



The column-free spiral stairway at University Hall.

# State of the University 2005





## VISION

Towards a Global Knowledge Enterprise  
*Unrelenting pursuit of excellence in  
education, research and service*



## MISSION

Advance knowledge and foster innovation,  
educate students and nurture talent,  
in service of country and society



## President's Message

Dear Colleagues and Friends of NUS

It is with pleasure and pride that I report on NUS' progress and accomplishments during the 2004-05 academic year. The pages that follow provide glimpses into the broad spectrum of initiatives, activities and achievements of our university community. Although



covering a single year, this account is limited by the space available and does not pretend to be comprehensive. It can be taken only to illustrate the excellence and vitality that characterize NUS.

We have kept up the momentum in global initiatives. NUS' leadership of the Association of

Pacific Rim Universities (APRU) continues to enable NUS and Singapore to lead and facilitate major discussions with important stakeholders on the future of higher education, research and enterprise in the Pacific Rim. The hosting of the first-ever joint Presidents Roundtable of the Association of American Universities (AAU) and APRU at NUS made it the largest gathering of university presidents from the Americas and Pacific Rim in Singapore. It marked a promising start for AAU and APRU in building a ten thousand mile bridge across the Pacific, linking member universities through collaborative initiatives and programs.

A significant milestone was reached during the year – NUS turned 100. From its modest beginning as a medical school with 23 students in 1905, NUS has become Singapore's homegrown global university. NUS' diverse community is now a confluence of Singaporean and global talents, both faculty and students, embracing a 'no-walls' organizational culture that supports multi-disciplinary education and research.

Our year-long Centennial Celebrations got off to a resounding start with the NUS Everest Expedition team's successful summit of the world's highest peak. Our global team, reflecting the diversity of the NUS community of students, staff and alumni from Singapore and around the world, unfurled the NUS flag at the summit and put our University on top of the world. The Everest team showed us all that with NUS, no dream is too high in the quest for excellence.

As NUS celebrates its first centennial, it stands among the top 20 universities in the 2004 global ranking of the world's best universities by *The Times of London*. We are setting our sights higher for the second centennial. NUS' aspiration is to be the first Asian university to be recognized by the global knowledge community to stand among the world's top 10 universities.

To rise to the challenge and realize this shared aspiration, I look to our stakeholders – students, alumni, faculty, staff and friends – to take ownership and persevere in our unrelenting quest for excellence in the virtuous circle of creating, imparting and applying knowledge. We will continue to push beyond boundaries and overcome limitations to realize our institutional and personal aspirations.

I hope this report on the state of the University will provide a sense of NUS' intellectual vibrancy, passion for global pursuits, and desire to serve country and society. May I also thank our stakeholders, friends and well-wishers for sharing our vision.

SHIH Choon Fong  
President

## Global Initiatives

- In June 2005, NUS hosted the first-ever joint Presidents Roundtable of the Association of American Universities (AAU) and the Association of Pacific Rim Universities (APRU), which drew the participation of 52 university presidents from the Americas, Asia and Australasia. AAU is the premier consortium of 62 research universities in North America, including Harvard, Yale, Duke, Johns Hopkins, Stanford and MIT. APRU comprises 36 leading universities around the Pacific Rim, including Stanford, Berkeley, Caltech, Chile, Australian National, Tokyo, Peking and NUS.



University leaders at NUS  
for a historic AAU-APRU  
Presidents Roundtable

- A significant outcome of the APRU 9th Annual Presidents Meeting chaired by and held at NUS in July 2005 was the setting up of the APRU World Institute (AWI). This institute for advanced studies will draw on a deep and wide pool of talent from diverse political systems, regions, and cultures to foster basic research on questions and issues of global importance, e.g. the impact of globalization on cultures, energy and the environment, and communicable diseases. NUS chairs the AWI Pro-Tem Governing Board.

- In July 2005, NUS and seven top research universities in Asia Pacific, Europe and USA – Australian National, Peking, Tokyo, ETH Zurich, Copenhagen, Berkeley, and Yale – signed an agreement to create a global alliance of research universities. The alliance will provide a platform for research and education that transcends disciplinary, cultural and geographical boundaries.

## Global Standing

- The 2004 global ranking of universities by *The Times of London* placed NUS
  - 18th overall
  - 9th for Engineering and IT
  - 10th for Social Sciences
  - 17th for Arts and Humanities
  - 25th for Biomedicine
  - 35th for Science
- *Asia Inc* ranked NUS Business School's Master in Business Administration (MBA) program as top in South-east Asia in 2004.
- The Institute for Scientific Information (ISI) Essential Science Indicators 2005 rated NUS in terms of publication output
  - 10th for Computer Science
  - 10th for Engineering
  - 21st for Materials Science
  - 21st for Mathematics
- The Logistics Institute-Asia Pacific received the Best Education Course Provider title for the third consecutive year at the 2005 Asian Freight and Supply Chain awards, widely regarded as the most authoritative and prestigious award for the industry in Asia.

## Celebrating the First Centennial

- The **Centennial Everest Expedition** put NUS on top of the world when it reached the world's highest peak on 31 May 2005, marking the first successful ascent by a Singapore university team.



- The Centennial sculpture was unveiled and the new NUS flag raised for the first time on campus on 25 June 2005 at the new University Hall.

### *Initiatives launched to mark NUS' 100th year*

- The bond-free **Global Merit Scholarships** for top Singaporean students were launched. Available for any course leading to a first degree (except medicine and dentistry), these scholarships provide the opportunity for scholars to spend a year at overseas partner universities or to enrol for double degrees.
- The **NUS Centennial Global Education Convention** in July 2005 attracted about 180 students and staff from universities around the world to discuss aspects of global education under the theme "Global Pursuits, Mindsets and Aspirations".
- New endowed professorships, the **Centennial Chairs**, were established to attract renowned experts to NUS.
- The **NUS Centennial Nobel Laureate Public Lecture Series** kicked off in July 2005 with Nobel Laureates Professors Steven Chu, Roald Hoffmann and Carl Wieman sharing their passion and expertise at the frontiers of knowledge with the NUS and wider communities.

## Students

### Enrollment

- Total enrollment: 28,222
- Total international students: 7,789
- Undergraduates: 21,761
- Graduate students: 6,461

Faculty/School/Institute	Under-graduate	Graduate
Arts and Social Sciences	4,969	779
Business	1,077	344
Computing	1,703	383
Dentistry	137	55
Design and Environment	1,527	353
Engineering	5,971	1,847
Law	813	185
Medicine	1,140	692
Science	4,310	983
Yong Siew Toh Conservatory of Music	114	-
Lee Kuan Yew School of Public Policy	-	92
NUS Graduate School for Integrative Sciences and Engineering	-	81
Design Technology Institute	-	87
Institute of Molecular and Cell Biology	-	2
Institute of Systems Science	-	312
Laboratories for Information Technology	-	1
National University Medical Institutes	-	3
Regional Language Centre	-	22
Singapore-MIT Alliance	-	107
Temasek Defence Systems Institute	-	102
The Logistics Institute-Asia Pacific	-	31

### Graduation statistics

- Bachelor degrees: 5,780
- Total higher degrees: 3,053
  - Graduate diplomas = 356
  - Master degrees = 2,417
  - PhD = 280

## Examples of Student Achievements

- **Mustafa Izzuddin** (Arts and Social Sciences) was Singapore's representative at the 2004 Youth Summit at the United Nations' New York Headquarters.
- **Tan Peng Ting** (Arts and Social Sciences; University Scholars Program) received the 2004 Bayer Young Environmental Envoy Award.
- **Gitta Juwita and Melanie Chng** (Law) won the 2004 Asia Cup International Law Moot Court Competition, Japan.
- **Kimberley Huston, Tan Toh Ken, Celeste Chong and Teng Pei Yun** (Business) won first prize in the Copenhagen Business School Case Competition held in Denmark.
- **Jet Teong Yi Heong** (Arts and Social Sciences; University Scholars Program) emerged winner in the Young Speakers Forum at the 7th ASEAN University Network Education Forum in May 2005.
- **Ho Pei Ni, Diana Zhang and June Shaul Hameed** (Business) emerged national champions in the L'Oréal Brandstorm marketing competition in March 2005. Ms Hameed was named "Most Outstanding Presenter".
- **Steven Zhou** (Engineering) was second in the Info Tech and Engineering section of the 2004 International Idea to Product Competition, which drew entries from universities such as Stanford, Imperial College, Georgia Tech and University of Southern California.
- **Lee Tze Ming** (Design and Environment) was second in the Professional Category of Internot Designpreis competition in Germany.
- **Randall Law** (Engineering) won a silver award at the Asia Pacific Young Inventors Awards 2004 for using laser lithography to produce lines of 20

nanometers (5,000th of a hair's width) on light-sensitive film.

- **Sudesh Wijesinghe** (Engineering) was among 20 students worldwide who received travel grants for poster presentations at the 2004 National Association of Corrosion Engineers conference in New Orleans, USA.
- **Yu Hongyu** (Engineering) received a Graduate Student Fellowship from the US-based Institute of Electrical and Electronics Engineers Electron Devices Society for academic excellence and contributions to advanced gate stack research.
- **Gao Quan** (Music) won third prize at the 1st Fox International Bassoon Competition in Beijing, China, in July 2005.
- **Tran Thi Tam Ngoc** (Music) came in third at the inaugural ASEAN International Chopin Piano Competition held in Malaysia.

#### *International awards received for papers*

- **Lee Keng Leong** (Business) – winner of the first undergraduate student paper competition of the Council of Logistics Management, Philadelphia, USA.
- **Boh Jaw Woei** (Engineering) and Associate Professor **Choo Yoo Sang** (Engineering) – James Watt Medal 2005, The Institution of Civil Engineers, UK.
- **Zhang Songhua** (Engineering) and Professor **Kam Pooi Yuen** (Engineering) – Best Paper Award, 2004 Vehicular Technology Conference, Los Angeles, USA.
- **Wu Dongrui** (Engineering) – Best Student Paper Award, 2005 IEEE International Conference on Fuzzy Systems, Reno, USA.
- **Mirtha Laban** (Medicine) – Best Poster Award, 1st International Symposium on Cancer Metastasis and the Lympho-vascular System: Basis for Rational Therapy, San Francisco, USA.

## Alumni

- Inaugural **Eminent Alumni Awards** were conferred on Mr Lee Kuan Yew, Mr Goh Chok Tong and Dr Tony Tan to honor their singular achievements and exceptional contributions to society, Singapore and beyond.



- In recognition of their outstanding and sustained service to NUS, its predecessor institutions or alumni community, **Distinguished Alumni Service Awards** were presented to Mr Harry Chan Keng Howe, Dr Chee Phui Hung, Emeritus Professor Kiang Ai Kim, Professor Arthur Lim Siew Ming, Professor Saw Swee Hock, Dr William Tan Kian Meng, and Mr Wong Ah Long.
- At the Bash@Bukit Timah Campus, an alumni reunion organized by the Class of '72 in May 2005, Dr Tony Tan announced that the Bukit Timah Campus would be NUS' again.
- Dr **William Tan Kian Meng** (Class of '80) set a new world record by completing 10 marathons on 7 continents in 70 days to raise funds for a Professorship in Paediatric Oncology.
- Overseas alumni chapters now total 12 with the launch of chapters in Shanghai, China in October 2004 and Auckland, New Zealand in March 2005.
- The Alumni Complex design competition was won by Architects Vista, led by Mr **Kim Loh Fong** (Class of '71). The Complex will be a home on campus for alumni around the world.

## Faculty and Staff

- Total faculty and staff: 6,205
- Academic and research faculty: 2,852
- International faculty: 1,771
- Administrative, professional and support staff: 3,353

## University Awards 2005

### *Outstanding Educator Awards*

Assistant Professor **Chan Wai Meng**

(Arts and Social Sciences)

Associate Professor **Cheng Li** (Engineering)

Professor **Alex Ip Yuen Kwong** (Science)

Associate Professor **Kulwant Singh** (Business)

### *Outstanding Researcher Awards*

Associate Professor **Hong Yunhan** (Science)

Associate Professors **Marie-Veronique Clement**

and **Shazib Pervaiz** (Medicine) – Team Award

### *Young Researcher Awards*

Assistant Professor **Joseph Ooi Thian Leong**

(Design and Environment)

Associate Professor **Edward Teo** (Science)

Assistant Professor **Yao Shao Qin** (Science)

### *Outstanding Service Award*

Professor **Wang Gungwu**

(Director, East Asian Institute)

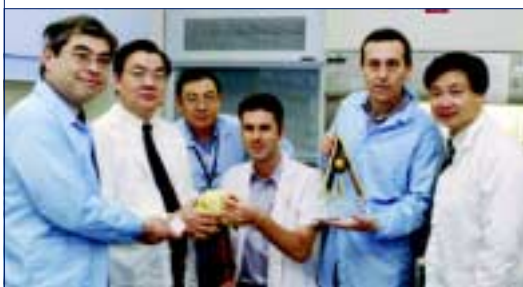


A celebration of excellence in education, research and service

## Examples of Faculty Achievements

- Professor **Shih Choon Fong** (NUS President) was inaugurated in October 2004 as the first Singaporean member of the US National Academy of Engineering.
- Professor **Louis Chen** (Science) received the French government decoration, Chevalier de l'Ordre des Palmes Academiques, in April 2005 for his service to education. Professor Chen was also appointed President, Institute of Mathematical Statistics, USA.
- Professor **Philip Keith Moore** (Medicine; Head, Pharmacology) was made a Fellow of the British Pharmacological Society, the professional association for pharmacologists in the UK and one of the world's leading pharmacological societies.
- Professor **Colin J R Sheppard** (Engineering; Leader, Bioengineering Program), was elected a Fellow of the Institute of Physics. He was also elected Vice-President, International Society for Optics within Life Sciences.
- Professor **Tan Cheng Han** (Dean, Law) was appointed a Young Global Leader by the World Economic Forum.
- Professor **Barry Halliwell** (Medicine; Head, Biochemistry; Director, NUS Graduate School for Integrative Sciences and Engineering) was elected a member of the World Health Organization Expert Panel to recommend levels of intake for nutrients and related substances.
- Professor **Fwa Tien Fang** (Engineering) was selected by the Transportation and Development Institute of the American Society of Civil Engineers (ASCE) for ASCE's Frank M Masters Transportation Engineering Award 2005.

- Associate Professor **Ganesan Adaikan** (Medicine) was installed as the eighth and first Asian President of the International Society for Sexual Medicine at its 11th World Congress.
- Associate Professor **Victor Savage** (Arts and Social Sciences) was re-elected President, Commonwealth Geographical Bureau, UK.
- Associate Professor **Ong Seow Eng** (Design and Environment) received the International Real Estate Society Achievement Award for outstanding research, education and practice at the international level at the 2005 European Real Estate Society conference.
- Professor **Teoh Swee Hin** (Engineering), Associate Professor **Lim Thiam Chye** (Medicine), Associate Professor **Dietmar Hutmacher** (Engineering), Assistant Professor **Jan-Thorsten Schantz** (Medicine) and their team received a Gold Award at the 2004 Asian Innovation Awards for their outstanding work on bone regeneration.



A winning team in bone regeneration

- Associate Professor **Tan Ngoh Tiong** (Arts and Social Sciences) was elected Co-Chairman, Commonwealth Organisation for Social Work, UK.
- Associate Professor **Wong Tien Yin** (Medicine) was given the 2005 Distinguished Service Award by Asia Pacific Academy of Ophthalmology.
- Dr **Manuel Salto-Tellez** (Medicine) received the 2004 World Scientific Forum International Award from the International Research Promotion

Council, India, for contributions to the field of onco-cytology.

- Assistant Professor **Ng Huck Hui** (Science) received the Young Scientist Award at National Science and Technology Awards 2004 for his research on gene regulation.
- Associate Professor **John Potter** and his team of research engineers at the Tropical Marine Science Institute won the Defence Technology Prize Team Award (R&D) for developing the world's first broadband digital ambient noise imaging camera.
- The 2004 Singapore Youth Awards (Science and Technology) were awarded to Associate Professor **Ong Soh Khim** (Engineering) and Assistant Professor **Chew Fook Tim** (Science) for her scientific excellence and efforts in promoting manufacturing engineering and for his research in translating DNA sequences of proteins found in allergy-causing dust mites respectively.
- Professor **Yong Eu Leong**, and Assistant Professors **Aung Tin**, **Lynette Shek** and **Allen Yeoh** (Medicine) received inaugural Clinician-Scientist Investigator Awards from the Biomedical Research Council and National Medical Research Council in April 2005.
- Associate Professor **Thang Leng Leng** (Arts and Social Sciences) received the 2005 Japanese Chamber of Commerce and Industry Singapore Foundation Education Award for her commitment in promoting inter-generational integration.
- Mr **Ashvin Thambyah** (Medicine) received the Albert Trillat Young Investigator Award from the International Society of Arthroscopy, Knee Surgery and Orthopaedic Sports Medicine at its 5th Biennial Congress in April 2005.
- Ms **Low Siew Leng** (Medicine) received a Young Investigator Award at the International Society for Clinical Densitometry 2005 Annual Meeting in New Orleans, USA.



- The Faculty of Arts and Social Sciences' Information and Communications Management Program was restructured to a **Communications and New Media Program**, with an expanded Interactive Media and a new Communication Management area.
- **Overseas educational experiences** to foster global perspectives were enhanced:
  - The *Student Exchange Program* was expanded with the signing of more than 30 agreements with overseas partners, including University of Copenhagen, University of Helsinki and Royal Holloway, University of London. Students will now be able to study, live and play in more non-traditional destinations like Budapest, Miami, Poitiers, Sichuan, St Petersburg, Tilburg, and Zagreb.
  - *Summer programs* also provided overseas exposure, e.g. the new 'Topics in Real Estate-China' program by the Department of Real Estate; the first joint program between the University Scholars Program, The Chinese University of Hong Kong and Fudan University; and the NUS-Zhejiang University program.
  - Experiential learning through *field studies programs* saw students venturing into the region for extended periods, e.g. Geography students to Malaysia to study tourism, Political Science students to Indonesia to understand its politics, and Architecture students to Malaysia on joint studio programs.
  - Students participated in *international conferences and forums* drawing participation from universities around the world, e.g. the 2004 Harvard Project for Asian and International Relations, the inaugural U21 Undergraduate Research Conference, the East Asian Common Space Youth Forum, and INNOVATE 2005.
- The **NUS High School of Mathematics and Science**, the first pre-tertiary school with seamless curricular links to NUS, enrolled its pioneer batch of 227 students in January 2005. Its students will be exposed to the excitement of research and discovery-based learning.

## Research

- Faculty members produced more than 3,100 research papers in international, regional and local journals, and over 2,000 international conference papers.
- The Institute for Scientific Information (ISI)'s latest list of the world's highly cited researchers, a respected indicator and global benchmark for research accomplishment, includes four from Singapore. Publications by Professors **Barry Halliwell**, **Philip Keith Moore**, **Harald Niederreiter** and **Shih Choon Fong** were highly cited in the categories of Biology and Biochemistry, Pharmacology, Mathematics and Engineering respectively.



Professor  
Barry Halliwell



Professor  
Philip Keith  
Moore



Professor  
Harald  
Niederreiter



Professor Shih  
Choon Fong

### Examples of significant research findings

- Associate Professor **Lim Chwee Teck** (Engineering) and Assistant Professor **Kevin Tan** (Medicine) teamed up with Massachusetts Institute of Technology researchers to study how the elasticity of red blood cells changes as parasites from female Anopheles mosquitoes mature within them. A paper on this research won a Ribbon Award at the 2004 Materials Research Society, Fall Meeting in Boston, USA.
- Associate Professor **Vincent Chow** (Medicine), working with researchers at India's International Centre for Genetic Engineering and Biotechnology, found that a protein in the SARS virus causes host cells to commit suicide. Their

findings, which could lead to a way to fight SARS, were published in *Biochemical Journal*.

- A team led by Associate Professor **Mary Ng Mah Lee** (Medicine) is the first in the world to identify the receptor protein which facilitates the entry of the West Nile virus. Their findings have significant implications for antiviral drug development.
- Associate Professor **Shazib Pervaiz** (Medicine) has tied up with researchers at the Karolinska Institutet to successfully investigate why B-cell lymphoma do not respond to chemotherapy. Their findings were published in *Blood*.
- The collaboration between Associate Professor **Peter Ho** (Science), research fellow Ms **Chua Lay Lay** (Science) and Sir Richard Friend of Cambridge University to develop plastics that act like semiconductors and metals has led to the world's first general working *n*-type plastic transistor. The feat, which received input from A\*STAR's Institute of Materials Research and Engineering, was carried in *Nature*.
- Associate Professor **Hong Yunhan** (Science) achieved a major breakthrough as the first to cultivate test-tube sperm. This was reported in more than 100 newspapers worldwide.
- Research by Associate Professor **Liu Xiang-Yang** (Science) on in-situ observations and direct imaging of a 2-D nucleation process of charged colloidal particles was published in *Nature*.
- The Office of Life Sciences' **Cardiovascular Program** reported that an animal model of diabetes has revealed down-regulation of hydrogen sulphide (H<sub>2</sub>S) biosynthesis in various tissues. These novel results imply a potential role for H<sub>2</sub>S in cardiac disease.
- A team of NUS and A\*STAR's Genome Institute of Singapore scientists led by Dr **Stephen Hsu** (Medicine) developed a new synthetic protein fragment that can target and kill cancer cells. This was featured on the cover of *Cell Cycle*.

#### *New initiatives and programs*

- The **NUS Nanoscience and Nanotechnology Initiative** was officially launched, raising its global profile through research collaboration and international conference organization and participation.
- Life science initiatives included the **Health and Environmental Impact of Nanomaterials**, in close coordination with the Faculties of Engineering, Medicine and Science; and a new **Immunology Program**.
- The **Institute of South Asian Studies** was set up as an autonomous research institute to promote economic-oriented research on contemporary South Asia, with a principal focus on India.
- The **Centre for Maritime Studies**, launched in June 2005 as a university-level research center focussing on maritime issues, aims to help position Singapore as a global maritime hub.
- The **Centre for Offshore Research and Engineering**, a joint effort of the Faculty of Engineering and the Economic Development Board, will help strengthen Singapore's development as an oil and gas hub.
- Sweden's **Karolinska Institutet (KI)**, one of Europe's largest medical universities, set up its first overseas office at NUS. A coordinating center for KI's research collaborations in Singapore, the office will also facilitate programs (e.g. the NUS-KI Joint PhD Program in Genetic and Molecular Epidemiology) and new initiatives.
- The **Structural Biology Research Group** was the first in ASEAN to receive an IBM Shared University Research award, in the form of a S\$1.2 million supercomputer, for research on protein structures which could lead to cures for diseases like SARS.
- The Faculty of Arts and Social Sciences' **Singapore Centre for Applied and Policy Economics** was set up to conduct research to support economic policy formulation for Singapore as well as to serve as an international reference point for studies on the Singapore and other Asian economies.

## Funding

- Total research spending for the financial year ending March 2005 was S\$218 million, with S\$166 million going to research programs and projects, and the rest to research scholarships. Research grants were received mainly from the Ministry of Education and external funding agencies, including the Agency for Science, Technology and Research (A\*STAR), the National Medical Research Council, Defence Science and Technology Agency, Singapore Totalisator Board, foundations, and industry.
- Reflecting the broad scope of NUS research, projects with external funding exceeding S\$500,000 each include the following:
  - Development of a combined nanofabrication/ characterization tool for research on nanometer scale spintronics
  - Development of high mobility channel layer formation technology for high speed CMOS devices
  - Near-infrared autofluorescence and Raman spectroscopy and imaging for non-invasive, in vivo cancer detection
  - Development of maskless, nano-patterned porous silicon for controlled light emission
  - Mechanisms of 2D/3D colloidal assembly and fabrication of functional colloidal crystals
  - Differentiation of human stem cells into oligodendrocytes for use in treating demyelinating diseases including diabetic neuropathy
  - Industrial collaboration project on in-vitro and in-vivo testing of bio-scaffold for bone re-construction and implants
  - Advanced underwater acoustic sensor technology research
  - Investigation of Gibberellin signalling in flowering process
  - Genetic diversity and patterns of speciation in selected tropical Southeast Asian taxa: Using molecular tools to identify conservation priorities in a region undergoing catastrophic extinctions
  - Fate, transport and impact of persistent organic pollutants in Singapore's coastal marine environment
  - Molecular regulation of mammalian spinal neurulation: A genome-wide analysis
  - Physical modelling and simulation of nano-scale electronic device phenomena
  - Development of building energy efficiency labeling system

## Enterprise

- The fourth NUS Overseas College was launched in Stockholm in partnership with KTH, Royal Institute of Technology, in May 2005.
- 96 students were successfully placed in the NUS Overseas Colleges in Silicon Valley, Bio Valley and Shanghai, bringing the total number of students enrolled in the program since its launch in January 2002 to 302 students.



- NUS Overseas College student teams DermaTech, Inc. (**Joshua Shoo**, **Jasmine Ong** and **Cheryl Lee**) and TMD Corporation (**Teh Huay Hoon**, **Ho Chee Chen** and **Karen Chua**) won the top two prizes in the 2004 Lee Kuan Yew Global Business Plan Competition, making them the first Singaporean winners in the contest.
- **Renuga Gopal** (Engineering) and **Karen Teo** (Dentistry) started a company, BioMers, which emerged champions at the Start-Up@Singapore 2005 business plan competition. They also received Honorable Mention at the University of San Francisco – Pacific Specialty Insurance International Business Plan Competition.
- NUS Business Incubation of Global Organisations (NUS BINGO) entrepreneurship awards were launched in February 2005 to honor student and alumni entrepreneurial achievements at the individual, start-up and international levels.

- The NUS **Student Enterprise Program** launched in October 2004 gave awards of S\$40,000 each to promising student business ventures.
- 132 invention disclosures were received, 152 patents filed and 45 patents granted. 125 research collaboration agreements and 28 license agreements were signed.
- NUS College in Silicon Valley student **Peh Ruey Feng** filed more than 10 US patent applications with a team from USGI Medical, a medical device start-up company in Silicon Valley.
- A collaboration was forged with Hyflux Ltd, a home-grown Singapore-based company, to conduct joint research on polymers and composites to develop membrane materials suitable for applications in the chemical and life science industries.
- Associate Professor **Anjam Khursheed** (Engineering), research engineer **Nelliyan Karuppiah** and Czech firm Delong Instruments have made available mobile scanning electron microscopes that are compact and cheaper.
- Associate Professors **Chandra Sekhar, Tham Kwok Wai** and **David Cheong** (Design and Environment) have set up Enhanced Air Quality Pte Ltd to make NUS' patented technology, the single-coil twin fan system, commercially viable. The system won The Enterprise Challenge Innovator 2004 Award.
- An exclusive worldwide licensing agreement with American biotech company BioDtech, Inc (BDT) will use and further develop a technology developed by Professor **Ding Jeak Ling** (Science) and Associate Professor **Ho Bow** (Medicine). The technology for genetically engineering the protein sequence in an enzyme in the horseshoe crab will be used to market a quick, user-friendly sterility test for medical equipment.

## Development Efforts

Benefactors and friends gave or pledged a total of S\$388 million (including Government matching grants of S\$149 million). Major gifts included the following:

- The Faculty of Medicine was named the Yong Loo Lin School of Medicine following a S\$200 million gift. In the single largest gift made to the University, the **Yong Loo Lin Trust** donated S\$100 million, which attracted another S\$100 million in Government matching. The gift will help transform the medical school from one of Asia's leading medical schools to one that can compete with the world's best.



- The **Lee Foundation** pledged S\$30 million to establish the Lee Kong Chian Scholarships, the Alice Lee Centre for Nursing Studies and two Lee Kong Chian Centennial Professorships. The Lee Kong Chian Wing at University Hall was named in recognition of this gift.
- A gift of more than S\$29 million in cash and shares was received from **The Tan Foundation** to establish four Tan Chin Tuan Centennial Professorships, to name the Tan Chin Tuan Wing at University Hall, and to support collaborative projects with University of Malaya to further Singapore-Malaysia relations.

- **Madam Agnes Tan** donated S\$4 million for the purchase and restoration of an original Peranakan house to be named the Tan Cheng Lock Baba House. The gift will promote the study and preservation of Peranakan architecture and culture in Singapore and beyond.



A gift of Peranakan heritage at 157 Neil Road

- A consortium led by Tan Sri Frank Tsao's **IMC Pan Asia Alliance Pte Ltd**, **PSA Corp** and the **Maritime and Port Authority of Singapore** (each giving S\$1 million) made gifts and pledges amounting to S\$3.78 million to establish the Centre for Maritime Studies.
- Professor **Saw Swee Hock** gave S\$2.6 million to establish NUS' first Centennial Chair, the Saw Swee Hock Centennial Professorship in Medical Sciences.
- The **Chen Su Lan Trust** pledged S\$2.5 million to the Yong Loo Lin School of Medicine to establish the Chen Su Lan Centennial Professorship in Medical Ethics.
- The **Yong Loo Lin Trust** gave a S\$1 million top-up to the Yong Loo Lin Professorship in Medical Oncology, raising its endowment to S\$7 million with Government matching, and making it NUS' highest endowed chair.
- The **Lien Foundation** gave S\$1 million to the Lien Ying Chow Professorship in Medicine previously established by Overseas Union Bank.



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This report covers Academic Year 2004-05,  
from August 2004 to July 2005





## VISION

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*Unrelenting pursuit of excellence in  
education, research and service*



## MISSION

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educate students and nurture talent,  
in service of country and society



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