Official Opening of **Duke-NUS Graduate Medical School** strengthens Singapore's vision for biomedical sciences

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It was also a time to celebrate the achievements which Duke-NUS has reached ahead of schedule, such as the launch of the innovative TeamLEAD (Learn, Engage And Develop) approach to medical education and the recruitment of renowned faculty members from Duke Durham, local hospitals and national institutes. Distinguished researchers and outstanding students from Singapore and beyond have also been drawn to the school to contribute to its development and success. With the establishment of five signature research programs, Duke-NUS has proven to be a magnet for outstanding scientists, attracting respected international scientists such as Patrick Casey, John Rush, Duane Gubler, Shirish Shenolikar, Dale Purves, David Virshup and David Matchar to head key positions within the faculty.

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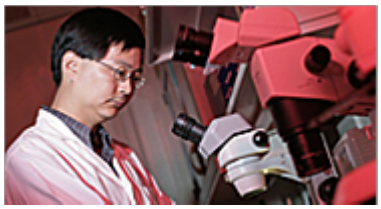

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HIGHLIGHTS

Duke-NUS' White Coat Ceremony (Class of 2013)

The White Coat Ceremony marks the start of an exciting journey for the new class of medical students. It is a remarkable personal milestone that signifies a new medical student´s transition from a general member of the community into one who has accepted the calling of becoming a practitioner of medicine.

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VITAL SCIENCE

Editor: **David Brill**
Production and copy-editing: **Adeline Sim**
Vital Science is a quarterly publication produced by the Office of Communications and Development.

For this issue, the banner features the main entrance to the Khoo Teck Puat Building, home of Duke-NUS Graduate School, which was officially opened by Prime Minister Lee Hsien Loong on September 28, 2009. The 11-storey building occupies 26,351m^2 and contains a genomics facility, a lecture theatre, a library, a high-performance computing cluster and six floors of laboratories.

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DUKE NUS GRADUATE MEDICAL SCHOOL SINGAPORE

VITAL SCIENCE

November 2009

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It was also a time to celebrate the achievements which Duke-NUS has reached ahead of schedule, such as the launch of the innovative TeamLEAD (Learn, Engage And Develop) approach to medical education and the recruitment of renowned faculty members from Duke Durham, local hospitals and national institutes. Distinguished researchers and outstanding students from Singapore and beyond have also been drawn to the school to contribute to its development and success. With the establishment of five signature research programs, Duke-NUS has proven to be a magnet for outstanding scientists, attracting respected international scientists such as Patrick Casey, John Rush, Duane Gubler, Shirish Shenolikar, Dale Purves, David Virshup and David Matchar to head key positions within the faculty.

The location of the new Duke-NUS campus allows collaboration between researchers at Duke-NUS and clinicians and scientists at the nearby SingHealth campus, who form the core of the clinical faculty at the medical school. This synergy has, in turn, catalyzed clinical and translational medical research, and optimized the use of resources in pathology, bench research and medical education.

The Duke-NUS campus comprises research laboratories, teaching and education facilities, a library and a research centre for genomic study and computational biology. The campus is named after the late philanthropist Tan Sri Khoo Teck Puat, whose estate in January 2007 donated S$80 million in his memory to further biomedical research at Duke-NUS.

With the recent intake of the third batch of students, Duke-NUS now has a total of 130 students from 17 countries. All hail from different academic backgrounds, ranging from engineering to anthropology. The school's inaugural class is due to graduate in 2011 with a joint MD degree from Duke University and NUS – the first such degree in the history of both universities. Students receive intensive training in both medicine and research, covering basic science in 1 year instead of the usual 2 years, and have an entire year devoted to independent research.

"To best serve patients, doctors need good communications skills," said Prime Minister Lee, in his speech at the opening ceremony. "This is all the more critical as patients today are more knowledgeable and have higher expectations. Doctors must be able to establish rapport with patients and their families, explain clearly different treatment options and risks, and help them to make informed decisions for themselves."

The unique approach to medical education training at Duke-NUS sees students taught in small teams, which promotes the development of inter-personal and communication skills. Being exposed to clinical training a year earlier also helps the students adjust to the wards more smoothly as they take on the responsibility of caring for patients.

With full confidence from the Singapore government and leaders in medicine, education and science, Duke-NUS is set to leave a large footprint on Singapore's biomedical landscape. It will also continue to build partnerships with NUS, Duke and A*STAR's research institutes – organizations which are among the world's best and which will help to ensure a bright future for Duke-NUS medical School.

VIEW SLIDESHOW

Quotes

> Duke-NUS exemplifies the spirit of collaboration and endeavour that is geared towards success. It celebrates the commitment of the Singapore government and like-minded partners, who see the value of the strategic partnership in driving the growth of Singapore's biomedical sciences, in fulfilling the country's healthcare needs, and in building an excellent academic medicine hub on Outram Campus. Despite its short history, Duke-NUS has proven to be worthy of the confidence the stakeholders have in us. Our faculty, staff, students and I are proud to be part of this milestone initiative.

------ *Professor Ranga Krishnan, Dean, Duke-NUS Graduate Medical School Singapore*

> The Duke-NUS Graduate Medical School represents a unique partnership between Duke University and NUS that goes far beyond the regular model of collaboration between universities. It exemplifies how two leading universities with a global vision, can bring complementary strengths and great dynamism to a common focus.

------ *Professor Tan Chorh Chuan, President, National University of Singapore; Deputy Chairman, Agency for Science, Technology & Research, Singapore*

> My late father had devoted himself to philanthropic work and championed community values that centred on education, healthcare and medical research. He believed passionately that advances in these areas will make a real and substantial difference to the lives of people in Singapore and around the world.
>
> The trustees hold the belief that with the establishment of quality research and educational facilities such as the one here in Duke-NUS, cutting-edge medical education at the Khoo Teck Puat Advanced Surgery Training Centre and the anticipated clinical care programmes at the new Khoo Teck Puat Hospital, Singapore's healthcare landscape will improve and bring benefits to us.

------ *Ms. Mavis Khoo, Trustee, The Estate of Tan Sri Khoo Teck Puat*

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Final checks are carried out before the official opening of Duke-NUS Graduate Medical School.

Guests begin to arrive for the Official Opening, including Dr. Ng Eng Hen, Minister for Education, who is greeted by Dr. John Rush, Vice Dean of Clinical Sciences (left).

Guest of Honor Prime Minister Lee Hsien Loong is greeted by the welcoming party, before heading up the stairs of the new medical school alongside Mr. Tony Chew, Chairman of the Duke-NUS Governing Board (right).

Over 400 people turned out to celebrate this historic milestone in the history of Duke-NUS.

Prime Minister Lee is presented with the last piece of the puzzle to complete the globe, which symbolizes the official opening of Duke-NUS.


A bust of the late Tan Sri Khoo Teck Puat is unveiled by Prime Minister Lee and Ms. Mavis Khoo, trustee of the Tan Sri Khoo Teck Puat estate, to officially inaugurate the new Khoo Teck Puat building. Duke-NUS is extremely grateful for the generosity of the Tan Sri Khoo Teck Puat Estate in supporting the school's biomedical research.


The special guided tour saw Prime Minister Lee meet Duke-NUS medical students in the amphitheatre and learn more about the school's education curriculum. Dr. Robert Kamei, Vice Dean of Education, shows Prime Minister Lee how students are trained for clinical practice using dummy simulations (right).


Dr. Patrick Casey, Senior Vice Dean for Research, shares insights on the school's research facilities with Prime Minister Lee as they proceed to the Cancer & Stem Cell Biology Lab, where Prime Minister Lee enjoyed a candid moment with Professor David Virshup and Tina Tan, a third-year Duke-NUS medical student.

Dignitaries and guests catching up at the dinner reception which followed the official opening.

Prime Minister Lee chats with (from left to right) Mr. Tony Chew, Chairman of the Duke-NUS Governing Board, Dr. Sanders Williams, Senior Vice Chancellor for Academic Affairs at Duke University, and Dr. Victor Dzau, Chancellor for Health Affairs at Duke University. Duke-NUS medical students also had the chance to meet and engage with Prime Minister Lee at the dinner reception (right).

VIPs, faculty, students, stakeholders and Dr. Sanders Williams from Duke University, US, gather to toast the end of a memorable evening which represents a significant event in the young life of Duke-NUS.

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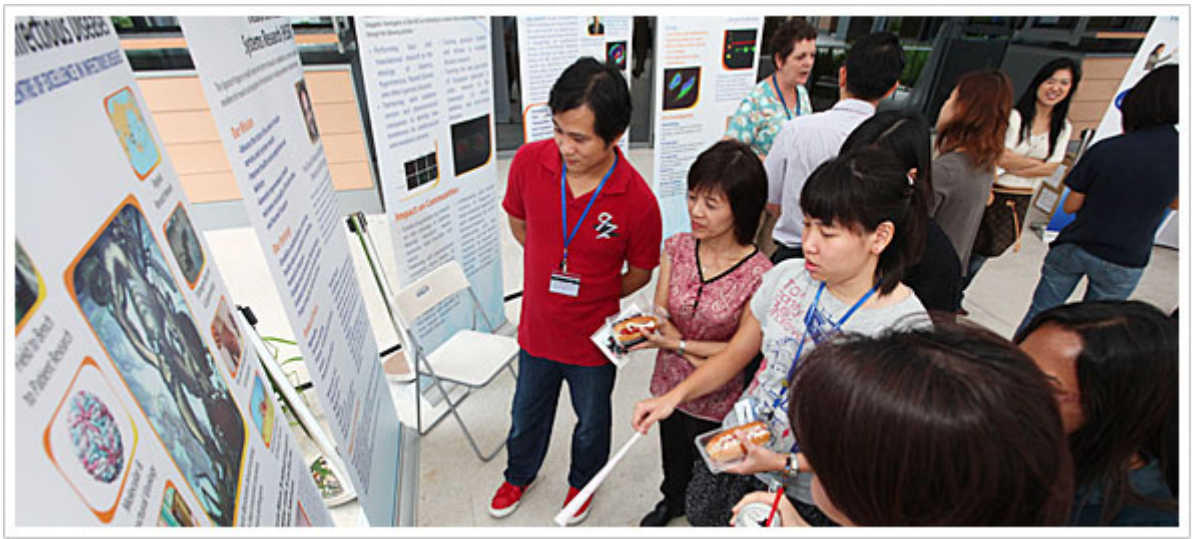
Ms. Geraldine Lee from Student Affairs & Admissions, introduces visitors to the guided tour, which included a stop in the LEAD room (right) – an educational facility where students are taught in small groups.

Dr. Mahi from Research Operations walks the group through the Cancer & Stem Cell Biology Lab, while Ms. Abegail Fernandez from the Clinical Performance Program explains how medical students are prepared for clinical rotations through standardized patient programs (left).

Visitors are introduced to Duke-NUS' signature research programs, and have plenty of opportunity to ask their own questions.

An educational representative explains the Duke-NUS curriculum to a potential student, in front of a photo collage showing just a few of the school's many community projects.



Interested visitors learn more about the signature research programs and academic ethos of Duke-NUS in the research and educational zones.

The Wellness Zone was a popular spot for those in need of a quick recharge.

Nurses and representatives from SingHealth kept visitors entertained at their stall with a series of fun activities.
Duke-NUS has partnered with Singhealth as part of the school's efforts to engage the Outram medical community.

Staff and guests take a break by tucking into candy floss, donuts and hotdogs.

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Shedding light on the science of sleep

Assistant Professor Joshua Gooley is studying how light influences our circadian rhythms, controlling when we feel tired and when we feel awake. He told Vital Science about his research at the new Chronobiology and Sleep Laboratory at Duke-NUS, his dreams of designing jetlag-eradicating glasses, and how living in a room for 6 days can feel like a holiday.

Unraveling circadian complexities

Deep in the heart of Singapore General Hospital, people are frozen in time. They have beds but cannot sleep; they eat regular meals but do not know breakfast from dinner. There are no clocks, no natural light and no noise from the outside – the inhabitants exist in their own world, living life entirely on their own schedules. Outside these 2 by 5 meter rooms sit the controllers, watching every second on a live video feed. The setup is state of the art, modeled on the latest technology from the US. But far from a prisoner isolation center, it is the sleep laboratories at Harvard Medical School that provided the inspiration. And with it came Assistant Professor Gooley who – as Assistant Professor at the new Chronobiology and Sleep Laboratory at Duke-NUS – hopes to finally deliver bedside applications to his research which began at the bench 10 years ago.

Assistant Professor Gooley poses in front of the Chronobiology and Sleep Laboratory's wall-mounted 'daylight simulator' which is used to deliver bright white light therapy to research volunteers

Assistant Professor Gooley is a chronobiologist – a field devoted to studying the natural 24-hour circadian cycles which make us wake up and fall asleep. Many factors influence the circadian clock – food, exercise and drugs, for example – but he is focused on the effects of light. His breakthrough came with a 2001 paper in *Nature Neuroscience*, announcing that he and his Harvard colleagues had identified the putative function of an elusive cell in the retina containing a pigment known as melanopsin. Unlike rods and cones, which send information to the visual cortex to create a conscious image of the world, the melanopsin-containing cells connect directly to the suprachiasmatic nucleus – an area of the hypothalamus which houses the subconscious circadian clock. Controlling this pathway, therefore, could theoretically control our sleep-wake cycles – a concept with very useful implications.

"If you give the right amount of light at the right time, you can actually resolve the symptoms of jetlag," says Assistant Professor Gooley. Bright light in the evening before flying, for example, would push the circadian clock backward and postpone tiredness, thereby helping someone who is heading west, he explains. Exposure to bright light in the morning, conversely, can shift the circadian clock forward, and would be beneficial before flying east. "Another major application would be to help a shift worker adapt to his schedule, or to design a workplace lighting environment which promotes alertness, increases productivity and improves safety. There have been studies in nurses showing that exposure to bright light on the nightshift and then dim light after leaving work helped them to adjust," he says.

A bright future for light therapy

Sleep technicians Victor Pachas and Jonathan Bostick prepare volunteer Erna Tandiana for a research study

The theory has already been put into practice in the form of light therapy devices, which have shown some success for the treatment of seasonal affective disorder and circadian sleep disorders. But users must sit and stare into the light for long periods to reap the benefits of therapy – an inconvenience which Assistant Professor Gooley aims to overcome. Different retinal cells respond best to different wavelengths of light and durations of exposure, he explains, suggesting that the process could be fine-tuned to maximize the activation of melanopsin-containing cells in proportion to rods and cones. If the devices could also be scaled down and made portable, then light therapy could become a powerful and practical way to tackle jetlag.

"I think the whole field should be gravitating towards these spectacle-based designs where you just put them on, go about your normal routine and still get the benefits without having to sit down and stare and disrupt your daily routine. That way, a businessman going across six times zones could put on his light therapy glasses and get an extra boost in the right direction before he gets to his destination," says Assistant Professor Gooley, who is already working on the glasses with fellow Assistant Professor Aaron Danner, an engineer at NUS. He believes they are feasible, and that new design features will enable this technology to overcome problems with existing light therapy devices.

Living in the laboratory

In the shorter term, the first experiments at Duke-NUS will focus on how the different retinal cells interact to generate subconscious responses to light – not only their direct influence on the clock but also on other reactions such as pupil constriction and the release of the circadian hormone melatonin. The researchers are also looking at ways to measure internal body time using a single biological sample. Discovering an accurate, simple method could even help to improve drug efficacy and safety, by allowing doctors to administer a therapy precisely when it will have the greatest impact.

Research volunteers take computer-based tests that measure their attention and cognitive function in response to sleep loss and shift work schedules.

Ultimately, Assistant Professor Gooley hopes to look beyond light to establish how it interacts with the other factors that regulate circadian rhythms. But for now all external influences must be controlled – hence the need to keep subjects sheltered from natural light, physically inactive, and eating on strict schedules. Some will be deprived of sleep for up to 50 hours, but it is not the torture it may sound. They read, watch movies, and even play cards with the researchers to keep awake. And not all protocols involve sleep deprivation: some subjects will live alone for up to 6 days but be allowed to make use of the comfortable beds in the two newly opened research suites (according to fixed schedules, of course).

Research Assistant Jonathan Bostick prepares a volunteer for light therapy, which is used to reset the body's circadian clock and to enhance levels of alertness.

Perhaps unsurprisingly then, there has been no shortage of volunteers since study recruitment began in August. One particularly enthusiastic student even phoned up within an hour of the first advertisement being posted.

"I think there's a lot of intrigue about sleep studies. Some people are just genuinely amused by the whole experience because it's so extraordinary," says Assistant Professor Gooley. "Living in a time-free environment for three days sounds like an adventure of sorts. You have all your meals provided and you get to sleep in complete darkness and silence, which is hard to find in Singapore. Think of it like a little paid vacation – just one with a unique itinerary where you can't actually go anywhere."

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VITAL SCIENCE

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Oncogenic pathways offer hope for stomach cancer treatment

Singapore scientists have proposed an alternative approach to the 'one size fits all strategy' and moved an important step closer to personalizing the treatment of stomach cancer.

A collaborative research team, led by Duke-NUS, has shown that a new, individualized approach to classifying tumors improves the prediction of how long patients will survive.

Associate Professor Patrick Tan examining results from a recent genomic experiment.

Rather than focus on structural differences, the researchers subdivided tumors by their activation of oncogenic signaling pathways – a method which opens new avenues for tailoring treatments.

Associate Professor Patrick Tan, who spearheaded the research, said that a clinical trial could be underway as early as next year to test whether the theory translates into practice. Patients could be stratified by tumor type and treated with the appropriate "cocktail of different pathway inhibitors", he said.

"The challenge in treating patients with cancer, particularly the big ones like lung, colorectal and stomach cancer, has been that historically we have tried to adopt a one size fits all approach. But as we begin to know more about the molecular makeup of these cancers, we realize that there is a tremendous amount of individuality," he said.

"This paper is a first step in approaching this problem and proposing a molecular taxonomy of how we could go about looking at it. Now we can try to tackle what makes one group different from another group, and establish whether these differences suggest ways that we can treat and manage them differently," he said.

The researchers used genetic profiling techniques to characterize tumors from 301 stomach cancer patients in Singapore, Australia and the UK. They identified three different oncogenic pathways which, according to Associate Professor Tan, are switched off in 70% to 80% percent of gastric tumors. Future studies could identify other subgroups to create a comprehensive classification system, he said.

Stomach cancer is the second leading cause of cancer death worldwide and is particularly common in Asia. The world's highest rates of stomach cancer are seen in Japan and China, while in Singapore it is the fourth leading cause of cancer death.

Progress in personalized treatments for stomach cancer has been slower than for lung and breast cancer, said Associate Professor Tan, noting that much of the pioneering work was done in the US and Europe where stomach cancer is less common.

"The fact that it is still early days for research into this disease represents a huge opportunity for us at Duke-NUS to use these concepts and apply them to stomach cancer. Anything we can do to impact this disease will hopefully make some contribution on a global scale," he said.

The research, published in the October edition of the *Public Library of Science Genetics*, was funded by the National Medical Research Council as part of its Translational and Clinical Research program. The 5-year project brings together researchers from institutions across Singapore to look at all aspects of gastric cancer.

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A corporate kick-start for the doctors of tomorrow

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"The delivery of healthcare is no longer an individual sport," says Dr. Craig Stenberg, Associate Dean of Student Affairs and Admissions at Duke-NUS, explaining that physicians more than ever must cooperate and work in multidisciplinary care teams. By studying managerial and teamwork skills, students are also learning effective strategies to approach the challenges they will face throughout their medical school education and career, he says. "The CE experience sets the stage for the learning environment. It helps the students to develop critical and creative thinking skills and the facility to work with others."

Laying the foundations

The CE module is a 2-day retreat at the beginning of the 2-week foundations program at the start of Duke-NUS Graduate Medical School. Students are divided into teams and embark upon a series of discussions and roleplays designed to help them learn how to resolve differences of opinion, settle conflicts and overcome cultural communication issues. The implications of these team-building exercises are not merely theoretical: the students will remain in the same learning teams for the entire first year, giving them plenty of opportunity to put their newfound skills into practice. Guidance is on hand during this experience from the faculty and a group of senior students, who fly in from Duke University School of Medicine in Durham, North Carolina to share their wisdom and experience with the juniors.

Duke-NUS students work and study in the same learning teams for the whole of the first year. The Corporate Education module teaches them how to perform as a unit and play to the strengths of each individual member - skills which will prove essential if the teams are to achieve academic success.

The class of 2013 comprise 56 students, the largest batch as to date.

With the teams and principles established, the foundations course concludes with the White Coat Ceremony, when students formally accept their calling into the medical profession. Friends and family come from all over the world to watch the dean and vice-dean place the coats on the students, who recite a modern version of the Hippocratic Oath. "We were the first to introduce this in Asia," says Dr. Stenberg. "It's been a very important part of the culmination of the beginning phase of students' training in medicine. There's seldom a

dry eye in the house."

The birth of corporate medical education

"We basically live in our teams – we think together, we perform together, we study together and we party together," says Ms. Padmastuti Akella (far right), a new first-year student at Duke-NUS. "Especially being an international student – my teammates are my family."

For Professor Robert Kamei, Vice Dean of Education at Duke-NUS, the foundations course is a personal highlight of the school's new and innovative curriculum. He was closely involved in the decision to introduce CE, beginning with a chance meeting in Durham with one of the directors of Duke CE – a global company founded in July 2000 by academics from Duke University's Fuqua School of Business. Duke CE specializes in providing adult learning and development services, and Professor Kamei quickly realized that their values and methods were aligned with his. All parties signed on, and Duke CE became part of the Duke-NUS curriculum.

Professor Kamei sees the CE module as just a small part of the bigger picture at Duke-NUS. While other medical schools use traditional methods to deliver vast amounts of educational material, Duke-NUS has purposefully recognized the importance of the 'hidden curriculum' – those core values for the school that define an organization's real identity. Beyond simply learning core content, it was critical to create a learning environment that would enable students to learn how to study, think and grow for themselves. "Physicians need to continue to learn after medical school," says Professor Kamei. "They need to be able to take a problem that they've been faced with, learn about it themselves, discuss it with their peers and come to some logical conclusion that makes sense for their patient. So we give the students not only the academic skills to learn medicine but also the creative thinking and teamwork skills that are going to be necessary. We want our students to have the leadership abilities to be able to implement some of the brilliant things that we know they'll come up with."

The CE program complements the team-based learning environment, known as TeamLEAD (Learn, Engage, And Develop), which forms the core of the first year curricular delivery strategy at Duke-NUS. Besides helping them to learn the material, the team-based approach also requires students to develop their personal skills and learn important lessons about human interaction, according to Dr. Stenberg. "A lot of interesting dynamics emerge when you ask groups to come to answers. Students learn very quickly that it's not necessarily the one who is most confident or most inclined to share that has the correct answer. Sometimes there may be students who are a bit shyer or less inclined to speak up, but who nevertheless may be in a better position to help the team come up with the right answer. They have to develop a collective sense of judgment about how they're going to come together and process the various answers," he says. Thus, the CE program gives the students the skills to maneuver through these team dynamics more effectively.

Building success

The inclusion of CE in the new curriculum initially raised a few eyebrows, but so far the decision appears to be paying off. The latest exam results show that at the end of the first year, Duke-NUS students performed at or above the US national average on an examination which covers the basic science content taught in medical schools, written by the National Board of Medical Examiners. What makes this score remarkable, however, is the fact that Duke-NUS covers the basic sciences in one year, while other US schools take this same test at the end of their 2nd year.

Ultimate proof, says Professor Kamei, will come once the first students graduate after the full 4 years. But for now he remains confident that the right values are being instilled, and that this unique fusion between business and medicine will prove to be a success.

"For the first year or two, I don't think the students really understood why Duke CE was here because they didn't have a context of how highly we value teamwork. But now groups of students who have finished the first year have acknowledged that they struggled at times working as a team, and that their grade suffered because they didn't really understand how to communicate and work together. Because the junior students hear this from their seniors, they understand now how important this is. The whole Duke CE piece keeps getting better and becoming a bigger part of our story," he says.

The traditional lecture-based method of medical education has been discarded at Duke-NUS and replaced with the novel, forward-looking TeamLEAD approach. Rather than simply delivering information from behind a platform, faculty members work alongside student teams to guide them to the appropriate material and help them learn how to process it for themselves. Here,Professor Pierce Chow introduces a session for 3rd year students Mr. Lim Kheng Choon and teammates Mr. Chia Ghim Song and Ms. Lim Miao Shan.

The new addition to the family

Ms. Padmastuti Akella, 22, moved to Singapore from the US in July this year. Originally from India, she studied physiology and neurobiology at the University of Connecticut before moving to the Lion City to take up her place in the third intake at Duke-NUS.

"It took us a little time to buy into why the course is structured the way it is. We all came in skeptical about how the TeamLEAD approach was going to work. But we were 56 new people coming together from all different backgrounds, so in order for us to do well academically we had to function as a team. Now, after just 4 weeks, we're at the point where we have gelled and know each other really well. We basically live in our teams – we think together, we perform together, we study together and we party together. Especially being an international student – my teammates are my family.

Everyone took certain concepts away from the CE module. We learned how we can use our different personalities to do better academically, rather than pull each other down, and that we should always try to get the best from each other. I also like the fact that we are taught not to make assumptions about where people are coming from in terms of culture and academic background. If an issue comes up in the team we should bring it up and solve it together.

The TeamLEAD approach is already working. There are times when you get frustrated, but the frustrations are because we as individuals are not getting the concept or the right scientific way of looking at the problem. It's a tricky balance between trying to convince people at some times and trying to hold back at others. The times when we have scored best is when we've all listened to each other, and then made a decision logically and reasonably. When we don't listen to each other it just doesn't work."

The voice of experience

Mr. Lim Kheng Choon, 33, is one of the old hands at Duke-NUS. A born-and-bred Singaporean, he joined the inaugural intake in 2007 and is now into his third year of studying toward an unconventional career change: after graduating in mechanical engineering at NUS, Kheng Choon spent 7 years as an aircraft engineer in the air force before deciding to become a doctor.

"Having worked for many years before joining Duke-NUS, I attended several team building and leadership seminars in the past. The CE course in my year was well executed, with a good focus on personality and character assessment tools, and learning how to resolve conflicts when they arise.

It certainly helps to have that head-start but for me, what really makes TeamLEAD work is being thrown in at the deep end. You learn quickly that the guy sitting next to you will have a marked influence on your academic score. If you don't work as a team your ship will sink – period – so you have no choice but to try and build that ship together.

You can be a brilliant student, but if you can't convince the team of why your answer is right and they ignore you then it doesn't matter. And on the flip side, if you have the loudest voice but give everyone the wrong answer, then you're going to fail as well. The quiet members learn to speak up, and the more vocal members learn to listen. You don't go it alone – you stand on the shoulders of your teammates.

At the start there's a lot of chaos and squabbling – sometimes emotions spill over and it becomes personal. Most groups go through this. But medicine is a team-based effort and you soon learn to live in the real world. One person can't be right all the time, and you can't boss everyone else around. That, I think, is the beauty of the system: you sink together or you float together."

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DUKE NUS GRADUATE MEDICAL SCHOOL SINGAPORE

VITAL SCIENCE

November 2009

Duke-NUS' White Coat Ceremony (Class of 2013)

The new class of Duke-NUS medical students reciting the Hippocratic Oath.

The White Coat Ceremony marks the start of an exciting journey for the new class of medical students. It is a remarkable personal milestone that signifies a new medical student's transition from a general member of the community into one who has accepted the calling of becoming a practitioner of medicine.

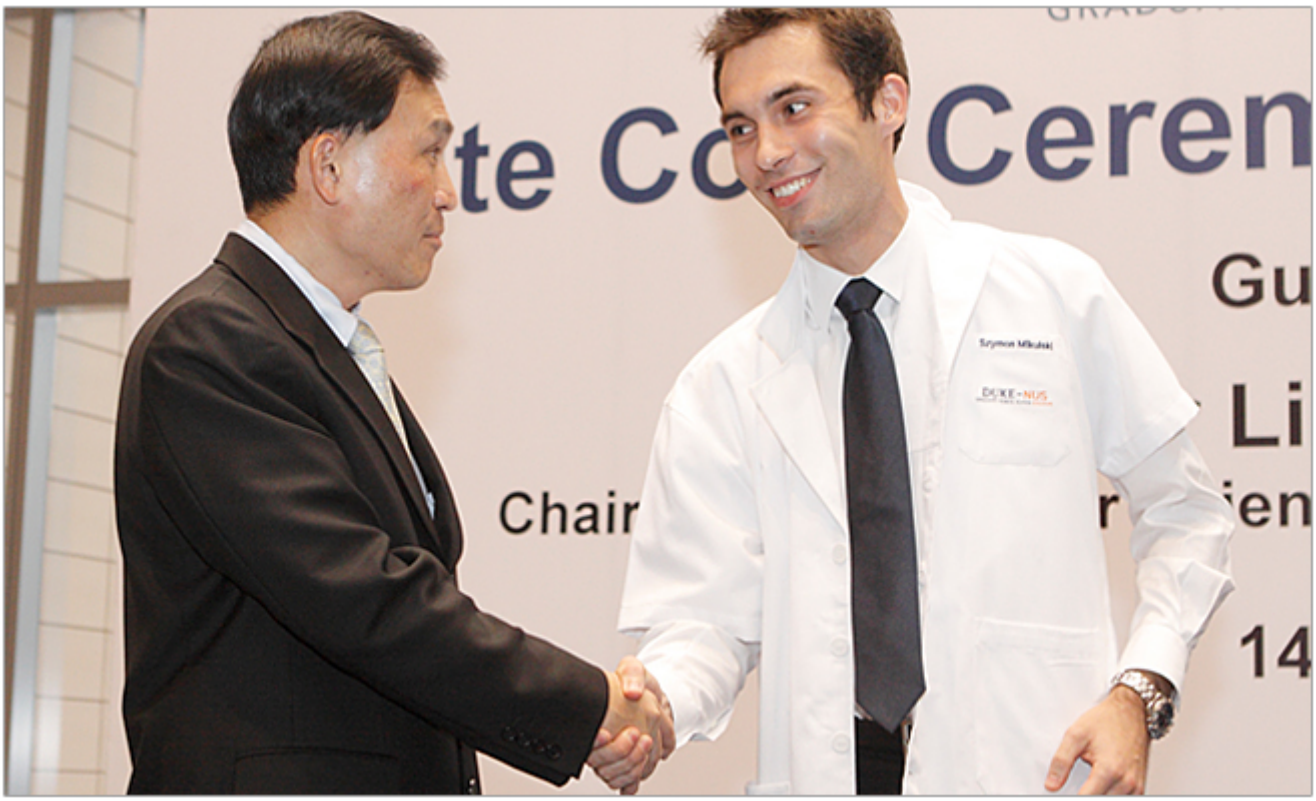
This year's White Coat ceremony for the third intake of students (Class of 2013) was held at the atrium of the newly built Duke-NUS campus. There were around 300 attendees, including the guest of honor Mr. Lim Chuan Poh, Chairman of A*STAR, Mr. Tony Chew, Chairman, Duke-NUS Governing Board, Professor Tan Chorh Chuan, President of NUS, and Dr. Jean Spaulding, trustee of the Duke Endowment and consultant at Duke Medical Center and Duke University Health System, who was also the master of ceremonies for the event. Other guests included the students' families and significant others, faculty members, Governing Board members and the Classes of 2011 and 2012.

The addition of this newest class to the Duke-NUS family brings the total to 130 students, hailing from 17 different countries. The latest batch is by far the largest, with 56 outstanding young individuals from countries such as Singapore, Malaysia, the United States, Canada, China, India, South Korea, the Philippines, Indonesia, Taiwan, Pakistan and Poland. The school is confident that each new student will bring their own unique perspective, adding to the richness and diversity of the class, and will spur each other toward excellence in everything they do.

Welcoming the Class of 2013!

*Front row from left to right: Professor Patrick Casey, Senior Vice Dean of Research; Mr. Tony Chew, Chairman, Duke-NUS Governing Board; Mr Lim Chuan Poh, Chairman of A*STAR; Professor Ranga Krishnan, Dean; Ms. Giselia Giam, Vice Dean, Corporate Services; Professor Soo Khee Chee, Vice Dean of Clinical and Faculty Affairs; and Professor Robert Kamei, Vice Dean, Education.*

Mr. Szymon Milkulski on stage with Guest of Honour Mr. Lim Chuan Poh



> On the one hand, the White Coat Ceremony is a symbolic fulfillment of my long-standing ambition. I have always aspired to study medicine and will not deny the sense of achievement I felt upon receiving my Duke-NUS white coat. But at the same time, I know the White Coat Ceremony marks merely the beginning of a lifelong dedication to the medical profession. **I felt privileged to recite the Hippocratic Oath and in awe of the tremendous responsibility and obligation to our patients, which we embrace as aspiring physicians.**
>
> ------ *Mr. Szymon Milkulski, a first-year Duke-NUS student from Poland*

> I urge the new class of students to reflect on what it personally means for you to be here. By donning the white coat, you begin your journey to acquire medical knowledge. More importantly, you are committing yourself to care for and to protect the wellbeing of patients. The unspoken responsibility that has always set a doctor apart from an individual who simply treats illnesses is your professional devotion to your patients. Professionalism here is much more than proficiency or being skilful: **it is a commitment to uphold the ideals of the profession, to care, to protect and to heal.**
>
> ------ *Mr. Lim Chuan Poh, in his opening address*

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