

SPEECH BY DR NG ENG HEN, MINISTER FOR EDUCATION AND SECOND MINISTER FOR DEFENCE, AND CHAIRMAN, SINGAPORE NATIONAL COMMISSION FOR UNESCO, AT THE L'ORÉAL SINGAPORE FOR WOMEN IN SCIENCE NATIONAL FELLOWSHIPS AWARDS CEREMONY ON 28 AUGUST 2009, AT 4.30PM AT CHIJMES HALL

Mr Christopher Neo
Managing Director, L'Oréal Singapore

Professor Leo Tan
Chairman, Science Sub-Commission for UNESCO

Ms Yena Lim
Managing Director, Agency for Science, Technology and Research (A*STAR)

Ladies and Gentlemen

INTRODUCTION

1. I am pleased to be here at the inaugural Awards Ceremony of the L'Oreal Singapore For Women In Science National Fellowships Programme which seeks to recognize the contributions of women scientists in the development of science and research in Singapore.

THE SINGAPORE NATIONAL COMMISSION FOR UNESCO

2. The Singapore National Commission (SNC) for UNESCO was inaugurated just over a year ago in May 2008 but has since introduced several initiatives to further its stated goal of promoting greater exchanges among UNESCO countries. For example, the UNESCO Educators Workshop was launched to mark the inauguration and brought together educators from the Asia Pacific region. More recently, in July 2009, the SNC sought UNESCO funding to support the participation of African principals at the 9th World Convention of International Confederation of Principals held in Singapore. This event brought together school leaders to share ideas and best practices on new developments in school leadership trends, and was well attended by more than 1000 principals from around the world.

3. In November, the SNC will also support the International Science Education Conference which is expected to be attended by some 600 policy-makers and educators, including those from UNESCO member states. The Conference will be a useful platform for discussions on common issues in science education and sharing of best practices in teaching and research on science education. We hope that the Conference will lead to useful lessons on enhancing science education which could be adapted for implementation in schools and institutions around the world.

IMPORTANCE OF SCIENCE AND TECHNOLOGY IN SINGAPORE

4. Science is a priority for the SNC, and for Singapore as a whole. As a small, resource-poor country, Singapore has benefited much from the application of science

and technology to overcome resource constraints and to expand its economic space through land reclamation.

5. We nurture an interest in Science at a young age, through both the formal curriculum and informal learning. Last year, the Science Centre attracted over 1 million visitors, most of whom were children or students. The Ministry of Education has been working with our universities, A*STAR and the Singapore Science Centre on various initiatives to expose students to science and R&D from a young age. These include curricular and enrichment activities at school, as well as out-of-classroom programmes like the Singapore Science and Engineering Festival and even attachments at A*STAR research institutes for a first-hand feel of a research career.

6. Science involves a continuous journey of discovery in which students learn through being inquisitive and seeking answers to questions. Students are introduced to science at the age of nine, where they learn basic scientific concepts, like life cycles of animals and plants. At the secondary and Junior College levels, students have the opportunity to deepen their study of science through Physics, Biology and Chemistry. Science and technology are emphasized throughout a child's general education in our schools. This emphasis to create an interest in Science has yielded results. In our secondary schools, almost all our students take Science and more than 85% pass the subject at the O levels. And in our Junior Colleges, 86% of students take Science and 98% pass the subject at A levels – one of the highest percentages in the World. This gives our students a comparative advantage for admissions to top Universities here and abroad.

7. Our polytechnics have also developed strong applied R&D capabilities, and have set up Centres of Innovation in selected areas such as marine and offshore technology and the environment and water technology to engage local industries in joint R&D activities. Our universities too play a central role in science and technology research in Singapore. For instance, NUS' role in Cancer Research has been enhanced with the establishment of the Cancer Science Institute and the launch of various Cancer-related programmes like the Gastric Cancer Consortium¹. With the support of the Academic Research Fund provided by the Ministry of Education, our universities are strengthening their research programmes and creating new knowledge in areas such as biophotonics. The work at our polytechnics and universities complement the R&D efforts at A*STAR research institutes and clinical community so that as a whole, our R&D framework is robust, integrated and attractive to industry. We will continue to invest in R&D and work with relevant industries to produce research that can be applied to enrich our lives. This focus on Science in all aspects of our education landscape will build a knowledge-based economy with a pipeline of intellectual and high value R&D talent that will ensure our continued success.

8. At the national level, the Singapore Government had earlier allocated a total of S\$13.55 billion by 2010 under the 5-year National R&D Framework. The funds have gone towards new growth areas and strategic programmes, supporting academic research, and promoting mission-oriented R&D. Close to S\$2.5 billion has been committed to R&D initiatives in three strategic areas, namely Biomedical Sciences,

¹ The Gastric Cancer Consortium, which is funded under NMRC's Translational and Clinical Research Flagship Programme, is a synergistic collaboration between NCCS, NUHS and NUS.

Interactive and Digital Media, and Environmental and Water Technologies. Singapore is committed to reach an overall spending in R&D equivalent to 3% of its GDP, with two-thirds of the expenditure from the private sector. It does take time for R&D efforts to show results but I am encouraged by the achievements of our scientists who are gaining a reputation for breakthrough discoveries through their publications and citations.

9. Talent is key to the success of science and R&D activities. From 2000 – 2007², we have grown the pool of Research Scientists and Engineers in Singapore by some 70%. Today, there are around twenty thousand researchers and scientists in our education institutions, research institutes and companies focussing on research and development in engineering and technology, life sciences, and natural sciences. Every year, our universities graduate 800 PhDs. Together with support from other research funding agencies like A*STAR, we are grooming the next generation of scientists and researchers amongst our youths.

L'OREAL SINGAPORE FOR WOMEN IN SCIENCE NATIONAL FELLOWSHIPS

10. As always, role models are important in encouraging our young people to strive for excellence in their chosen fields of endeavour. The L'Oreal Singapore For Women in Science National Fellowships, which was launched last December, therefore represents another important avenue to groom talent in science and research. Apart from recognising the significant contributions of Singapore women scientists and researchers in scientific progress, the National Fellowship awards also serve as a catalyst to encourage more young women to pursue their interests in science and research.

11. The Singapore National Commission has been working closely with L'Oreal Singapore and A*STAR to implement the National Fellowships programme. Let me take this opportunity to express my appreciation to the Jury Panel, chaired by Professor Leo Tan, Chairman of the Science Sub-Commission for UNESCO and comprising experts from the scientific community, for their efforts in reviewing the applications, and selecting the candidates for the award.

12. We are proud to acknowledge here today, the three outstanding Singapore women scientists for the inaugural L'Oreal Singapore For Women in Science National Fellowships Award. These three young women scientists were selected based on their research proposals. They have demonstrated strong passion for science and research, and are potential role models who would inspire more young women in Singapore to pursue careers in science and research. Each of them also has promising research projects in different research areas that could bring new solutions and innovations to the scientific and medical communities.

13. Dr Melissa Jane Fullwood, a Post-Doctoral researcher at the Duke-NUS Graduate Medical School, wants to find more effective ways of cancer treatment through the study of gene functions. Dr Lam Yeng Ming, Associate Professor at the School of Materials Science and Engineering, Nanyang Technological University, wants to understand and design molecules that can detect specific gas or

biomolecules, and convert solar energy to electricity. Ms Le Thi Nguyet Minh, researcher at the Genome Institute of Singapore, is hoping to develop more effective drugs targeted at neurological and pancreatic disorders.

14. Let me once again congratulate Dr Fullwood, Dr Lam and Ms Le on their Award. May you be an inspiration to other women and encourage more of them to join the scientific field. I wish you success in your research.

Thank you.

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