

News In Brief

"It is all too evident that our moral thinking simply has not been able to keep pace with the speed of scientific advancement. ... Just as the world of business has been paying renewed attention to ethics, the world of science would benefit from more deeply considering the implications of its own work. Scientists should be more than merely technically adept. They should be mindful of their own motivation and the larger goal: the betterment of humanity."

– Tenzin Gyatso, the 14th Dalai Lama and author of *The Universe In A Single Atom: The Convergence of Science and Spirituality*.

COMBINED SCIENTIFIC MEETING 2005

The inaugural Combined Scientific Meeting of SingHealth, NHG and NUS, was held from 4 to 6 November 2005. Highlights included plenary lectures by academics such as Prof Sir David Lane, world authority on p53, as well as showcases of the latest clinical and basic research in Singapore. The role and future of academic medicine was a thriving topic, as seen at the Scientific Session co-presented by Prof Vernon Oh, Prof Soo Khee Chee and A/Prof Ho Kek Yu.

Among topical issues of prominence in the news as well, the Symposium on Emerging Infectious Diseases proved to be a smash hit: seats rapidly filled to capacity and over a hundred interested visitors were turned away – ample evidence that there is interest in Infectious Diseases in Singapore and the region.

VIAGRA FOR THE LUNGS

A double-blind, placebo-controlled study showed that Sildenafil improved exercise capacity, WHO functional class and haemodynamics in patients with symptomatic pulmonary hypertension. The patient casemix contained idiopathic, connective tissue disease-associated and congenital systemic-pulmonary shunt derived pulmonary hypertension. (NEJM 2005; 353:2148-2157.)

A QUESTION ON THE BREATH

A series of nearly 18,000 patients were studied with SPECT, having been referred for cardiac

stress testing, and their symptoms at presentation were reviewed. Self-reported dyspnoea was a prognosticator for death from cardiac and other causes, even in otherwise asymptomatic patients. (NEJM 2005; 353:1889-1898.)

BEGINNINGS AND ENDINGS

A study of 8,700 people in Helsinki, where childhood growth had been recorded, showed that coronary events correlated with being small at birth, thin at 2 years, and then rapidly putting on weight. The mechanism may be related to insulin resistance, which was also correlated. Coronary risk in this sample population seemed more related to the rate of BMI growth in childhood, rather than the eventual BMI being attained. (NEJM 2005; 353:1802-1809.)

AVIAN FLU

US\$800 billion – The World Bank's estimated economic cost of a deadly global human flu pandemic.

US\$7.1 billion – President George W Bush's proposed budget for the United States' flu pandemic preparations.

2 per cent – Drop in East Asia's GDP caused by SARS in the second quarter of 2003.

"The signs are clear that it is coming." – WHO Director-General Lee Jong Wook.

"A new flu pandemic could kill up to 150 million people." – WHO Global Response Coordinator David Nabarro.

“For the first time in human history, we have a chance to prepare for a pandemic before it arrives. It is incumbent upon the global community to act now.” – Dr Margaret Chan, WHO’s official in charge of monitoring bird flu.

STEM CELL RESEARCH

The Singapore General Hospital (SGH) announced a collaboration with Chicago’s Northwestern University in stem cell transplant research, targeting autoimmune diseases such as systemic lupus erythematosus (SLE), multiple sclerosis and rheumatoid arthritis. While SGH has already carried out three successful autologous stem cell transplants in multiple sclerosis patients over the past three years, it intends to further that treatment by adopting the allogenic method. Northwestern University is where the world’s first transplant for SLE was performed.

Dr Yvonne Loh, an associate consultant haematologist at SGH, will leave for Northwestern on a fellowship programme in 2006.

STEM CELL THERAPY

TheraVita, a 2-year-old American-and-Israeli-run company based in Bangkok, offers treatment for heart disease using autologous stem cell transplants. University of Pittsburgh cardiologist Amit Patel, who helped develop the procedure in the US, says cells released into coronary arteries appear to form new vessels and improve blood flow, while those injected directly into the heart seem to grow into new tissue and improve pumping efficiency. In clinical trials reported in American medical journals, Patel’s methods have improved cardiac function by 20 to 70%. TheraVita is also exploring the alternative option of lab-grown stem cells, instead of harvesting from patients’ bone marrows. However, as the therapy is still in the experimental stage, only patients in whom all other treatment modalities have been exhausted are considered eligible. “These patients are really sick,” says TheraVita spokesman Jay Lenner Jr. “We can give people a second chance.”

THE ERA OF THE BRAIN

Thanks to the development of functional magnetic resonance imaging (fMRI), the latest in neuro-imaging technology which is making it easier to determine how our minds work, hybrid fields like neuro-ethics and neuro-economics are emerging so rapidly that ‘neuro’ may become investors’ next hot prefix.

Creating the most buzz is the International Consortium for Brain Mapping, a 12-year

collaborative effort to create an atlas of the human brain, based on scans of 7,000 brains from three continents. Data is being stored and analysed on a supercomputer at UCLA with 1 petabyte of capacity – equivalent to a book with 250 billion pages. Due for release online next year, the atlas will give researchers and physicians around the world access to virtual maps of how the brain functions, to compare with data they obtain from scans of their own subjects or patients.

“We can do very tight matches. For example, you could look for all left-handed Chinese women in their 20s with two years of college and make a match,” says John Mazziotta, who runs the Ahmanson-Lovelace Brain Mapping Center at UCLA.

More importantly, however, is neuro-imaging’s extension into the fields of politics and commerce, with various companies already utilising fMRIs to study decision-making in tasks ranging from what to have for lunch to voting for the next President.

THE VERICHIP

Applied Digital Solutions won approval from the US Food and Drug Administration last year for what it bills as “the world’s first human implantable microchip”. A radio-frequency identification (RFID) transponder the size of a grain of rice, the Verichip contains a 16-digit personal ID number that can be scanned like a bar code, providing healthcare workers access to medical records online. This could be lifesaving in an emergency, especially in patients who cannot communicate or lack other forms of identification. 58 hospitals in the US are already adopting the technology, a number expected to expand to 200 by 2007. ■

“It is not uncommon for ants to attack diabetic patients.”

– Superintendent A Adhikary of Kolkata’s Sambhunath Hospital, in response to the death of a 54-year-old diabetic who was found with ants swarming in a gaping hole in her left eye after an operation. Cause of death was deemed secondary to “post-surgery complications”.

