory pressure setting guided by oesophageal pressure measurement on oxygenation and respiratory mechanics during laparoscopic gynaecological surgery: A randomised controlled trial”

The Award of Excellence for Biomedical Research:

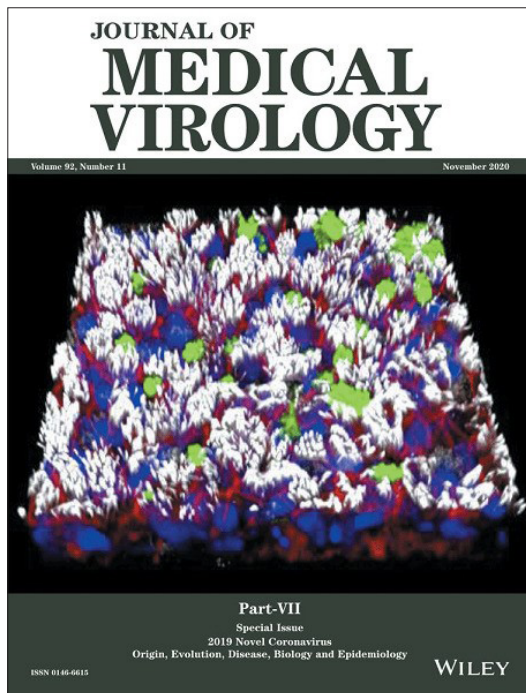
1. **Lecturer Dr. Navin Horthongkham**, Department of Microbiology: “Clinical validation of a Cas13-based assay for the detection of SARS-CoV-2 RNA”
2. **Asst. Prof. Dr. Methichit Wattapanitch**, Siriraj Center of Excellence for Stem Cell Research (SiSCR): “Multilineage differentiation potential of hematoendothelial progenitors derived from human induced pluripotent stem cells”

The Award of Excellence for Innovative Research:

Prof. Dr. Anchalee Tungtrongchitr, Department of Parasitology, and **Assoc. Prof. Dr. Nitat Sookrung**, Department of Health Research and Development: “Serological Test Kit for Canine Allergen Antibody”

The Award of Excellence for Young Researcher:

1. **Lecturer Dr. Nalat Sompagdee**, Department of Obstetrics and Gynecology: “Seroprevalence of Bordetella pertussis antibodies and anti-pertussis antibody response after a single dose of reduced-antigen combined diphtheria, tetanus, and acellular pertussis vaccine (Tdap) in pregnant Thai women”
2. **Lecturer Dr. Monrat Chulanetra**, Department of Parasitology: “GD2 chimeric antigen receptor modified T cells in synergy with sub-toxic level of doxorubicin targeting osteosarcomas”



Two major publications that featured the research project of the Department of Microbiology, Faculty of Medicine Siriraj Hospital, Mahidol University



The greatest threat of our time!

The severe acute respiratory syndrome Coronavirus 2 (SARS-CoV-2) pandemic, also known as Coronavirus disease 2019 (COVID-19), has had a significant influence on practically all societies around the world, putting billions of people's health at risk. Since its first recorded case in the city of Wuhan, China, in December 2019, the **World Health Organization (WHO)** has reported that there have been 211,730,035 confirmed COVID-19 cases with 4,430,697 deaths (as of August 2021). According to WHO's report, laboratory support is a key to interrupting the COVID-19 virus transmission (to confirm suspected cases, guide triage and clinical decisions, aid contact tracing and facilitate early detection of cases in people with previous exposure).

As part of these efforts, the **Department of Microbiology, Faculty of Medicine Siriraj Hospital, Mahidol University** has played a vital role in the fight against the COVID-19 pandemic in Thailand. The standard method of laboratory diagnosis has been developed, which is **“reverse-transcriptase polymerase chain reaction”** or **“RT-PCR”** test. This test provides very accurate results, however, it involves a number of laborious procedures and demands a high level of laboratory biosafety. As a result, testing capacity is very limited. The time wasted during the procedure is significant because the contracted individuals waiting for the test results remain in the community, posing a risk of unintentionally spreading the infection to others.

The “ideal” molecular assay

WHO has defined the “ideal” rapid, sensitive, safe and simple diagnostic test to accelerate interruption of virus transmission in every setting. The ideal test should be suited for use in peripheral health clinics with no laboratory infrastructure in place. The test and related portable equipment should also need no power supply and require no maintenance.

The good news

The development of rapid and simple-to-use assay is finally achievable! The Department of Microbiology, Faculty of Medicine Siriraj Hospital, Mahidol University has successfully developed a **rapid SARS CoV-2 antigen detection assay** that shows comparable sensitivity and specificity with the real-time RT-PCR assay. We can use this rapid and simple SARS-CoV-2 antigen detection test as a screening assay (published on **Virology Journal Volume 17, Article number: 177 (2020)** “Rapid SARS CoV-2 antigen detection assay in comparison with real-time RT-PCR assay for laboratory diagnosis of COVID-19 in Thailand” <https://doi.org/10.1186/s12985-020-01452-5>).



Against COVID-19



Another achievement is the research based on Clustered regularly interspaced short palindromic repeats (CRISPR) diagnostic methods. This assay, which is amenable to multiplexed detection in a single lateral-flow strip incorporating an internal control for ribonuclease contamination, should facilitate SARS-CoV-2 detection in settings with limited resources (published on **Nature Biomedical Engineering Volume 4 Issue 12, December 2020** "Clinical validation of a Cas13-based assay for the detection of SARS-CoV-2 RNA" <https://doi.org/10.1038/s41551-020-00603-x>).

The following are the results of various studies conducted by the Department of Microbiology and related organizations during the pandemic.

- Extended shedding of viable SARS-CoV-2 from COVID-19 patients
- Measuring neutralizing antibodies in blood donors to develop convalescent plasma aiming to treat COVID-19 infection
- Testing the stability of SARS-CoV-2 on specific surface designed for viral decontamination
- Herbal extracts with antiviral activity against various virus strains
- Anti-COVID-19 medicines developed from traditional Chinese medicine and Thai herbs; a study in collaboration with the Chinese Academy of Sciences and Innovation
- The immunological responses to COVID-19 vaccine of laboratory personnel, Department of Microbiology, Faculty of Medicine Siriraj Hospital
- Antibody responses to SARS-CoV-2 in recovered COVID-19 patients in Samut Sakhon province
- The accuracy of spike protein antibody in indicating neutralizing antibody in health care personnel after COVID-19 vaccination

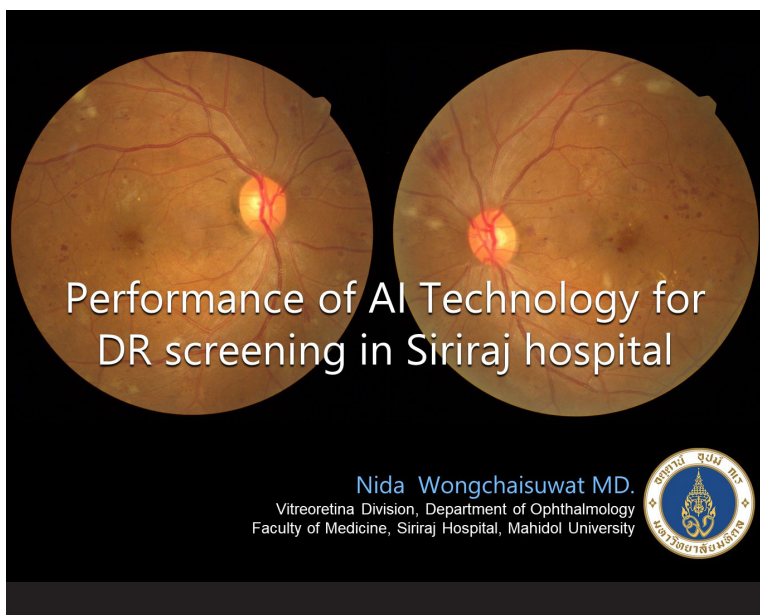
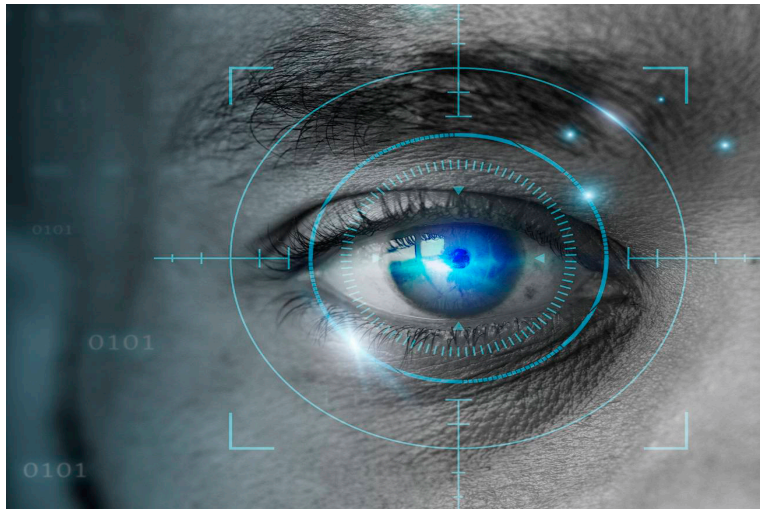
- The relationship and stability of the level of spike protein antibodies and neutralizing antibodies after COVID-19 vaccination in health care personnel who contracted the disease
- The efficacy of Kariyat powder extracted in treating mild-symptom COVID-19 patients compared with placebo; a randomized controlled trial

Since January 2020, the Department of Microbiology has set up the mobile station in a heavy-spreading area (such as Samut Sakhon Province) to help screen the suspected cases, guide triage and clinical decisions, aid contact tracing and facilitate early detection of cases in people with previous exposure. It also underpins effective case detection and quarantining of patients.

In summary, the Department of Microbiology has collected and tested the samples of more than **112,852 individuals!** (ATC = 93,125 samples, RT-CPR = 19,727 samples)



Siriraj Artificial Intelligence Diabetic Retinopathy Screening



Background

Diabetic retinopathy (DR) is the leading cause of blindness in adults between 20 - 74 years old. But, an early detection of DR can reduce the risk of severe vision loss with the statistically proven that more than 90% of treatment were succeeded!

Traditionally, the ophthalmologist will screen for DR by dilating the pupil and performing indirect ophthalmoscopy. This method is possibly successful but the increasing number of patients has outpaced the number of ophthalmologists! From the patient's perspective, this technique is time-consuming, it is labor-intensive, needs a long turnaround time, and requires expensive equipment and trained retinal photographers and readers. Thus, the pupillary dilation may be uncomfortable!

For the past few years, the development of artificial intelligence technology (AI) has achieved unprecedented progress and practically applied to DR screening. AI assisted systems provide a potential solution by enabling quick and accurate assessment of the retina at the screening point.

Based on these information, **Lecturer Dr. Nida Wongchaisuwat** and her team from Division of Retina, Department of Ophthalmology, Faculty of Medicine Siriraj Hospital, Mahidol University, has started a research project "Efficacy and Accuracy of Artificial Intelligence Program for Diabetic Retinopathy Image Analysis" to compare the AI screening system with a traditional dilated eye examination performed by retinal specialists. The results is similar to the performance of the ophthalmologists!

Performance in research

Initial goal for AI algorithm : Sn95%, Sp80%

Internal Validation		Nidek AFC330	Eidon	new Eidon model
Training N=4522	n	128	134	134
	Sn	0.98	0.92	0.96
	Sp	0.83	0.81	0.85

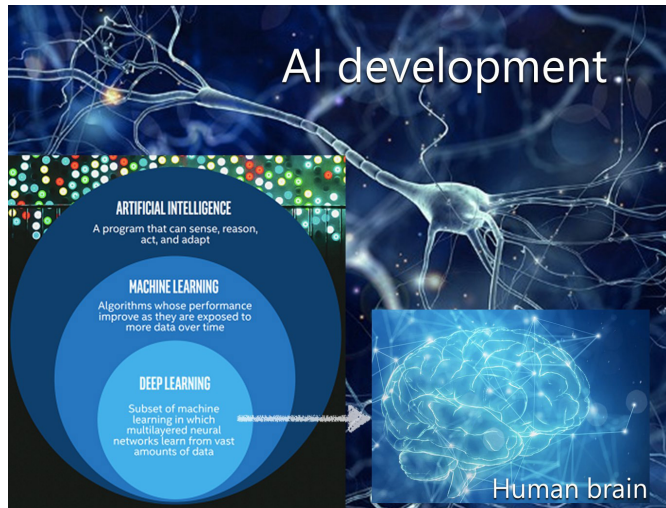
Clinical verification

(compare to fundus exam by retinal specialist)

Test result	n	Sn	Sp	PPV	NPV
Nidek AFC330	982	0.82	0.92	0.82	0.92
Eidon	674	0.89	0.84	0.73	0.94



Siriraj Artificial Intelligence Diabetic Retinopathy Screening

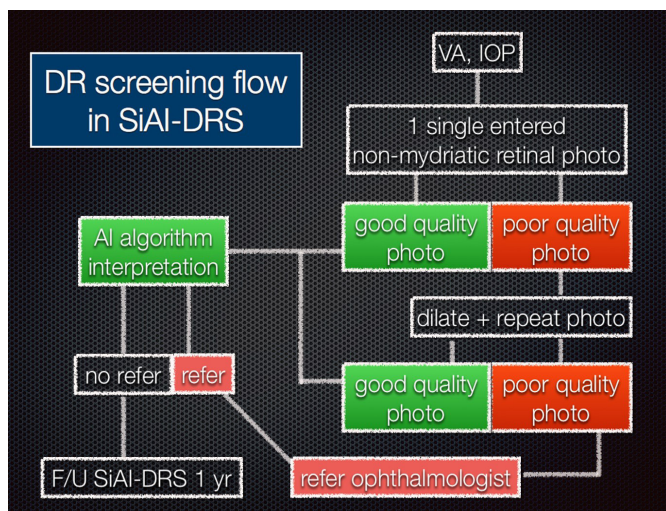


The Results

The outcome of this research had made a clinical impact to the DR screening at Siriraj Hospital! Since September 2020, 61% of total 374 patients were screened by the AI screening system alone without the need of seeing the ophthalmologist! In the past, all patients need a pupillary dilation before meet the ophthalmologist. But today, only 19 % were still need a pupillary dilation, and 90% of the patients were very satisfied!

Lecturer Dr. Nida Wongchaisuwat and her team won "R2R Outstanding Award" in 2021.

Congratulations!



In-person verification of deep-learning algorithm for diabetic retinopathy screening using different techniques across fundus image devices.

Nida Wongchaisuwat, MD, Adisak Trinavarat, MD, Nuttawut Rodanant MD, Somanus Thoongsuwan, MD, Nopasak Phasukkiwatana, PhD, MD, Supalert Prakhunhungsit, MD, Lukana Preechasuk, MD, Papis Wongchaisuwat, PhD.

Department of Ophthalmology, Faculty of Medicine Siriraj hospital, Mahidol University, Bangkok, Thailand

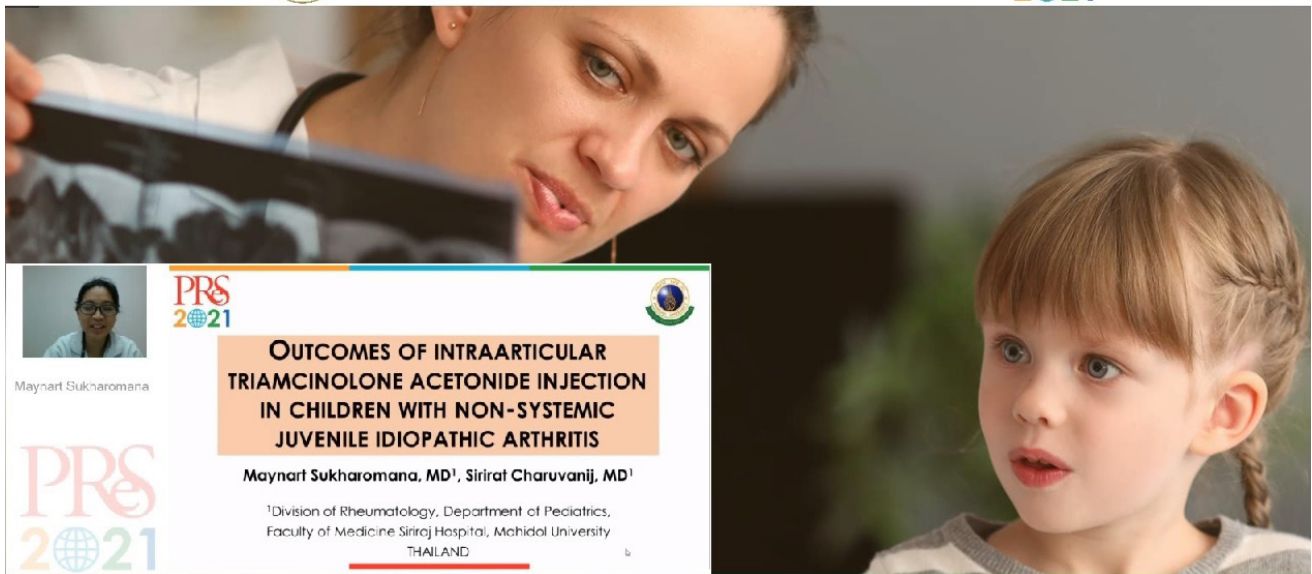




Faculty Abroad at 27th PReS 2021



SIRIAJ FACULTY ABROAD @ PReS 2021



Lecturer Dr. Maynard Sukharomana from the Division of Rheumatology, Department of Pediatrics, Faculty of Medicine Siriraj Hospital, Mahidol University, attended and delivered a poster presentation on the topic “Outcomes of intraarticular triamcinolone acetonide injection in children with nonsystemic juvenile idiopathic arthritis” at the “27th European Pediatric Rheumatology e-Congress 2021 and Young Investigators Meeting”. This congress was held as an online platform from The Swiss Confederation between September 18th - 21st, 2021.



Faculty Abroad at 19th AOCC



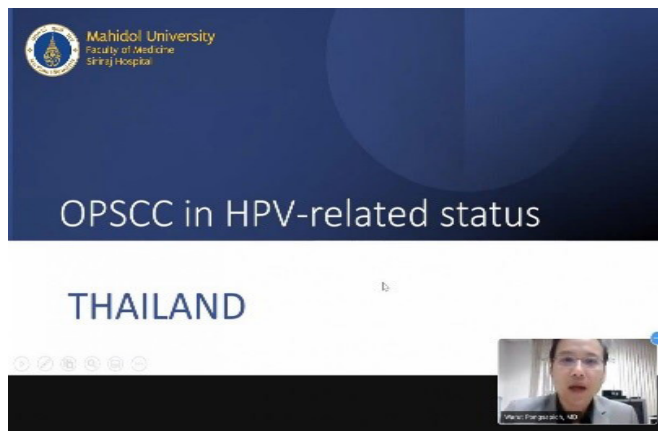
Prof. Piyaorn Apisarntharak from Department of Radiology, Faculty of Medicine Siriraj Hospital, Mahidol University, attended and delivered an oral presentation on the topic “Mucinous Colorectal Adenocarcinoma: Is CT Good Enough for Preoperative Prediction”? at the “19th Asian Oceanian Congress of Radiology (AOCC)”. This meeting was held as a virtual platform in Kuala Lumpur, Malaysia, between July 1st - 4th, 2021.



Siriraj Attended AAO-HNSF Virtual Regional Roundtable



virtual **REGIONAL
ROUNDTABLE**



On July 10th, 2021, **Asst. Prof. Warut Pongsapich** from Department of Otorhinolaryngology, Faculty of Medicine Siriraj Hospital was invited to attend the zoom webinar “**AAO-HNSF Asia-Pacific Regional Roundtable on HPV Related Oropharyngeal Cancer, Current Status in the Asia Pacific**” hosted by The Australian Society of Otolaryngology, Head & Neck Surgery (ASOHSN). On this webinar, Asst. Prof. Warut has joined the Panel Discussion: “*The Real World and Current Need in the Asia Pacific Region*” along with the renowned experts across the Asia-Pacific region!



Robotic Surgery in Urology: Hands-on Wet Lab Training



On August 24th, 2021, **Assoc. Prof. Sittiporn Srinualnad**, Chief of the Division of Urological Surgery, Department of Surgery, Faculty of Medicine Siriraj Hospital, presided and conducted a hands-on workshop for surgeons and healthcare professionals “**Robotic Surgery in Urology: Hands-on Wet Lab Training**” at the Training Center, Faculty of Veterinary Science, Mahidol University. On this occasion, Assoc. Prof. Sittiporn has demonstrated various robotic surgery techniques such as Intra-corporeal ileal conduit/neobladder (Sureform robotic staplers), Partial nephrectomy (Renorrhaphy technique), Robotic Radical Nephrectomy, and Heterotopic Kidney transplantation (vascular anastomosis and ureter reimplantation) for the participants (4 surgeons, a surgical nurse, a registered nurse, a veterinary anesthesiologist, and a medical technologist).



Siriraj Open Online Lecture Courses on “Global Classroom”



The ASEAN Medical Schools Network (AMSN) has operated its online lecture series called “Global Classroom” through the website of CenMED Scholar – A Learning Content Management System empowered by the Centre of Medical Education, Yong Loo Lin School of Medicine, National University of Singapore.

The Faculty of Medicine Siriraj Hospital, Mahidol University, as a founding member of the ASEAN Medical Schools Network, also joined this “Global Classroom” program by providing 14 online classes through CenMED Scholar – A Learning Content Management System (more classes will be available soon). If anyone interest to take these online classes, please follow our instructions as follows:

How to enroll in CenMED Scholar Courses?

All courses offered by CenMED will have to be registered online.

If you are a new user, you will have to register for a new account.

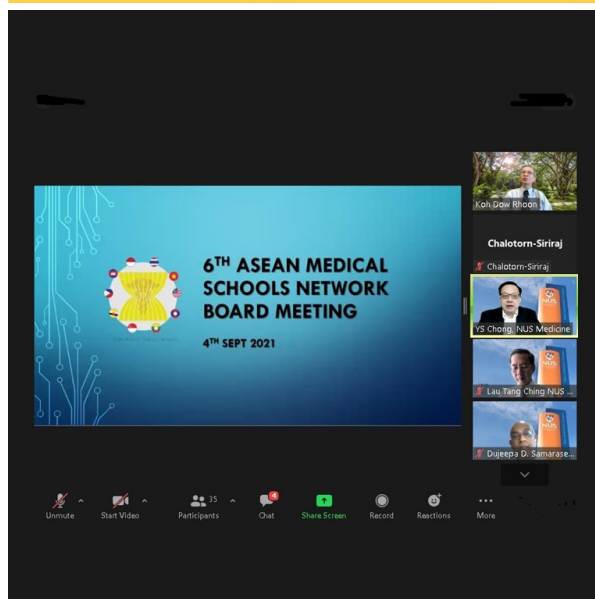
If you have an existing account, you may log in to this system and choose your desired courses.

After you successfully finished the registration and login, please select “Global Classroom Initiative” and select “Faculty of Medicine Siriraj Hospital, Mahidol University” on the Courses menu. Please note that each Faculty of Medicine Siriraj Hospital’s class needs an individual “access code” before starting your learning; please e-mail to irsiriraj@gmail.com for your access code.

* Important: Each “access code” only authorizes for a “single account” to attend one “specific class”! If you need to attend another “class”, you need another “access code”!



10th ASEAN Medical Deans' Summit 2021



Between September 3rd - 4th, 2021, the **International University, Cambodia** hosted the “10th ASEAN Medical Deans' Summit” via the zoom platform due to the heavy pandemic of the COVID-19. The details of the Summit are shown as follows:

On September 3rd, 2021, the **ASEAN Medical Deans' Summit Day 1** start with an opening remark by the President of ASEAN Medical School Network, **Prof. Chong Yap Seng**, Dean of NUS Yong Loo Lin School of Medicine, Singapore, and the discussions on 4 themes: “Protection of IP for Online Materials”, “Social Media Navigation/Fake News from Educators' Perspective”, “Volunteerism Practices Being Adapted in Response to Pandemic”, and “Student Mobility”.

On September 4th, 2021, start with the **China - ASEAN Medical Deans' Summit Day 2**, the discussions are on the themes: “Continual Training of Medical Students in the Midst of COVID Measures”, “COVID Research That Each Institution Has Developed”.

The next session is the **ASEAN Medical Schools Network Board Meeting**, the discussions continued on 7 agendas as follows:

Agenda 1: ASEAN Medical School Network Webinar Series

Agenda 2: Global Classroom Initiative

Agenda 3: ASEAN Medical School Network Research Collaborative Funds Initiative

Agenda 4: ASEAN Medical Deans' Summit 2022

Agenda 5: Nomination of the ASEAN Medical School Network President-Elect

Agenda 6: New Member Nomination

Agenda 7: ASEAN Medical Students Dialogue Brainstorming: Benefit and challenges of an ASEAN Medical School Network Student Chapter:

- Brainstorming: The Future of Student Collaboration in ASEAN
- Present to ASEAN Medical School Network Board Meeting



Mark Your Calendar



CHINA-ASEAN
2021中国—东盟医学健康共同体发展会议
CHINA - ASEAN Conference on Partnership in Medicine and Health

2021年10月21-22日 中国·北京 Oct. 21-22, 2021, Beijing, China

主办单位：中国—东盟中心
北京大学医学部
泰国玛希隆大学诗里拉医院 / 医学院

Hosts: ASEAN-China Centre
Peking University Health Science Center
Faculty of Medicine Siriraj Hospital, Mahidol University



Hosts:
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