

Chula

RESEARCH MAGAZINE

Biannual



July 2015

GLOBAL GAME CHANGERS

FOLLOW MDCU'S
JOURNEY BEYOND
MEDICAL & RESEARCH
FRONTIERS

INSIDE THIS ISSUE

A ROAD WELL TRAVELLED

THE FIRST MOVERS

THE NEURO HUB

AND MUCH MORE

Partners for Life



Faculty of Medicine
Chulalongkorn University

King Chulalongkorn
Memorial Hospital

A collaboration with royal insight...

Making quality healthcare
a reality for everyone

Welcome

Message from the Dean

At MDCU,

we'd like to think that in research, everything is possible. Now, with our many advances in both medical and biomedical fields, it is no wonder why MDCU stands apart from the rest.

After more than 50 years of excellence in medicine and research, MDCU is always ready and willing to tackle any healthcare related issues.

Our outlook for the rest of the year is optimistic and as we continue to showcase our unlimited research capacity, we invite you to join our efforts in discovering the unknown.



Sophon Napathorn, M.D.
Dean
Faculty of Medicine
Chulalongkorn University



Editor-In-Chief



On a recent trip abroad, I was impressed with the great attractions that each destination had to offer. Each country that I visited was very proud to present its greatest accomplishments.

To follow in this world-wide tradition, I too, would like to present our University's greatest accomplishments to all our readers. Our global research "game changers" issue offers an exclusive look into the lives and works of some of our own researchers that have truly made a significant impact on the world. From our foremost experts on cervical cancer, ischemic stroke, virology and immunology, our MDCU Research initiatives constantly push the envelope in innovation.

We are very proud of our game changers and trust that the world will benefit from all of their revolutionary findings.

Enjoy,

A handwritten signature in black ink, which appears to read "Anan". The signature is fluid and cursive.

Prof. Anan Srikiatkhachorn, M.D.
Associate Dean for Research Affairs
Faculty of Medicine
Chulalongkorn University

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research
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Many new advances and scores of applications for research are discovered daily at the world renowned

CHULA Medical Research Center
Bangkok, Thailand

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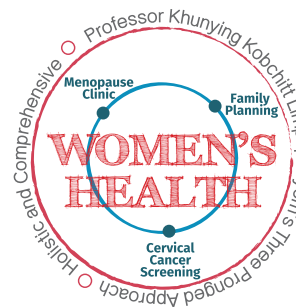
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A ROAD WELL TRAVELLED
Professor Emeritus Khunying
Kobchitt Limpaphayom, M.D.



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Twenty-two years ago in 1993, Professor of Obstetrics and Gynecology, Khunying Kobchitt Limpaphayom, M.D. decided to create Thailand's very first menopause clinic. The idea came to her as a dedicated champion for women and women's health not just in Thailand but all around the world.

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KNOWLEDGE IS POWER
Professor Yong Poovorawan, M.D.



Promising and optimistic, results of Professor Poovorawan's research has led to more medical advances in other emerging viral diseases.



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THE FIRST MOVERS

Pioneers in global collaborations, MDCU's first mover positioning in all aspects of healthcare on both domestic and international fronts has certainly paid off as Professor Pedro Ramirez and his team from the world renowned cancer powerhouse recently visited MDCU to solidify the strong bonds between the two institutions.

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THE NEURO HUB

Professor Nijasri Suwanwela, M.D.

As the complexity of modern medicine is often influenced by many talents, the impact of one individual, Professor Nijasri Suwanwela, Head of Chulalongkorn's Neurology Division and Director of the Chulalongkorn Stroke Center, is making momentous strides to transform the conventional treatment environment for ischemic stroke into an innovative, globalized medical presence all throughout the world.

ON THE EDGE OF DISCOVERY

Professor Nattiya Hirankarn, M.D., Ph.D.

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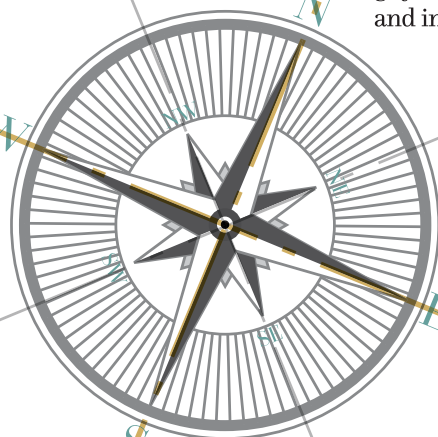
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CONGRATULATIONS

National Research Council of Thailand Outstanding Researchers of the Year 2015

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ONGRA
TULA
TIONS



CURIOSITY
FINDS
THE CURE



Chulalongkorn Medical Research Center

WHERE IT ALL BEGINS





A Road Well Travelled

For over 5 decades, Professor Emeritus Khunying Kobchitt Limpaphayom, M.D. has been paving the way towards a better tomorrow for women everywhere.





Professor Emeritus Khunying Kobchitt Limpaphayom, M.D. received royal appointment as a Khunying by H.M. King Bhumibol Adulyadej. An honor reserved for only the most deserving through accomplishments to the betterment of the Kingdom of Thailand and its citizens.

“A legend in her own time.”

-Amy Kleine
JHPIEGO Program Manager

Twenty-two years ago in 1993, Professor of Obstetrics and Gynecology, Khunying Kobchitt Limpaphayom, M.D. decided to create Thailand’s very first menopause clinic. The idea came to her as a dedicated champion for women and women’s health not just in Thailand but all around the world. As she noticed increasing trends in aging populations, Professor Limpaphayom has been at the forefront in providing adequate treatment and guidance for all women in need.

With a strong background in reproductive health, Professor Limpaphayom’s early years focused greatly on family planning, sterilization and reversal sterilization in developing countries. Working alongside her American counterparts from Johns Hopkins University in Reproductive Health and under the tutelage of Professor Theodore M. King, M.D., Ph.D., and his visionary JHPIEGO program in Baltimore, Maryland, Professor Limpaphayom honed her skills by utilizing new techniques and instruments she acquired to help Thai patients as

well as to help develop physicians in Thailand. Her goal was to address increasingly high population growth rates and with her expertise, she was able to develop scores of community based programs to help curb and control Thailand’s fast growing population issues.

A Champion of Women’s Health

Throughout her extremely busy career, Professor Limpaphayom has also taken a stand against cervical cancer. Although cervical cancer deaths have drastically decreased among western countries, it still claims the lives of so many women in developing ones. “No woman should die of cervical cancer”, says Professor Limpaphayom. It is a mantra that rings true as cervical cancer, if detected early, can be cured. The charismatic and persistent professor has worked to develop easy and cost effective screening methods. Her valiant effort to fight this silent killer knows no bounds.



A rural call-to-action:
All women must know about cervical cancer

Expanding beyond her borders in South East Asia, Professor Limpaphayom has made great efforts to collaborate with Uganda and other African nations that also share a high prevalence of cervical cancer. Teaming up with strategic partners on both healthcare and governmental levels, easy and low-cost screening solutions were tried and tested. “It is practical but effective”, Professor Limpaphayom mentions as she shares that the secret for success lies with everyday household items that can be found in every kitchen cupboard or pantry. Vinegar, believe it or not, is a great screening technique that can easily and effectively detect cervical cancer. Those who test positive for precancerous cervical lesions can then be treated earlier with cryotherapy. In short, Professor Limpaphayom’s vision to help women become more vigilant and aware of their health has become a reality.

Professor Limpaphayom’s ability to identify gaps in the healthcare system has also led to many innovative training initiatives. To address the shortage of skilled and knowledgeable physicians, Professor Limpaphayom has ingeniously developed training programs for nurses and other frontline healthcare professionals. “There was a gap and we needed to fill it”, she says. Training nurses to carry out simple operations including removing cysts, inserting IUDs and cryotherapy has helped alleviate the pressure put upon physicians, especially in extremely rural or sub-district hospitals where there are no physicians present at all. This proactive training has given nurses the knowledge and skills needed to help support the health community nationwide. Professor Limpaphayom explains that, “Since physicians are constantly overwhelmed with heavy workloads, it is much better to have nurses that know how to screen for





Touching base on the homefront:
Educating young women of Northern Thailand

cervical cancer and manage patients on a fundamental level.”

And as knowledge can bring people together and raises quality life for all, principle education programs that stress the importance of Equity and Access to Reproductive health are giving the community accurate information about lesser known women’s issues. Creating awareness and setting things straight have certainly become priority for Professor Limpaphayom and her team. “The right education for community leaders, nurses, teachers, volunteers, mothers and daughters can open communication” which Professor Limpaphayom emphasizes is necessary to promote better women’s health. “Women are the core of every family” therefore, it is necessary to be able to discuss the issues

that women and families face in order to reduce diseases that have once plagued women all around the world.

Through open communication and enhanced information pathways, people can receive more accurate and helpful information to effectively deal with today’s health concerns. This is why Professor Limpaphayom has also dedicated much time and effort in initiating country-wide menopause clinics. These clinics promote exercise and other vital health tips to create awareness and offer women at the end of reproductive age adequate knowledge and care. “We are fighting for a cause”, says Professor Limpaphayom and with all of her wonderful contributions to women’s health on a global level, everyone is behind her every step of the way.



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The FIRST MOVERS



Professor Limpaphayom:
creating awareness at MD
Anderson Cancer Center

Professor Emerita Khunying Kobchitt Limpaphayom, M.D. will again return to center stage this year at the Global Academic Program (GAP) Conference at MDCU's sister institution, MD Anderson Cancer Center, University of Texas, Houston, Texas, to share her latest insight and advances in the fight against cervical cancer along with other health related issues that concern women.

Pioneers in global collaborations, MDCU's first mover positioning in all aspects of healthcare on both domestic and international fronts has certainly paid off as Professor Pedro Ramirez and his team from the world renowned cancer powerhouse recently visited MDCU to

solidify the strong bonds between the two institutions.

Professor Limpaphayom is extremely proud of this bold collaboration and says, "Cervical cancer is one disease that connects us all." This is exactly why MDCU teamed up with MD Anderson. "Together, we have the opportunity to share our work i.e. insights regarding screening, treatment and clinical trials across our geographical borders." says Professor Limpaphayom.

Without a doubt, the dedicated professor and her powerful network of experts are bravely standing up to cervical cancer for the betterment of all women.



MDCU Deans at MD Anderson
Cancer Center

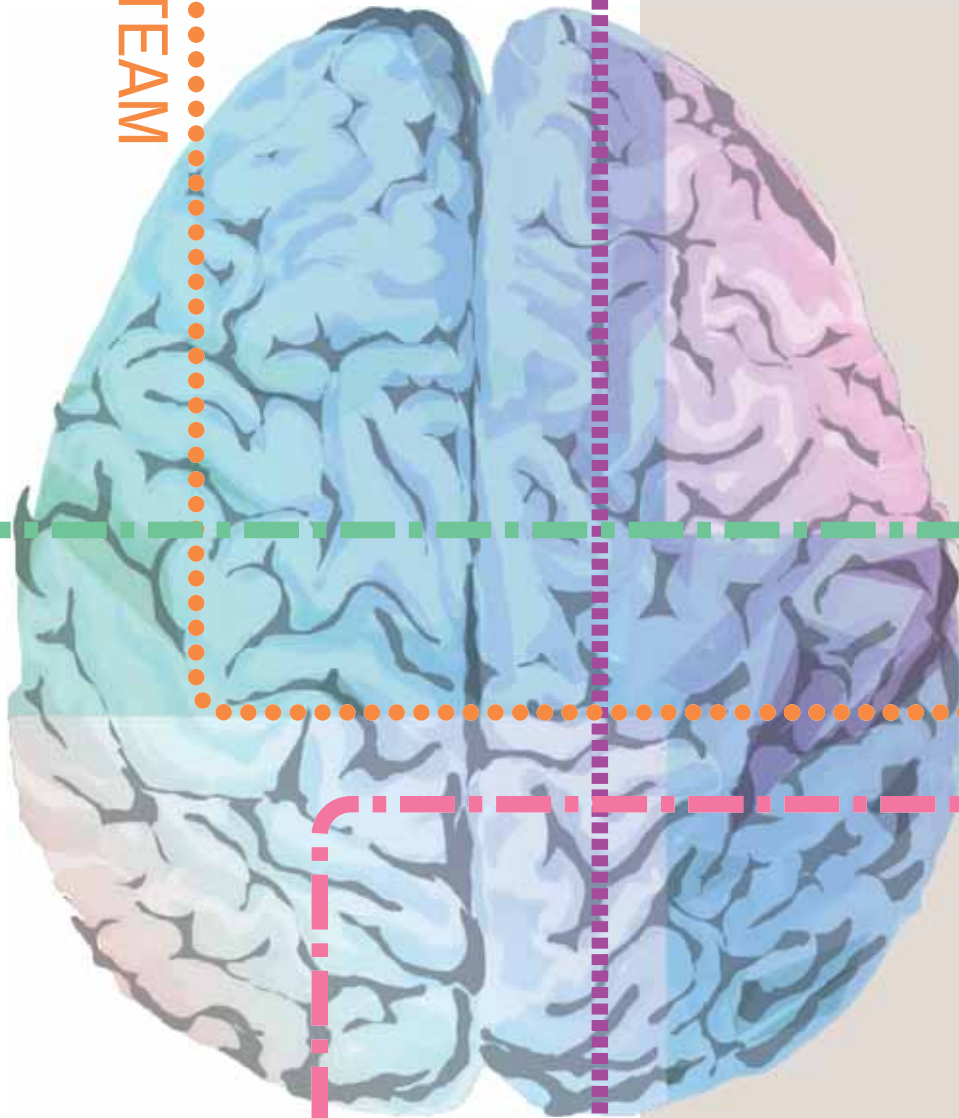


THE UNIVERSITY OF TEXAS

MD Anderson ~~Cancer Center~~



TEAM



LOCATION

THE NEUROLOGIST
who helped turn her stroke unit
in Thailand into global hub for
knowledge sharing and a com-
prehensive treatment.

TECHNOLOGY

The Neuro HUB

**Professor
Nijasri Suwanwela, M.D.**



As the complexity of modern medicine is often influenced by many talents, the impact of one individual, Professor Nijasri Suwanwela, Head of Chulalongkorn's Neurology Division and Director of the Chulalongkorn Stroke Center, is making momentous strides to transform the conventional treatment environment for ischemic stroke into an innovative, globalized medical presence all throughout the world.

Now as she plans to develop one of the most comprehensive stroke units in Asia, Professor Suwanwela is investing a great deal of time to also develop the people involved. From neurologists, stroke specialists, neurosurgeons, emergency physicians, psychologists, physiologists, pharmacists, nurses and physical therapists, her vision to centralize and align the treatment process from beginning to end will indeed equip her with a unique advan-

TREATMENT

tage. "We pride ourselves on each part of our team. We have specialists to contribute to treatment of both physical and mental aspects of ischemic strokes", says Professor Suwanwela. She further explains that this conscious collaborative effort will effectively help patients as well as their families. "In Thailand, we do our best to reduce the length of hospital stay for our patients. We can do this by first providing proper treatment and then training the family and other outside volunteers to pick up where the hospital leaves off."



Professor Suwanwela's stroke team

CHULA STROKE UNIT

A large part of the professor's time is divided between treatment and educating the population about ischemic strokes. Often debunking folklore and other myths regarding the ailment, Professor Suwanwela has made it clear that the community must know about their right to better care. This means that her many clinical researches that have proven the advantages of early treatment of acute ischemic stroke within the golden period of 4.5 hours helps in optimal management. She has therefore, initiated a Stroke Fast Track program at the King Chulalongkorn Memorial Hospital since 1998. And for well over two decades, Professor Suwanwela has been exploring and expanding the scope of treatment for her stroke patients. With today's advanced

recanalization technique called mechanical thrombectomy, patients are exposed to a wider spectrum of treatment options.

Her World Stroke Day campaign has been a sounding off point where she can relay all important information about strokes directly to the public. Professor Suwanwela explains, "When people are aware of their stroke symptoms and they have knowledge about the 3-4.5 hour window to administer Thrombolysis (TPA), patients would indeed come to hospital for treatment earlier. Unfortunately, the sad reality is that many do not know this and therefore forfeit their right to receiving best treatment options and the many benefits of early treatment."

PROFESSOR SUWANWELA

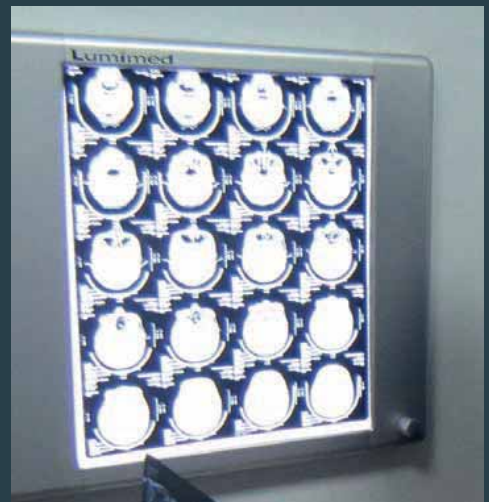
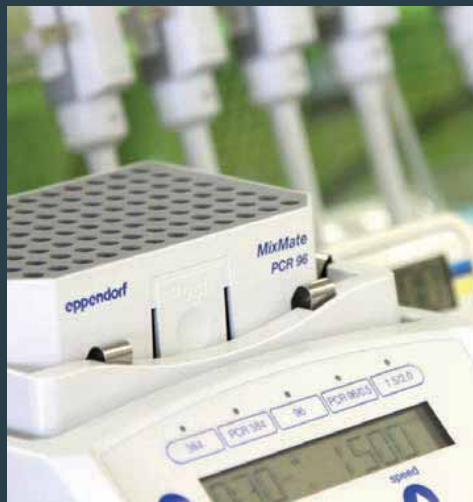
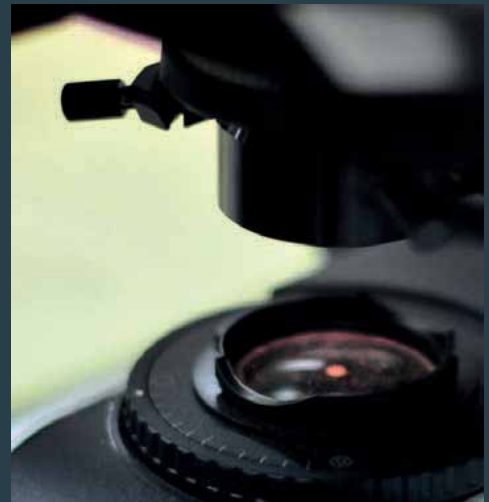
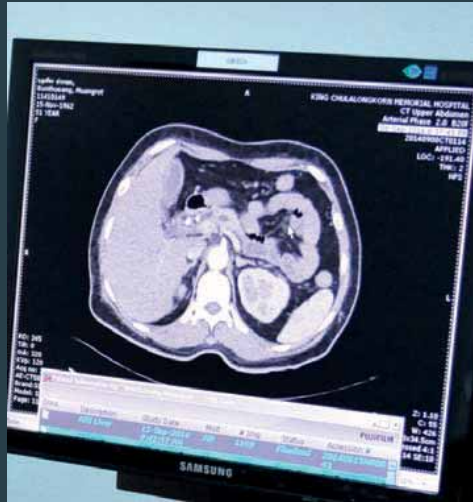
was the first to use TPA treatment in Thailand 16 years ago. This was also the first reported case in Asia.

The stroke climate in Thailand is much improved now after her many initiatives have become standard treatment protocol. In addition to her work with the community, her other clinical research milestones include strong findings on the genetic risk factors for ischemic stroke and the advantages of administering IV fluid for Thai ischemic stroke patients. Her state-of-the-art Telestroke System has also helped many patients with acute stroke. This step to integrate technology has eliminated boundaries and improves the time in which patients are evaluated by their physicians. Professor Suwanwela's dedication has established herself and her unit as the hub in an interconnected network of multi-centered research in the country. Professor Suwanwela says "We've got a specialized team, space and protocol, courses for nurses and volunteers." It is this capacity, wide and deep, which gives the Stroke Unit at King Chulalongkorn Hospital purpose in serving the community.



Always insightful: Professor Suwanwela shares her views on today's stroke issues





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with early detection

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SEQUENCING
THE FUTURE

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CHULA MEDICAL RESEARCH CENTER

FACULTY OF MEDICINE

CHULALONGKORN UNIVERSITY
BANGKOK, THAILAND

CAUTION



**ADMITTANCE TO AUTHORIZED
PERSONNEL ONLY**

ALWAYS READY



KNOWLEDGE IS POWER

PROFESSOR YONG POOVORAWAN, M.D.

Professor of Pediatrics and Head of the Center of Excellence in Clinical Virology
at the Faculty of Medicine, Chulalongkorn University, Bangkok, Thailand.

TURNING RESEARCH INTO KNOWLEDGE FOR THE MASSES



ONE OF THAILAND'S MOST FAMILIAR NAMES IN MEDICINE, PROFESSOR YONG POOVORAWAN M.D., IS UTILIZING ALL OF HIS ENERGY AND RESOURCES TO BRING HELP TREAT THAILAND'S AILING POPULATION.

Most famous for his work with viral Hepatitis B vertical transmission from infected pregnant mothers to their unborn children, Professor Poovorawan has patiently studied and successfully decreased this once high incidence rate. "We wanted to cut the cycle and prevent transmission of this burdening disease," he says.

“

PROFESSOR POOVORAWAN'S RESEARCH HAS LED TO MORE MEDICAL ADVANCES IN OTHER EMERGING VIRAL DISEASES INCLUDING HAND-FOOT-MOUTH DISEASE, PINK EYE AND THE AVIAN FLU H5N1.

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Through research and development of a Hepatitis B vaccine, Professor Poovorawan has found that if given to newborns, the vaccine alone can be more than enough to prevent and stop the cycle of viral Hepatitis B infection in the young. His findings were published in the Journal of the American Medical Association (JAMA) in 1989 and led to a revolutionary healthcare movement that has forever changed the face of mass policies in Thailand. In 1992, viral Hepatitis B vaccines were included in the universal vaccine list issued by the Thai Center for Disease Control (TCDC).

For over 22 years now, his push for prevention has paid off. In a long term study that followed the first newborns that were vaccinated with the Hepatitis B vaccine, carrier rates in Thailand are now less than 1% among children under the age of 22.

Promising and optimistic, results of Professor Poovorawan's research has led to more medical advances in other emerging viral diseases including Hand-foot-mouth disease, pink eye and the Avian Flu H5N1. As he heads the Center of Excellence in Virology at Thailand's premier research institution at Chulalongkorn University, Professor Poovorawan firmly believes that, "Impacts of health cannot be measured with a dollar amount. We cannot calculate its benefits because people's health is far more valuable than we can ever conceptualize".

Therefore, Professor Poovorawan and his team of talented researchers work with the ethos of utilizing every bit of knowledge gained from breaking through conventional methods of thinking and research to make powerful strides towards a better tomorrow.

PROFESSOR YONG POOVORAWAN, M.D. AND HIS TEAM





Professor Roongroj Bhidayasiri, M.D., FRCP, FRCPI.
MDCU's world-renowned specialist in movement disorders



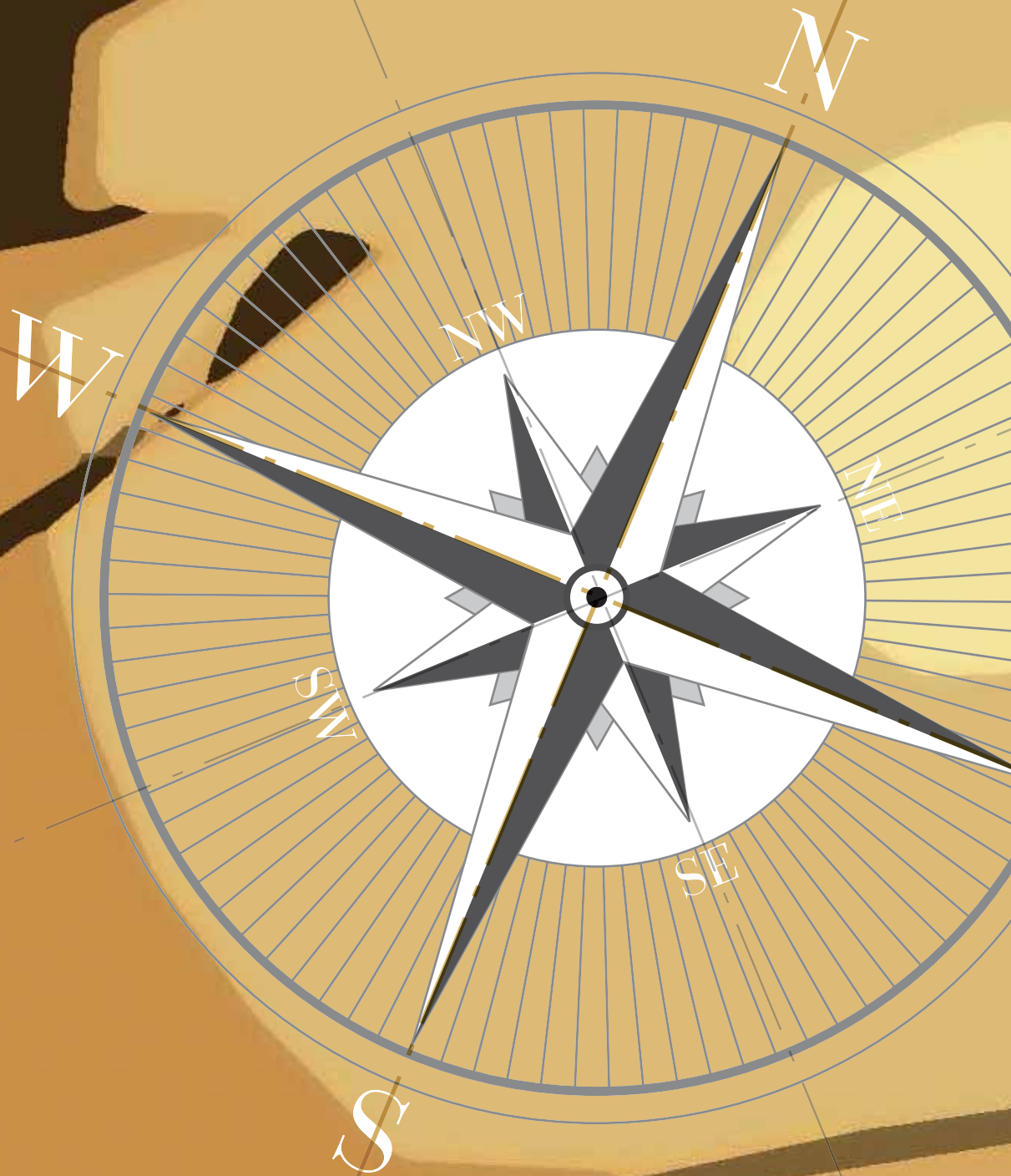
Professor Narisa Futrakul, M.D., Ph.D.
MDCU's world-renowned expert in kidney diseases

CONGRA TULA TIONS!

2015
Outstanding Researcher in Health Sciences
from the National Research Council of Thailand

On The Edge of Discovery

Professor Nattiya Hirankarn, M.D., Ph.D.





Despite her busy and hectic schedule, Professor Nattiya Hirankarn, M.D., Ph.D., finds a few moments to talk about her latest works and ongoing projects.

As the Head of the Center of Excellence in Immunology and Immune-mediated diseases, she has spearheaded the effort to uncover the detrimental mechanisms of Lupus and other auto-immune diseases.

Sranya Phaisawang: You're a talented medical doctor but what drew you to work in immunology and with immune-mediated diseases?

Nattiya Hirankarn: I was drawn to the evolution of human beings. It's cool. I am amazed of our body's ability to cure its own infections and was drawn to find out more about our own human potential. I'd like to think about the immune system as a group of superheroes coming together to fight off the "bad guys" or in our case, diseases and infections.

SP: That's so true...I never really thought about it that way.

NH: Yes, it's a fun way to look at my job. You see, my work makes up one part of the larger picture. Here at Chulalongkorn University, we believe in collaborations not only with our own units but cross faculty as well. I am motivated and encourage many different people in different areas of healthcare to work together. Especially here at the Center of Excellence, apart from working on Lupus nephritis, we also work closely with Professor Jongkonnee Wongpiyabovorn to seek answers for psoriasis

and other autoimmune diseases of the skin and Dr.Asada Leelahavanichkul on biomarkers in sepsis and transplantation. We're shifting interest to do more research in microbiology all the way down to the role of genes and discovering biomarkers in these types of diseases.

SP: Biomarkers are a hot area in the world of research right now. What's the key to utilizing these new discoveries?

NH: Absolutely, we've discovered some biomarkers that actually help save time and money for our patients. You see, when we have identified a biomarker, let's say, for a nephrologic disorder, we don't have to perform a kidney biopsy on our patients. We can determine whether or not our patients need aggressive treatment early on to ensure the positive outcomes for them. With this knowledge, researchers everywhere can provide more specific and customized treatment that best fits with each patient's needs. Right now, our leader in this area, Professor Yingyos Avihingsanon, has got a very strong initiative to work with other





Success is a team effort:
Professor Nattiya's team



departments, researchers and organizations to continue discovering new breakthroughs. We're definitely on the edge of something monumental.

SP: That's great to know that research is helping out patients in ways that we've never really imagined before. So, how many ongoing collaborations do you have at the moment?

NH: Currently, we're working with various Research units and Centers of Excellences at the University as well as collaborating internationally. We are working with leading researchers to change our medical environment and lessen the burden that diseases cause for the Thai and international population. I've got to look cross faculty collaborations to help fill the gaps that single-department research may encounter.

SP: When you mention cross faculty, how far does your scope go?

NH: Well, I'm definitely looking and paying close attention to basic and molecular sciences to help us understand more about our own research for Lupus and other kidney disorders. For example, a young researcher on our team, Dr.Rangsima Reantragoon is studying the novel immune cells called "MAIT cells" to determine its primitive immune responses not just for the disease itself but also to get a better picture of basic and fundamental discoveries in immunology.

I'm currently working cross faculty with Professor Apiwat Mutirangura, head of the Center of Excellence in Molecular Genetics and Human Diseases. He's got a really different perspective on things. He's constantly pushing our research into uncharted territories especially in the field of epigenetics and autoimmune diseases. He's always talking about paradigm jumps and is always looking at how research can be approached with different perspectives to gain more insight; which is something that all researchers, including myself, can definitely do more of.

SP: Yes, understanding the basics with a touch of different perspectives is very important, especially for younger researchers.

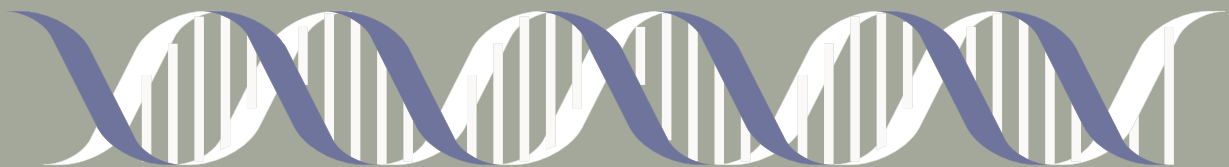
NH: Absolutely, as I mentioned, our concept is for overall collaboration. In our unit alone, we've been getting more and more researchers that are younger in age. This is a very good sign because our medical students can be integrated in the research process earlier than usual. The holistic approach is something that is needed especially in this day in age of research.



Research Excellence



This research triad is proof of our commitment to medical and scientific research excellence. From cancer, genetics, degenerative diseases, infectious diseases, tropical diseases to translational and public health research, our investigative capacity knows no bounds.



LIVING LEGEND



Professor Emeritus Charas Suwanwela, M.D.

A ground breaker in the world of Thai medicine,
this legendary neurosurgeon believes in
Thailand's research potential

“ **T**he overall medical environment has changed quite a lot and has proven that time is not linear. Changes in the past were much slower but now changes happen very quickly. We have progressed in science, technology, innovations and new methods and expanded on our medical services. Thailand can boast advancement and the spreading of effective services for our patients. With more primary health-care providers and volunteers on the peripheral side of things, knowledge, new technology and development can be useful to people all over the country, especially in rural areas. I see that research is an integral part of today's medical and health-care process. We need research. Ongoing essential national research initiatives are essential to drive our country forward.

Professor Emeritus Charas Suwanwela, M.D.

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