

features:

## DINOSAURS *alive!*

*Meet Our  
New Professors*

*Building 7th Heaven:  
Project Angel 7*

*and many more...*



*"...to communicate and challenge  
at every possible opportunity..."*

Dean Tan Eng Chye  
Faculty of Science

## Faculty of Science

*Cultivate passion  
Catalyze change  
Create future*

Dean's Office  
National University of Singapore  
Block S16, Level 9  
6 Science Drive 2  
Singapore 117546

Tel: 65 516 7641/ 3092  
Fax: 65 777 4279



### *Editorial Team for this issue*

#### Editor

Ms Manjeet Kaur  
Ms Caroline Tan  
Dr Lawrence Chia  
Mr Perry Hee  
Ms Karen Wong  
Dr Chin Wee Shong

#### Advisor

Dean Tan Eng Chye  
Vice Dean Lim Tit Meng

#### Design by

In-house team

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# OmniSci

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## Acknowledgement

We thank Shaw Foundation for its continuing and generous sponsorship and support of the Faculty.



## Dean's MESSAGE

As Dean of a forward-looking faculty in a very vibrant varsity, you may understand my yearnings to congratulate and commend as well as to communicate and challenge at every possible opportunity. I owe this specially to our stakeholders – our students and staff, our alumni and our anticipated and aspiring students. This prompted the production of our publication, *OmniScience*, in November 2005. Our inaugural issue, supported by our sponsor the Shaw Foundation, had both the printed and the electronic versions. Our second issue in May 2006 was a web version, partly to save time and costs.

From feedback and popular request as well as the nature and extent of our news and need to share at this time, this third issue is once again in hard and soft copies.

I hope you are as eager and excited to read about your alma mater and fellow alumni even as we are in sharing the happenings and honours that have increasingly characterize our famous faculty and family. The initiatives and invitation from one of the world's great natural history museums – The Field Museum of Chicago, USA to have their first ever Exhibition in Singapore and South East Asia revealed something of their perception of our reputation and represented an opportunity for us to do something significant for Singapore and for our Alumni. Together with the Singapore Science Centre we were thus thrilled and thankful to demonstrate how different fields in Science – such as biology,

chemistry, physics, mathematics and computing – come together to help us reveal and recreate, infer and interpret the lives of extinct organisms such as these dinosaurs.

Both the Exhibition and the tie up with our Science Alumni Family Day 2006 are featured in this issue. We are also pleased and proud to showcase our 2006 Distinguished and Outstanding Science Alumni. We hope you will find these pages informative and inspiring especially as we vicariously take pride and joy in the success stories of our alumni and reflect on their sharing of the precious pearls of wisdom that we meant much to them. Details and a fuller account may be found in our website: <http://www.science.nus.edu.sg/alumni/alumniawards/>.

I hope also that as you follow our calendar of events and something in the lives and fortunes, activities and attainments of our students and staff, you will feel more and more part of the Faculty. I hope further that your very much appreciated interest in and support of the Faculty would lead you to also support our newly established Science Student Overseas Exposure Fund (SSOEF) which can truly make a difference in the lives of our needy and deserving students- our future alumni.

My colleagues and I wish you happy reading and participation in our wide ranging activities. We look forward to staying in touch and in hearing from you. Thank you also in anticipation of your increasing support.

# Academia

## Promotions and Tenure

### A/P Suresh Viliyaveetil

*Granted Tenure and promoted to Associate Professor.*

### A/P Chin Wee Shong

*Granted Tenure and promoted to Associate Professor.*

### Dr Xia Yingcun

*Granted Tenure and promoted to Associate Professor.*

### A/P Low Boon Chuan

*Granted Tenure and promoted to Associate Professor.*

### Prof Kuok Meng Hau

*Promoted to Professor.*

### A/P Mark Breese

*Granted Tenure.*

# The Admin-

## Desk

### A/P Chin Wee Shong (CHM)

*Appointed Assistant Dean (HR and Outreach) (27 Jul 2006).*

### A/P Loh Kian Ping (CHM)

*Appointed Deputy Head of Chemistry (1 Sep 2006).*

### A/P Mark Breese (PHY)

*Appointed Deputy Head of Physics (1 Sep 2006).*

### A/P Li Baowen (PHY)

*Requested to step down as Deputy Head of Physics.*

### Prof Xu Guo Qin (CHM)

*Appointed Vice-Dean (Research) (1 June 2006).*

### A/P Leung Ka Hin (MAT)

*Relinquished his role as Deputy Head of Mathematics, and is assisting Prof Xu Guo Qin as Assistant Dean in Research matters (1 June 2006).*

### Prof Hardy Chan (CHM)

*Relinquished his position as Vice-Dean (Research) (1 June 2006) and assumed the position of Co-Director of the Singapore-MIT Alliance (SMA) (1 July 2006).*

### Prof Wong Sek Man (DBS)

*Appointed Vice-Dean (Special Duties) (1 June 2006).*

### Prof Andrew Wee (PHY)

*Relinquished his position as Vice-Dean (Special Duties) after being appointed Head of Physics. (1 June 2006).*

### A/P Roger Tan (MAT)

*Remains as Vice-Dean (Undergraduate Programs).  
Assisting him will be*

**Assistant Deans A/P Chan Woon Khiong (DBS), A/P Tok Eng Soon (PHY) and Dr Wong Yan Loi (MAT) (1 June 2006).**

### A/P Lim Tit Meng (DBS)

*Remains as Vice-Dean (HR and Outreach) (1 June 2006).*

### A/P Ji Wei (PHY)

*Appointed Vice-Dean (Graduate Programs) (1 June 2006).*

### Prof Shen Zuwei and Prof Zhu Chengbo

*Appointed as Deputy Heads of Mathematics (1 July 2006).*

### Prof Sun Yeneng, A/P Goh Say Song and A/P To Wing Keung

*Appointed as Assistant Heads of Mathematics (1 July 2006)*

### A/P Feng Yuan Ping and A/P Li Baowen

*Continue as Deputy Heads of Physics (1 July 2006).*

### A/P Mark Breese and Dr Sow Chornng Haur

*Continue as Assistant Heads of Physics (1 July 2006).*

### A/P Pan Shen Quan

*Appointed Deputy Head of Biological Sciences (1 May 2006).*



## Meet Our NEW Professors:

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### Assistant Prof. Zeng Huaqiang (CHM)

- *Nanomaterials Sciences*
- *Medicinal Chemistry*
- *Chemical Biology*
- *Biomimetrics*

### Prof. Feng Qi (MAT)

- *Mathematical Logic*
- *Set Theory*

### Assistant Prof. Li Jialiang (STA)

- *Nonparametric and semiparametric models*
- *Diagnostic medicine*
- *Statistical methods in epidemiology*

### Assistant Prof. Ji Hui (MAT)

- *Computer Vision and Robotic Navigation*
- *Visual Psychophysics and Applied Mathematics*

### Assistant Prof. Xu Jinfeng (STA)

- *Survival Analysis*
- *Model Selection*
- *Semiparametric Inference*

### Assistant Prof. Chen Ping (PHY)

- *Solid-state Hydrogen Storage Materials*
- *Synthesis and Characterization of ternary and multinary nitrides, imides and amides*
- *Heterogeneous catalysis*

# In the Forefront

## *Team from NUS Science wins Lee Kuan Yew Global Business Plan Award*

Congratulations! Ph.D. student and Biological Sciences USP alumnus Mahesh Uttamchandani, Life Sciences and NOC student Low Juliang and his sister Winnie Low from Ngee Ann Polytechnic. Their team ND-array Technologies was the winner in the recent biannual Lee Ku an Yew Global Business Plan Competition. They beat 219 teams from 19 countries, receiving US\$20,000 plus \$100,000 from HSBC's Youth Enterprise Fund for the best performing local team to invest in their enterprise.

The team business plan put forward a new way for pharmaceutical companies to carry out drug screening and patient diagnosis at a much lower cost. They proposed using microarray platforms instead of the bigger microplates to screen blood samples for diagnosis. Instead of one millilitre of blood, a pin-prick sample is enough and while a microplate can screen only 96 molecules at a time, a microarray platform can screen 10,000 molecules, reducing the amount of reagent needed for the procedure.

## *ND-array Technologies were also runner-up for the 7th Start-Up@Singapore Business Plan Competition.*

### *2006 National Day Awards for four FoS faculty and staff*

*Heartfelt congratulations to our National Day Award recipients!*

#### *Public Service Star Ong Tang Kwee*

*Senior Lab Officer  
Department of Biological Sciences*

#### *Public Administration Medal (Bronze) Peter Pang Yu Hin*

*Director  
University Scholars Program  
Associate Professor  
Department of Mathematics*

#### *Public Administration Medal (Bronze) Tan Teck Koon*

*Dean of Students  
Office of Student Affairs  
Associate Professor  
Department of Biological Sciences*

## *Long Service Medal Foo Eng Tin*

*Senior Laboratory Officer  
Department of Physics*

## *Harald Niederreiter*

*Professor of Mathematics*

He was recently appointed to the International Advisory Board of the Shannon Institute of Dublin. This newly founded research institute on coding theory and cryptology is supported by the Science Foundation, Ireland.

## *Lee Hian Kee*

*Professor of Chemistry, and*

## *Mark Breese*

*Associate Professor of Physics*

Awarded Outstanding Researcher and Young Researcher 2006 respectively at the recent Centennial University Awards 2006. Faculty of Science received two out of four research awards.



## *Five from FoS receive Outstanding Mentorship Award.*

The Science Mentorship Programme gave out thirteen Outstanding Mentorship Awards out of sixty-five nominations from all tertiary institutions, polytechnics, research institutes, research centres, etc. Six such awards were given to staff of NUS, of which the Faculty of Science swept five.

The Science Mentorship Programme provides opportunities for students in the Gifted Education Programme to interact with scientists and to perform real scientific investigations. Students are exposed to the process of problem-finding, problem-solving, exploration and discovery. Students meet their mentors to work on their projects from January to July. After which, they will write a scientific paper for publication in the Proceedings of the Youth Science Conference. The Youth Science Conference showcases, through posters and oral presentations, the projects in the programme to an audience of peers, teachers and scientists.

*Our winners are:*

### *Krishnamoorthy Janarthanan*

*Graduate Student  
Department of Biological Sciences*

### *Lang Mong Lung*

*Associate Professor  
Department of Mathematics*

### *Lim Tit Meng*

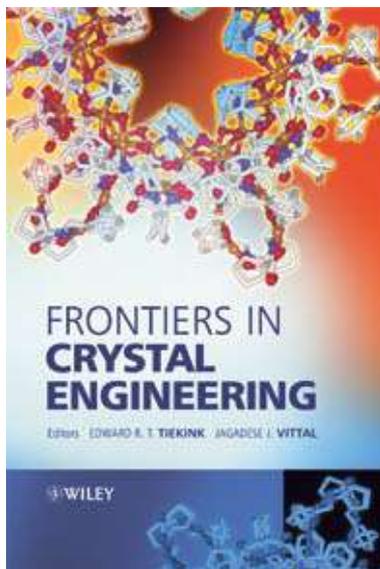
*Associate Professor  
Department of Biological Sciences*

### *Liou Yih-Cherng*

*Assistant Professor  
Department of Biological Sciences*

### *Tay Seng Chuan*

*Senior Lecturer  
Department of Physics*



## *RIPE – Research and Industry Placement Enterprise*

The Department of Chemistry has recently launched a new optional industry and research attachment programme for their students. It is called RIPE – Research and Industry Placement Enterprise. As the name suggests, the department intends to raise the level of enterprise among their students by giving them a real life experience of working in a research and technology-driven business environment.

This is on top of the compulsory placement programmes that are already in place for the applied chemistry and FST students.

The response so far has been excellent, from students, industry and research institutes. This is the fourth major initiative that Chemistry has launched this year, after CHIP, EURIP, and SCSF. These programmes help us value-add in education and help us reach out to the bigger community.

## *Faculty Notes*

### *Jagadees J. Vittal*

*Associate Professor of Chemistry  
Department of Chemistry*

Together with Dr Edward R T Tiekink (UTexas at San Antonio), edited a book, *Frontiers in Crystal Engineering* (2006). The material presented in this book represents an excellent overview of efforts to discern the principles that determine the aggregation of molecular species into crystals.

### *Huang Dejian*

*Assistant Professor of Chemistry  
Department of Chemistry*

He wrote a fast breaking paper, “The chemistry behind antioxidant capacity assays” in the *Journal of Agricultural and Food Chemistry* [2005; 53 (6); 1841-1856]. The article analyzed the chemical principles behind the different antioxidant activity quantitation methods and exposed the advantages and the limitations of the assays by putting them into perspective of a broader scope of antioxidants.

### *Andy Hor*

*Professor of Chemistry  
Department of Chemistry*

He contributed to “1,1’-P/O-Ferrocenyl Ligands in Palladium-Catalyzed Suzuki Coupling of Aryl Chlorides” in the journal, *Organometallics* [2006; 25 (5); 1120-1134]. It is one of the top five most assessed articles in the journal for the first quarter of 2006.

# Building 7<sup>th</sup> Heaven : Project Angel 7



• *Lim Keng Moh (Applied Chemistry)*

*Project Angel is an overseas community involvement project. This year, the team of 14 enthusiastic youths ventured on a journey of fun, friendship, community service and self-discovery deep into the rural areas in Bakong District, Cambodia.*

The team built a new school for Kropeu village to provide a safe and conducive learning environment for the children. The single classroom school will provide Grade 1 and Grade 2 education for over a hundred children. A communal well was also dug as part of the school facility.

In addition, old school uniforms were collected in Singapore from various primary schools and flown over to be distributed among the school-going children in Kropeu and Propeu. The team also prepared goodie packs of

stationeries to be given to children in Kropeu, Propeu and Kochea schools.

The project focuses on both community service and learning elements. Hence, the team was exposed to local way of life and culture through interaction with locals, grocery-shopping at markets, overnight camp in Kropeu village, and visit to fishing village. They

were introduced to Cambodia's history through visits to Angkor Wat, Akira landmine museum, S21 Tuol Seng Muesum and the killing fields. Facilitation sessions were conducted to stimulate participants to do personal reflections.

The host and locals are following up on the project. There are plans to acquire more benches and to hire

another teacher to start Grade 3 and 4 classes.

The locals have also taken the initiative to pave a new road to the school.



# Science Rag & Flag Day 2006

• *Michelle Seah (Applied Mathematics)*



Flag Day 2006 took place on the 8th of August this year and Science was once again seeking to do her best for charity. More than 400 of our freshmen and seniors went around Singapore flagging to raise funds for 20 beneficiaries. The amount collected would help many needy people.

The Flag committee spent more than 3 months planning for Flag Day and much hard work went into organising the event. Moreover, the Dean, faculty staff and alumni showed tremendous support.



No doubt, it is the unity of the Science Faculty both past and present which makes Science Faculty what it is – a family.

This year, the hard work of our flaggers allowed Science to earn the Gold Award for the second year running. What is more inspiring is our togetherness and unceasing spirit to give back to society, and that is what Science Flag is all about!

Flag would not be complete without Rag. The annual Rag Day was held on 12th August 2006. Rag is a day where the halls and faculties build visually aesthetic,

economical and environmentally friendly floats to show appreciation to the public for their kind donations during Flag. “Dreams – sketches from the past, portraits of the future” was the theme NUSU gave for this year’s Rag and Flag.

Faculty of Science

The preparation phase took up the three months of holidays. The committee, worked with an aim to do Science proud. During the actual competition held at the Sports and Recreation Centre in NUS, over 400 Science students turned up to support this event. We were undoubtedly the largest and loudest contingent there, drowning the voices of everyone else. This event was only made possible with the support of the Dean and Dean’s Office, both logistically and monetarily. The Physics workshop also assisted us with technical advice and support which greatly facilitated the construction of our float.

Although Science did not win any award in the Rag component, many who helped in Rag gained new friendships and learnt skills that would last them a lifetime.

## The Return of the Pharmacist!



It has been 25 years since the Pharmacy students participated at the Annual Rag Day. With the encouragement of lecturers and administrators, the students embarked on this momentous endeavour.

With only 2 months to prepare, everything was accelerated. The whole team was put together within 2 weeks. Then they conceptualized and worked non-stop - building the backdrop, sewing the costumes and practising the dance item.

On Rag Day, excitement was mixed with apprehension as they were privileged to perform for President Nathan, many administrators, lecturers and fellow students. The performance went without a hitch and the Pharmacy students achieved their RAG theme - “Don’t just dream your dreams... Live your dreams...”

# Science Students Overseas Exposure Fund



In June 2006, the Faculty of Science had a soft launch of its Science Students Overseas Exposure Fund (SSOEF).

The primary objective of this Fund is to offer an opportunity for financially-challenged Science undergraduates to experience an overseas attachment with a partner-institution, without further adding to the financial burden of their families. We hope this stint overseas will have a broadening and accelerating effect on our students' maturing process, putting them in touch with different cultures and personalities.

In this era where technological trends are shifting and new ones are emerging at break-neck pace, the Faculty of Science has an extremely important role to play. Our graduates are very much needed to supplement the talent pool in this knowledge-driven economy where Science and Technology are the main drivers.

For many years, the Faculty has produced scientifically competent individuals who had excelled in many spheres of work. Globalization has now made the competition much tougher – which is why NUS feels that a globally oriented graduate will possess the extra dimension much needed for the future survival of Singapore. Global orientation necessitates a broad-based education and a mind that is sensitive to the cultural, social



and economic differences, and indeed an overseas exposure will be invaluable. To this aim, the Faculty of Science strives to channel 50% to 70% of our students through some form of international exchange during their time in NUS. We arduously and selectively put in place many overseas exchange programmes, such the Student Exchange Program, NUS Overseas College, ANU-NUS Joint Degree programme, the French Double Degree program and our

summer exchange programs. We have also included service learning exposures such as Project Angel (which is organized by the NUS Students' Science Club annually), and humanitarian projects as part of service learning. This fulfils an aspect of a graduate's development, which is less commonly seen in Singapore and the region – and as NUS becomes more global in our positioning, our aspirations must

also include the training of a dedicated group of citizens who can use their expertise for the good of the unfortunate in less developed countries.

All the above programs provide exciting, fun, yet academically challenging environments as well as stimulating insights into the different cultures and opportunities for students to experience life outside of Singapore. The Fund is meant to help Faculty of Science students who are Singapore citizens or permanent residents who have financial difficulty.





During its soft launch on the Alumni Family Day, held in conjunction with the “DINOSAURS! A *T. rex* named SUE and Friends” exhibition, a goal of raising \$100,000 was set by the end of this exhibition. In particular, the faculty had five specially prepared bronze plated *T. rex* SUE skulls to be given away as souvenirs for donors of at least \$20,000 towards this Fund. Through the generosity of our Alumni and friends, the Faculty of Science has, to date, achieved that and more - just exceeding \$250,000 in donations and pledges. This was no means an easy feat. At this point, the Faculty would like to thank the following people and organization, some of whom have chosen to remain anonymous, for their most kind and generous donations.



When you give to the Science Students' Overseas Exposure Fund, you will not only leave a distinct footprint in the path of the National University of Singapore's Faculty of Science but more importantly, in the life of our deserving students.

### *Donors to the Science Student Overseas Exposure Fund*

#### *\$20,000 and above*

Lee Foundation  
Olivia Lum  
Yap Soh Mooi  
One donor who wishes to remain anonymous

#### *\$2,000 to 19,999*

Dr. Chung Keng Yeow  
Centennial Prof Chen Hsiao Yun Louis  
Earnings from Jamu Exhibition  
Prof. Hew Choy Leong  
Kwan Yew Huat  
A/Prof. Lim Tit Meng  
Members of the ONDL Group 2006  
Siddhartha Centre  
Dr. Wan Sai Cheong Lucy  
One donor who wishes to remain anonymous

#### *\$1,000 and below*

Dr. Ahmad Mattar  
Ang Miah Boon  
Prof. Berthold-Georg Englert  
A/Prof. Chan Sui Yung  
Chio Siew Ling  
Emeritus Professor Huang Hsing Hua  
Lee Seng Luan  
Lien Wen Sze  
Lim Jit Poh  
Lim Siew Ming Arthur  
Prof. Tan Eng Chye  
Tan Hui Boon  
Tan Hock Huat  
Tan Khoon Hui Johnny  
Tan Kiok K'ng  
Tan Seng Chye  
Wang Yiming  
Prof. Wee Thye Shen Andrew  
Prof. Xu Guo Qin

# Be Inspired

by Albert Einstein, Marie Curie, Nelson Mandela, Amartya Sen, George Bernard Shaw, Sydney Brenner and Other Nobel Laureates...

A World-Renowned Exhibition that is Not to Be Missed!



## CULTURES OF CREATIVITY THE CENTENNIAL EXHIBITION OF THE NOBEL PRIZE

26 October 2006 to 24 January 2007

### Did You Know?

- Albert Einstein was in Singapore when he was awarded and accepted the Nobel Prize in Physics in 1921
- Only 33 out of 758 Nobel Laureates are women; and women have been honoured in all categories except Economics
- To do his work in absolute silence, 1933 Physics Laureate Erwin Schrodinger sometimes uses pearls as earplugs
- Max Born who received the Physics Prize in 1954 is the grandfather of singer-actress Olivia Newton-John

Find out more about the Nobel Laureates at the exhibition!

The National University of Singapore brings you another first. Come October 2006, NUS partners the Nobel Museum to bring you the world-renowned 'Cultures of Creativity – the Centennial Exhibition of the Nobel Prize'.

Launched in 2001 to commemorate the 100th anniversary of the first Nobel Prize award ceremony in 1901, this traveling exhibition has been a great success, attracting more than 1.8 million visitors worldwide. Singapore is the 12th city to host this exhibition.

To date, 758 individuals and 18 organisations have been awarded the Nobel Prize.

Using original artifacts, visual material, multimedia and archive materials, this Centennial Exhibition presents visitors with the creative work of the Nobel Laureates and several milieus that have inspired their creativity.

Free guided tours and educational talks available.

For more information on the exhibition, visit [www.nus.edu.sg/nobelexhibition](http://www.nus.edu.sg/nobelexhibition).

### Highlights of the Exhibition

#### • Alfred Nobel and His Times

The ideas and circumstances which brought about Alfred Nobel's will and the establishment of the Nobel Prizes

#### • The Nobel System

How the Nobel Foundation was established, how the prize awards are celebrated and how the prizes have been interpreted

#### • Individual Creativity

The creative efforts of Nobel Laureates and their achievements

#### • Creative Milieus

How the environment influences the creative process

#### Date

26 October 2006 to 24 January 2007

#### Opening Hours

Monday to Saturday  
From 11am to 8pm  
(closes at 6pm on Friday)  
Closed on Sunday and Public Holiday.

#### Venue

University Hall, Lee Kong Chian Atrium,  
National University of Singapore

#### Admission Fees

Adults: \$2  
Students/Senior Citizens/NSmen: \$1  
Children (6 years & below): Free

Ticket proceeds will be used to support student bursaries.

# DINOSAURS *alive!*



On 20 May, "DINOSAURS! A *T. rex* named SUE and Friends" opened to the public at the Singapore Science Centre. This \$1 million initiative marked the first official collaborative effort between NUS' Faculty of Science and the Singapore Science Centre.

DINOSAURS! was officially opened by President S.R. Nathan and visitors were treated to the rare sight of two *Tyrannosaurus rex*, more than 10 other dinosaurs from the polar-regions, and their ancient and modern-day descendants.

As you entered DINOSAURS!, you were greeted by "Dinosaurs of Darkness". This travelling exhibition developed by the Monash Science Centre, showcased the survival of polar dinosaurs.

The main highlight of the exhibition was to meet two life-sized *T. rex* skeleton casts – the 12.8 m long SUE and STAN, measuring 12.2 m. Taking centre-stage was "A *T. rex* named SUE", a travelling exhibition created by The Field Museum in Chicago. SUE is the largest, best-preserved, and most complete – at 95%. STAN is the second most complete *T. rex* – at 75%. Although SUE and STAN were discovered in the same general area by the same team, they had never before been exhibited together.

Integrated within this dinosaur exhibition were panels put together by the Raffles Museum of Biodiversity Research and the Faculty of Science. The Raffles Museum panels explored these themes: "What are Dinosaurs?"; "Are Birds Dinosaurs?"; "Extinction:

Global, Southeast Asia and Singapore"; and "Conserving Singapore's natural heritage". Contributions from the various departments in the faculty aided in presenting a holistic experience for the visitor about the various cutting-edge research activities undertaken by the university.

Children visiting the exhibition had a wonderful time playing in the simulated palaeo-dig site. Life-size *T. rex* bone casts were placed in the sand so that children could dig them out with various tools provided. There was also a simulation ride that invited long queues.

To complement this exhibition, notable palaeontologists and others such as Sue Hendrickson, Jack Horner, Peter Larson, Christopher Bronchu, Peter Makovicky, Xu Xing and Patricia Vickers-Rich, were invited to give talks and seminars.

The exhibition ended on 20 August. More than 119,000 people visited the exhibition – far exceeding our optimistic expectations. This together with the sponsorships to the tune of some \$950,000 marked a very sweet and successful ending to "DINOSAURS! A *T. rex* named SUE and Friends".





To my Rex friend  
Rex wishes!!

Sue



20<sup>th</sup> May ~ 20<sup>th</sup> August 2006

Dinosaurs! A *T. rex* named SUE and Friends

At Singapore Science Center

Jointly Organised by: Singapore Science Center & Faculty of Science, NUS

# Distinguished

SCIENCE ALUMNI AWARDEES 2006

## Mr Ang Miah Boon

BSc (1968), BSc Hons (1969)  
Former President, Asia Pacific - McAfee

*"Take risk; Be a change agent;  
Be passionate with what you do!"*

After graduation from the University of Singapore, Mr Ang joined IBM where he served as Chief Information Officer, CFO and MD for IBM's Singapore and Brunei regions. He was also GM for IBM Global Services in the ASEAN and South Asia. He was an advocate of e-Business transformation and equal opportunity and was instrumental in creating several service offerings that put IBM in the leading edge.

In 2000, Mr Ang left IBM to join Vignette Corporation as VP & GM, Asia Pacific. He established Vignette's presence in countries like India, Japan and China.

In 2001, he joined Network Associates, later renamed McAfee, as its President for Asia Pacific. He was responsible for the strategic direction and growth of the company in the region. Mr Ang retired from McAfee in May 2005 and was credited for the growth and transformation of its business operations.

Mr Ang is a highly regarded figure in the IT industry and a sought-after speaker on leadership, business transformation and security. He was a committee member for public institutions such as the National Computer Board and the Singapore Federation of Computer Industries.

## Professor Chua Nam Hai

BSc (1965)  
Andrew W Mellon Professor, Head, Lab of Plant Molecular Biology, Rockefeller University, New York

*"There is no short cut  
to a long experiment"*

Prof Chua is the Andrew W. Mellon Professor and Head of Laboratory of Plant Molecular Biology at the Rockefeller University, New York City, since 1988. Prof. Chua has a distinguished academic career beginning with his B.Sc. in Botany and Biochemistry from the University of Singapore in 1965 and his Ph.D. in Biology from Harvard University in 1969.

Prof. Chua has held numerous distinguished lectureships world-wide and has won many honors and awards, among them in the year 2001 is the award from the Institute for Scientific Information as one of the top 15 most-cited researchers world-wide in plant and animal sciences.

Prof. Chua is consultant to and member of advisory boards of many biotechnological and biopharmaceutical companies and institutions in the U.S.A, Singapore, People's Republic of China, India, Canada and Korea. Prof. Chua serves on many editorial boards of distinguished scientific journals, such as the Journal of Cell Science and the Journal of Molecular Biology. He is also a member of the board of Directors of the Delta and Pine Land Company (which is listed on the New York Stock Exchange). Furthermore, he is corporate advisor to Temasek Holdings, Inc.

## Mr Lam Chuan Leong

BSc Hons (1970)  
Ambassador-at-large,  
Ministry of Foreign Affairs  
Chairman, Infocomm Development  
Authority and Competition Commission  
of Singapore

*“Life is a ceaseless activity  
of making sense of the past to prepare  
for the future.”*

Mr Lam has retired from the Civil Service in 2006. During his career, he has been the Permanent Secretary in several Ministries i.e. Environment, National Development, Trade and Industry, and Communications and Information. From 1981 to 1984, Mr Lam was the Principal Private Secretary to the Prime Minister.

Mr Lam has special expertise, experience and interest in many areas, especially macro economics, regulation of monopolies, competition policy, pricing and market efficiency, privatization of government services, transport economics, and the structuring of public, private financing initiatives.

Mr Lam graduated from the University of Singapore, in Physics. He completed his MBA in Harvard Business School. In 1991 Mr Lam was an Eisenhower Fellow, under the USA Eisenhower Fellowship Programme. He was a Singapore President Scholar, and a Fulbright-Hays Scholar.

## Mr Lim Jit Pok

PPA, BSc (1963), BSc Hons (1964)  
Chairman/Director, ComfortDelGro  
Corporation Ltd

*“Always remember your roots.”*

After his Hons in Physics from the University of Singapore, he won a Masters of Education from the University of Oregon under a Fulbright scholarship. Besides the PPA in 1972 he received three awards by the NTUC and the NUS Faculty of Science Outstanding Science Alumni Award for 2005.

He spearheaded the merger of the Adult Education and the Industrial Training Boards to form the Vocational and Industrial Training Board, the forerunner to the Institute of Technical Education (ITE). He served as its first CEO.

His many contributions included giving leadership to NUS, Singapore Polytechnic, Ngee Ann Technical College, the Science Council, National Productivity Board, Colombo Plan Staff College, Institute of Education, Skills Development Fund, the National Statistical Commission, the Chinese Chamber of Commerce and Industry, the Singapore British Business Council, the Sports Council, the Football Association, Singapore National Employers Federation, Orchid Country Club, Raffles Institution Board of Governors and the Pei Chun Public School.

He also spearheaded two very successful fund raising projects to honour Emeritus Prof Lim Chong Yah and the late Dr Ang Kok Peng.

Besides chairing ComfortDelGro Corporation Limited, he is also the Chairman of SBS Transit Ltd, VICOM Ltd, China Aviation Oil (Singapore) Corporation Limited, Ascott Residence Trust Management Limited and China Printing & Dyeing Holding Limited, Deputy Chairman of Surbana Corporation Pte. Ltd. (formerly HDB Corporation Pte. Ltd), a wholly-owned subsidiary of Temasek Holdings Pte Ltd and Board Director of numerous other public listed companies and private companies owned by the Singapore Labour Foundation.

## Tan Sri Dr Augustine Ong Soon Hock

BSc UM (1957); BSc Hons UM (1958); MSc UM (1959)  
President, Malaysia Oil Scientists' and Technologists' Association

*"Seeking for scientific truths is fascinating and this could be a magnificent obsession!"*

Tan Sri Datuk Dr Ong is a graduate of the University of Malaya and University of London. His academic and professional contributions include serving as: Dean, School of Chemical Sciences, Universiti Sains, Malaysia, Director-General of the Palm Oil Research Institute of Malaysia and Director in Science and Technology, Malaysian Palm Oil Promotion Council.

Recognized internationally in lipid Chemistry, he has been elected Chairman, International Society for Fat Research, President, Malaysian Oil Scientists' and Technologists' Association and Senior Fellow, Academy of Sciences, Malaysia.

Overseas honours include: Fulbright-Hays Fellow at the Massachusetts Institute of Technology (MIT), Visiting Professor at the Dyson Perrins Laboratory, University of Oxford and Fellow, Royal Society of Chemistry London and Third World Academy of Sciences.

He has 14 patents in the technology of palm oil and over 380 published articles. He was the Founder Editor-in-Chief of *Elaeis-International Journal of Oil Palm Research and Development* and is still a member of the Editorial Board. He is also President of the Confederation of the Scientific and Technology Associations of Malaysia (COSTAM). Other contributions include serving on many boards of various professional and corporate bodies.

## Dr Tan Eng Liang

PJG, BBM (L), BBM  
BSc (1960), BSc Hons (1961)  
Rhodes Scholar/ Olympian  
Vice-President, Wuthelam Holding's Ltd  
Senior Minister of State (1975-1980) & MP (1972-1980)

Dr Tan was the first regional Rhodes scholar, earning his doctorate in Chemistry from Oxford University.

He was a Member of Parliament from 1972 to 1980, serving as Senior Minister of State (National Development) from 1975 to 1978 and Senior Minister of State (Finance) from 1979 to 1980. He also chaired the Urban Redevelopment Authority and the Singapore Quality and Reliability Association. A former Olympian, he headed the Singapore Sports Council from 1975 to 1991 and still contributes as VP of the Singapore National Olympic Council and chairs its Special Training and Assistance Committee. He is the Patron for the Singapore Swimming Association and the Chinese Swimming Club.

Dr Tan is currently the VP, Wuthelam Holdings Ltd. He also holds directorships in several-listed companies.

Besides his three state awards, Dr Tan was presented in 1995, the IOC "Olympic Movement Unity" Trophy for his invaluable Services to Olympism.

He has made time for his alma mater and its projects and was a recipient of a Faculty of Science Outstanding Science Alumni Award in 2005.

## Mr Tan Kiok King<sup>PPA</sup>

BPharm Su (1963),  
BPharm Hons SU (1964)  
Former Longest Serving Chief Pharmacist (1976-1995)  
Retired Chief Pharmacist

*"Serve with dedication and pride for the betterment of All."*

Mr Tan joined the Government Pharmaceutical Service in 1966. In 1976 he was promoted Director (Pharmaceutical Department)/ Chief Pharmacist, retiring in 1995, as the longest Chief Pharmacist to date.

As Director and Chief Pharmacist, his duties included the overall management of the Pharmaceutical Service and serving as President of the Pharmacy Board. In the 70's and 80's, the Department's roles were ensuring adequate supplies for the Health Services through central procurement, self-manufacturing and distribution. The Department also enforced the Sales of Drugs Act and the Poisons Act. It also administered the Pharmacist Registration Act and ensured high standards of professional practices.

In 1969, on a Commonwealth Medical Scholarship, he obtained a MSc from the University of London. In 1981 Mr Tan was awarded the Public Administration Medal.

After his retirement, Mr Tan joined the World Health Organisation (WHO) as a consultant. He was involved in helping several nations in the Western Pacific and in ASEAN to strengthen their pharmaceutical practices. He also played a key role in ASEAN Technical Cooperation in Pharmaceuticals. Some of his recent work contributions include the report of the 18th ASEAN Pharmaceutical Working Group Meeting, in Hanoi in 2000 and the report of the Inter-Regional Workshop on Intellectual Property Rights in the context of Traditional Medicine, in Bangkok, in 2000

SCIENCE

# Alumni Family Day 2006

The Science Alumni Family Day takes centre stage in our priorities and planning because we believe in our alumni and treasure our relationships and bonding. We thus jumped at the opportunity to have Science Alumni Family Day 2006 in conjunction with the first ever in

the region *T.rex* Exhibition. Although the occasion was not quite on "home ground", this unique collection and display were significant. This being the first collaboration between the Faculty of Science and the Singapore Science Centre.

As in the case of 2005, Science Alumni Family Day was also an apt occasion for the presentation of our Distinguished and Outstanding Science Alumni Awards. The presence, as Guest of Honour, of our NUS President Professor Shih Choon Fong, and his kind help in presenting these awards added pomp and prestige to the occasion. Photos, brief citations and "words of wisdom" also occupy pride of place in this issue of *OmniScience*. Full write-ups and details may be found at [http://www.science.nus.edu.sg/alumni/dsa\\_osawards/dsa2006/](http://www.science.nus.edu.sg/alumni/dsa_osawards/dsa2006/).

In step with rejoicing over the success and status of the alumni, all present were presented with an insight into the aspirations and activities of our future alumni – the leaders and active members of our NUS Students' Science Club. Both students and alumni alike (especially the younger ones) could identify with and indeed were encouraged by the lovely and lively MC – a recent chemistry graduate.



A high point for this attentive and appreciative alumni gathering was the Dean's speech. As he welcomed, thanked and shared he also announced the establishment of the Science Overseas Student Exposure Fund to provide the required help for our deserving and needy students.

Following this ceremony, all present were treated to a viewing of the Exhibition and a reception which included a buffet dinner. As anticipated, the active and animated discussions over the buffet dinner were both lively and leisurely. Even the children of alumni and staff were catered for in not only the buffet dinner which included a chocolate fountain but also a sandpit for them to unearth their own fossil findings.

We trust this brief account and some of the photos featuring aspects of Science Alumni Family Day 2006 will help provide some information and insights for all serve as vivid reminders and memories of a vibrant experience for those present and enhance anticipation for Science Alumni Family Day 2007.



# Outstanding

SCIENCE ALUMNI AWARDEES 2006

## ◆ *Dr Chua Thia Eng*

BSc Nanyang (1964)  
Regional Programme Director, PEMSEA  
(Partnerships in Environmental  
Management for the Seas of East Asia)  
International Maritime Organization

*"Two step forward, one step back."*

His outstanding international service and in UN include being Director of ICLARM's Coastal Area Management Program (1989-1992) and its Natl. Research Support Prog. (1993), Coordinator of ASEAN/US Integrated Coastal Resources Mgt Project ('86-92), FAO Snr Aquaculturist (1980-1985) and in other key roles in the International Maritime Organization.

He founded the Malaysian Society of Marine Sciences and was its first President. He was also, inter alia, the Founding President, and later honorary member, of the Asian Fisheries Society.

He has served as advisor/consultant and Board member of numerous global bodies like the UNDP, World Bank, and oil companies

He has also contributed through his 200 + publications, editorial work and numerous positions in several universities.

International recognition include the prestigious Friendship Award for Foreign Experts given by China (1994), the First Gold Medal Award (1995) and the Honorary Member Award (2001) by the Asian Fisheries Society and the Sahak Metrey Medal conferred by Cambodia (2002).

## ◆ *Dr Han Cheng Fong*

BSc Hons (1966)  
Group Chief Executive Officer,  
Fraser and Neave

Graduating from the University of Singapore with physics honours in 1966, Dr Han obtained his PhD from the University of Birmingham. Contributing in many areas, he soon rose to the post of Permanent Secretary. He then continued his contribution to society in the private sector.

Until April 2000, he held directorships in companies related to DBS Land Limited, including Deputy Chairman and Group Chief Executive Officer of DBS Land Limited and Chairman of Raffles Hotel.

In May 2001, he joined the F&N Group as Deputy Chairman of Frasers Centrepoint Ltd. In 2004 he became the Group's MD and Deputy CEO. In 2006 he was appointed to his present position.

Up to 11 January 2004, he was the Deputy Chairman of the Board of Trustees of Singapore Management University.

([http://www.fraserandneave.com/fnn/aboutus/board\\_of\\_directors.xml](http://www.fraserandneave.com/fnn/aboutus/board_of_directors.xml))

# Outstanding

## Mr Kwan Yew Huat

BSc Pharm (1982)  
Managing Director, Pharmaforte  
Singapore Pte Ltd

*“Doing it your own way . . . The sky is the limit”*

Mr Kwan started in Guardian Pharmacy as her first pupil pharmacist. He has also worked in Astra Pharmaceuticals and Inchcape Healthcare. In 1995, he started his own company, Pharmaforte, with the vision to be the most efficient and diversified Pharmaceutical Distributor in Singapore.

He served actively in the Pharmaceutical Society in the 80's and 90's, as a council member for 7 years. In 1993, he was elected VP of the Society. From 1993, he has served as an appointed member of the Inquiry Panel under the Legal Professional Act.

Today he shares that, “Pharmacy Education has changed my life. Running your own company is hard work! However, it is very challenging and stimulating. It requires patience, determination, perseverance and a little dose of luck. It also requires one to take calculated risks. The reward for entrepreneurs will be great. The sky is the limit and you will derive immense satisfaction by doing things your own way.”

## Dr Kwok Kain Sze

B.Sc. SU (1967), B.Sc. SU Hons (1968)  
Chief Scientific Officer (Food &  
Beverage), Fraser & Neave Ltd

*“Getting a good mentor is the best thing that can happen to a person's life. Conversely, it is also most satisfying to be accepted as a mentor by others. A good mentor is both “teacher”, guardian and, most importantly, a life-long friend.”*

Dr Kwok obtained his PhD in 1972 from Cornell University, after graduating from the University of Singapore in 1968.

He joined the Fraser & Neave Group in 1981 as Chief Chemist and was appointed R & D Manager in 1982. Following his promotion to GM in 1990, he became VP & Technical Director. He has also served as the Group's Chief Scientific Officer, GM, Manufacturing & R & D of the Dairies Division, GM, Strategic Procurement and Director, Corporate R & D.

Dr Kwok was elected a fellow of the Singapore National Institute of Chemistry in 1995. Besides serving in various government and institutional bodies, Dr Kwok is a director of more than 10 companies.

## Mr Lim Ho Hup

BSc (1952)  
Past President of NUS Graduate Society  
Former Director, EDB

*“We cannot wait for things to happen. Our task is to promote change and take action.”*

As president of the University of Malaya Society in 1958, he became a member of the university council as the nominee of the Guild of Graduates at the age of 29.

By 1975 Mr Lim had served at the council level at all the key tertiary institutions in Singapore.

During the transformation of Nanyang University to the present NTU, a committee of four, which included Mr Lim, was appointed to perform the statutory functions of the vice chancellor when the position was vacant.

In parallel, Mr Lim, then a civil servant, played key roles as Director at the EDB in the 1960s, and later as the Director of Technical Education.

After EDB Mr Lim went into the private sector, and started the first petrochemical plant in Singapore in the 1970s.

In the early 80's, he also became the first president of the ASEAN Finance Corporation, which was set up by banks in ASEAN countries to promote cross border investments.

His other contributions include serving on the boards of various industries.

# Outstanding

SCIENCE ALUMNI AWARDEES 2006

## Prof Lok Wei Yin

BSc (1973), BSc Hons (1974), MSc (1975)  
Professor of Statistics, University of  
Wisconsin-Madison, USA

*"Big ideas often come  
in small installments!"*

After his three degrees from his alma mater, Prof Loh obtained his PhD from the University of California, Berkeley, in 1982. He joined the University of Wisconsin-Madison and was promoted to full professor in 1990.

He has published 60 papers, from statistical theory for interval estimation and hypothesis testing to machine learning algorithms for classification and nonparametric regression. He has developed four computer programs for machine learning.

He is currently involved in a large collaborative project on smoking cessation and another project on modeling weather patterns around the globe.

Prof Loh has served on the editorial boards of several international journals. He is a Fellow of the Institute of Mathematical Statistics and the American Statistical Association.

Prof Loh has been recognized for his excellence in teaching. To date, he has graduated 23 PhD students. He has served on review panels of the U.S. National Science Foundation and the Research Council of Norway.

## Mr Ng Kok Lip

BSc (1963), BSc Hons (1964)  
Managing Director, National Kap Ltd  
Managing Director,  
Beng Kim Holdings Pte Ltd  
Director, Hotel Royal Ltd

After obtaining his Hons, he did his MSc in statistics from the University of California, Berkeley, in 1966. He worked as a Government statistician in 1966 before joining the University of Singapore in 1967.

As entrepreneur and pioneer, he set up, in 1969, National Kap to manufacture capacitors.

Since 1989, he has been a council member of the Singapore Chinese Chamber of Commerce and Industry (SCCCI). as well as the ASEAN Chamber of Commerce and Industry since 2004. He is also the vice chairman of the Singapore National Shippers Council.

His great service to education has included the Science Centre Board (1972-1995), Vocational & Industrial Training Board (1989-1992), NUS Physical Sciences Consultative Committee (1987-1998) and the NUS Institute for Mathematical Sciences.

In other areas, Mr Ng was a member of the National Wages Council in 1989-1996 and Patron of the Yio Chu Kang Citizens' Consultative Committee in 1993-2004

# Outstanding

## ◆ Mr Eric Sandosham

BSc (1994), BSc Hons (1995), MSc (2002)  
Director (Vice-President), Decision  
Management, Citibank Singapore Ltd

*"The only dream worth having is to live  
while you are alive and to die when you  
are dead."*

– Arundhati Roy

Mr Sandosham graduated first with  
Honours in Mathematics and later a  
Masters in Statistics from NUS.

He joined Citibank in 1995 as a  
Management Associate. In 1998, he  
moved to Business Planning & Analysis,  
rising to Assistant Vice President within  
4 years. Other notable achievements  
include the development of Customer  
Profitability methodologies through the  
Financial Data warehouse, and the use of  
sales incentive compensation modeling  
and datamining.

In 2002, he was the Senior Financial  
Analyst (VP) within the Financial Control  
Department. In this capacity, he headed  
the financial analyst team overseeing  
the Sales & Distribution, and Unsecured  
Assets divisions.

In 2004, he was appointed to his  
present position handling a 25-man  
team providing business and decision  
analytics. Over the years, he has  
successfully embedded statistical modeling  
and decision science techniques as an  
optimization tool for managing business.  
He has built a best-in-class team of  
decision analysts in a leading member of  
the Singapore financial industry.

## ◆ Mrs Irene Tan-Goh Ek Ek

B.Sc. SU (1970)  
Deputy Manager, Quality Assurance of  
the Group R&D Dept in Prima Ltd  
President, Singapore Institute of Food  
Science and Technology (February 2003  
& May 2006)

*"Success is a journey, not a destination!"*

Starting as an assistant chemist in Lam  
Soon Cannery in 1970, she moved on  
to work as Quality Control Manager in  
Wander Singapore in 1971. Thereafter she  
represented the company in Switzerland  
and several foreign branches in QC system  
and training. At Asia Dairies in 1991,  
she built an effective system to perform  
tests to meet local and legal regulatory  
standards. From 1997 to 2001, she lectured  
in Temasek Polytechnic.

Her current position includes oversight of  
the company's Management System ISO  
9001:2000 & Hazard Analysis and Critical  
Control Point (HACCP).

Mrs Tan served as President of the  
Singapore Institute of Food Science and  
Technology (SIFST) for 4 terms from 2002  
to 2006. Additionally, she is a Member/  
Alternate Member of the Singapore  
Professional Centre Board of Trustees  
2005/ 2006.

## ◆ Mr Tan Hui Boon

B.Sc. Hons SU (1963)  
Senior Vice-President, Singapore Airlines

*"After spending two thirds of my career  
in management, I strongly believe that  
the discipline in Science provided me  
with grounding and equipped me for  
my work in corporate management  
and finance."*

Mr Tan studied at RI and the University of  
Singapore for his Hons in Chemistry.

He joined the Industrial Research Unit  
under the EDB as a chemist for over three  
years. On a Commonwealth Scholarship,  
he obtained a PG Diploma in Chemical  
Engineering and a MSc (BioChem Eng)  
from University College, London. He  
returned to the Singapore Institute of  
Standards and Research as an Assistant  
Director.

In 1971, he was made member of the Inst  
of Chem Engineers, UK. In 1974, he joined  
the Airport Terminal Services (SATS),  
as the Admin Manager and promoted  
to Divisional Manager in SATS Cargo in  
1978 and GM of Admin in 1980. By 1984,  
he became CEO of SATS. He served as  
Director of Finance at SIA from 1989 to  
1994, the first science graduate to do  
so. In 1994, he was made CEO of SATS  
Airport Services. In 1998, he returned to  
SIA as the Senior VP involved in strategic  
investments, retiring in 2000.

He attended management programmes at  
Sloan, MIT, and Harvard and the finance  
programme at IMD in Switzerland.

He has also served as Board Member for  
numerous companies like Raffles City and  
R.C. Hotels.

# Outstanding

SCIENCE ALUMNI AWARDEES 2006

◆ *Dr Rosemary Tan Sok Pin* ◆

PhD (2001)  
CEO, Veredus Laboratories Pte Ltd  
CEO, Genecet Biotechnologies Pte Ltd

Mobile: +65 9619 9690  
Email: rosemary@vereduslabs.com

*"An optimist sets the opportunity in every difficulty.*

*And if opportunity doesn't knock, build a door!"*

Dr Tan received her BSc from the University of Calgary before going to the Institute of Cell and Molecular Biology, Osaka University and the Department of Immunology at the Medical School in the University of Tokyo, under an EDB - Ishihara Sangyo Kaisha scholarship. She has published widely in immunology and on the genetic basis of cancer and diseases. She was a recipient of the Naito Science Award.

In 1999, she was nominated for the NUH-National Medical Research Council Young Scientist Award for her study of infectious diseases. In 2003 she was awarded the Spirit of Enterprise Award for her work in Genecet Biotechnologies, a company she founded, dealing in educational kits.

Dr Tan moved on to form Veredus Laboratories, a medical diagnostics research company.

She has more than ten years of experience in the life sciences including one year at the National Cancer Centre.

◆ *Prof Bernard Tan Tiong Gie* ◆

PPA, PBM, BBM, BBM (L)  
BSc (1964), BSc Hons (1965)  
Professor of Physics, NUS

*"It is an honour to serve Singapore as a member of the Scientific Community."*

Bernard Tan was educated at the ACS, the University of Singapore and Oxford University (DPhil in Engineering Science, 1968). He is a Chartered Engineer and Member of the Inst of Electrical Engineers (U.K.), Fellow of the Inst of Physics (U.K.), Fellow of the Inst of Physics, Singapore, and Fellow of Trinity College of Music, London.

From Lecturer in 1968, he became Dean of Science of NUS (1985-1997) and Dean of Students (1997-2002). He is currently also Director of the Centre for Maritime Studies and Chairman of the Centre for Remote Imaging, Sensing and Processing (CRISP) and the Singapore Synchrotron Light Source (SSLS).

He is Chairman or Advisory member of numerous scientific, social and professional bodies like the Singapore Symphonia Company.

His current research interests are in microwave solid-state properties and devices, digital musical analysis and synthesis, and directional perception of multiple sound sources. He has published 90 papers in international peer-reviewed journals.

Besides his 4 National Day Awards he has also received the Institute of Physics Singapore President's Medal.

# Outstanding

## ◆ *Mr Yee Shen Kuan*

BPharm SU (1976)  
Senior Deputy Director, Centre for Drug  
Administration,  
Health Sciences Authority

### *“Pioneering the new age of pharmacy”*

Reflecting on his successful and satisfying career in the Government Pharmaceutical Service, he shares, “Back then, I did not have much to fall back on except a passion for ‘A’ level chem and bio and a vague desire to help others in need. As time passed, my passion and interest in pharmacy grew. The pharmacy course in NUS wasn’t just about studying, but also the close friendships kindled during the 3 years (my batch was close-knit and many of us are still close friends today) and the various fun activities which define university life, such as orientation and the making of the float for Rag & Flag Day.”

He continues, “Till now, I consider myself fortunate in taking up pharmacy and I have never regretted doing so. Yet even more exciting opportunities await those studying pharmacy now, as we are on the edge of a new frontier drug research, development, alternative medicines, evolving regulatory environment, drug trials and tailored drugs. The challenges are great, as exemplified by the developments in various disciplines, be it in regulation, drug manufacturing, marketing or hospital pharmacy. It is imperative that we have to constantly update. It would also take a dynamic and dedicated person to pioneer the new age of pharmacy, but the rewards would be well worth the effort.”

## ◆ *Dr Yu Rongjing*

PhD (1999)  
Founder of Suzhou Goldengreen  
Technologies Ltd, Suzhou, China

Dr Yu obtained his Bachelor and Master Degrees from Xiamen University, China in 1989 and 1992, respectively. From 1992 to 1995, he was a lecturer in the Chemistry Department of Xiamen University. Thereafter, he pursued further studies in the University of Singapore, and received his Doctorate in 1999.

With his background in materials chemistry, Dr Yu set up a high-tech manufacturing company in 2002. Based in Suzhou, China, the company specializes in the production of high-end organic photo-conductors (OPCs) catering for laser printers, digital copiers, laser fax and laser multi-function machines. Supported by key government science and technology projects, Suzhou Goldengreen Technologies Ltd has developed two high-volume fully-automation production lines with strong in-house design, research and development capabilities.

Dr Yu has since expanded the company into the largest professional manufacturer in high-end OPC in China. With several patents on OPC technologies registered, he has also led Suzhou Goldengreen into international imaging/ printing markets, such as Southeast Asia, Arabian area, Europe, USA and South America.

*Pharmaceutical*

## “...how I can serve my colleagues, and make our department a better place...”

*Professor Andrew Wee*  
*Head of Physics*



*Dean convinced me to take up the challenge of being Head of Physics from July 2006, which is my first substantive management appointment at my home department. The 6 years prior to this had been spent at the Dean's Office, and my thoughts since returning “home” have largely been concerned with how I can serve my colleagues, and make our department a better place for all to work in.*

*The Physics Department has done very well in the past decade under several Heads; it has attained a strong reputation in research in several niche areas. Whilst I will continue these efforts, I would like to highlight three areas I would like to further develop:*

### *(1) Development of collegiality, and a sense of “rootedness” -*

*We may bring in top talent, but it is also important that they want to stay and contribute for the long term. Likewise, long-serving members of the department should also feel that they are needed and appreciated, even when they retire. To me, all our staff can contribute to our mission, and they must be given opportunities to develop to their full potential.*

### *(2) Increasing transparency in all department processes, including budget, recruitment, and assessment -*

*If staff know that their views are heard and can contribute directly in decision making, then naturally they will feel a stronger sense of belonging.*

### *(3) Increasing interactions between academic, non-academic, research and post-doctoral staff -*

*I plan to create more opportunities for interactions, including at departmental meetings, seminars and social events. Research collaborations always start from good interpersonal relationships.*

*All reform is ultimately local. I hope that my staff will be convinced of these priorities and work with us to make our department a better and happier place for all. These, I believe, are important ingredients to growing a successful department, one that will work together in research, teaching and outreach.*



*Prof Andrew Wee (far left) with the Deanery team as Vice Dean from 1999 til 2006.*

# room with Patch Bear

Puah Tiong Hoe B.Sc.2005



The solemnisation of our marriage on the 22nd of July this year, held at NUS Students' Science Club Secretariat, marked the transition of our four-year courtship into a life-long promise and commitment to each other.

It was through one of the orientation projects organized by Science Club that we met other in 2002, and we started our relationship "officially" at Science Club Secretariat on the 23rd of July that year. As we were both Science undergraduates, we spent much of our time together in Science Faculty (and at other dating places such as Orchard Road of course!). Having our solemnisation in Science Faculty really meant a lot to us.

We were extremely delighted and grateful that Patch, the Science Club mascot bear, was present at our solemnisation. We had a special attachment to Patch, as he "witnessed" the beginning of our courtship four years ago. We were elated to have Patch "witness" the beginning of our marriage four years later.

We would like to take this opportunity to thank the 26th Science Club Management Committee in making all these possible. We would also like to thank our family and friends who helped out with the decorations and graced the occasion. It meant everything to us. Thank you so much!

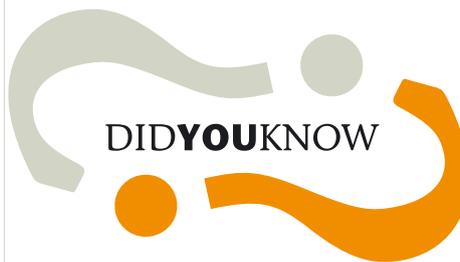
*With Love,  
Tiong Hoe and Ying Ying  
aka Mr and Mrs Puah*

1. Sir Thomas Stamford Raffles, the founder of modern Singapore, initiated idea for the Raffles Museum, which became the National Museum (Singapore). He was also a founding member of the London Zoological Society and he donated the land for the London Zoo. He described numerous new species which he collected while he was here and had many named after him by naturalists working in the region. The Raffles Museum of Biodiversity Research, National University of Singapore, houses many of these species.

2. A hypothesis is an educated guess, based on observation. Usually, a hypothesis can be supported or refuted through experimentation or more observation. A hypothesis can be disproven, but not proven to be true. You cannot prove a hypothesis. A scientific theory summarizes a hypothesis or group of hypotheses that have been supported with repeated testing. A theory is valid as long as there is no evidence to dispute it. Therefore, theories can be disproven. A law generalizes a body of observations. At the time it is made, no exceptions have been found to a law. Scientific laws explain things, but they do not describe them. One way to tell a law and a

theory apart is to ask if the description gives you a means to explain 'why'.

3. The Chinese were using aluminium as early as 300 AD. Western civilization didn't rediscover aluminium until 1827.



4. The amount of sunlight reaching the earth's surface is 6,000 times the amount of energy used by all human beings worldwide. The total amount of fossil fuel used by humans since the start of civilization is equivalent to less than 30 days of sunshine.

5. Birds are modern descendants of dinosaurs. Meat eating dinosaurs, like *Tyrannosaurus rex* and *Velociraptor*, have the same bone structure

as birds. Some dinosaur fossils have been found with what are believed to be feather impressions. Many examples of bird-like dinosaurs have been found in China and Mongolia.

6. Worldwide, 20,000 brands of beer are brewed in 180 styles, from ales, lagers, pilsner and stouts to bitters, cream ales and iced beers. Beer has been a popular beverage for a long time. Babylonian clay tablets show detailed recipes of beer making in 4300 BC. Beer was also brewed by the ancient Chinese, Assyrians and Incas. An Egyptian text of 1600 BC gives 100 medical prescriptions using beer. A few years ago, the New Castle Brewery in England brewed 1,000 bottles Tutankhamun Ale from a 3,200-year old recipe found in the sun temple of Queen Nefertiti. Commercial beer making was established in 1200 AD in present-day Germany. In 1506, the German Purity Law is issued, specifying that beer ingredients must only be water, barley, wheat and hops. Bottling of beer started in 1605. – The Best Beer

7. "To achieve the impossible dream, try going to sleep." -- Joan Klempner

# OmniSci

## Faculty of Science

*Cultivate passion  
Catalyze change  
Create future*

**Dean's Office** National University of Singapore, Block S16, Level 9 6 Science Drive 2, Singapore 117546  
Tel: + 65 6516 7641/3092 Fax: + 65 6777 4279