



PRESS RELEASE

New leads into understanding nasopharyngeal cancer (NPC)

Kuala Lumpur, 24 March 2009 - The Cancer Research Initiatives Foundation (CARIF), in collaboration with the Cancer Research-UK Institute for Cancer Studies of the University of Birmingham, Tung Shin Hospital and Sime Darby Medical Centre, has completed the first comprehensive study of 15,000 genes in human cells and has identified a small number of genes that appear to be important in the development of nasopharyngeal cancer (NPC).

This study, which was funded by Malaysian Ministry of Science and CARIF, was the first in Malaysia to investigate the molecular basis of NPC and the results have recently been published in a leading international cancer journal, [The Journal of Pathology](#).

Nasopharyngeal cancer (NPC) is a type of Head and Neck Cancer that occurs at the back of the nose and often presents with neck lumps and nasal symptoms. NPC is particularly prevalent in Southern China and Southeast Asia, and in Malaysia, NPC is the sixth most common cancer and the third most common in Chinese men. The Chinese have the highest incidence (6 out of every 10 NPC patients in Malaysia are Chinese) and unfortunately, Malaysian Chinese have the second highest incidence of NPC in the world.

NPC is linked to the Epstein-Barr virus (EBV), one of the most common viruses in humans. Intriguingly, although almost 90% of the world's population are infected with EBV, most people who are infected with EBV do not develop cancer. Scientists have found that NPC is more likely in people with Chinese ancestry and is also linked to environmental and dietary factors such as salted fish and preserved food.

The study discovered that EBV infection caused a tumour suppressor gene (a gene that protects a cell from developing into cancer) called ATM, to be lost in NPC tissue samples. This suggests that ATM normally protects cells from becoming cancerous and when EBV infects cells, this protection may be lost, thereby resulting in cancer development. New data from the study also suggests that ATM may be a marker to enable clinicians to predict whether patients are likely, or not, to respond to radiotherapy and chemotherapy.

NPC can often be treated effectively with a combination of radiotherapy and chemotherapy. Unfortunately, because more than 70% of patients present with late stages of the disease and some of these patients are resistant to many forms of treatment, a number of these patients still succumb to NPC. NPC that has metastasised (grows in other organs) or is recurrent (grows again) are most common causes of treatment failure. Therefore, there is an urgent need for more research into how we can prevent, detect and treat this endemic disease.

CARIF is one of the Malaysian laboratories that are part of a Ministry of Health and Ministry of Science research effort on NPC. CARIF's research has focused on understanding how

NPC develops, with the hope that the detailed understanding at the molecular level will enable scientists to design better ways of detecting and treating the disease.

“We are now conducting further research, in collaboration with partners in the UK and Malaysia, to determine whether this new information may be used in the diagnosis and treatment of NPC,” said Dr. Teo Soo Hwang, Chief Executive of CARIF.

In conjunction with this research effort, the British High Commission (BHC) supported a workshop on Head and Neck cancer, organised by CARIF today at University of Malaya.

Professor Paul Murray, of the Cancer Research-UK Institute for Cancer Studies of the University of Birmingham who collaborated on the NPC study, spoke to Malaysian researchers on the status and future direction of EBV research. Professor Murray’s visit was courtesy of British High Commission’s UK-Malaysia Partners in Science programme, which focuses on joint exploration in science, innovation and education.

Key supporters of the workshop included the University of Malaya, Malaysia, Institute for Medical Research (IMR), Malaysia and the Academy of Science, Malaysia.

If you would like to contribute to by taking part in nasopharyngeal cancer research at CARIF, or donating funds towards cancer research, contact Ms Yoon Sook-Yee of CARIF at 03-5639 1874 or email canre@tm.net.my.

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About CARIF

The Cancer Research Initiatives Foundation (CARIF) is a cancer charity established in 2000 to work together with others to beat cancer through research. To beat cancer, we must continue to conduct research. To beat cancer in Malaysia, CARIF is focusing on research which we believe will benefit Malaysians. We are using research to fight breast cancer among Asians, using research to fight cancers which are commonly called ‘Asian cancers’ because they are more common here, and using research to maximize the utility of Malaysia’s biodiversity in the search for anti-cancer compounds. CARIF’s research programmes pull together the strengths of local researchers, local resources and international collaborations. CARIF is dependent entirely on donations and grants for research and spends more than 95 percent of funds received into research. We are indebted to the Malaysian Ministry of Science, Technology and Innovation (MOSTI), Ministry of Health, Sime Darby Berhad, PETRONAS, Yayasan Lim, the Joseph Eu Foundation and a long list of other corporate and individual supporters for our work. For more information, please visit www.carif.com.my, email canre@tm.net.my or call Tel: +(603) 5639-1874.

About UK-Malaysia partners in Science Programme

The UK-Malaysia Partners in Science programme was originally launched as a year-long “Malaysia & UK: Forward Together” campaign in 2007 to mark Malaysia’s 50th anniversary of its independence. The campaign, which focuses on joint exploration in science, innovation and education, was such a success that the British High Commission (BHC), Malaysia, decided to establish this as a long-term strategic initiative under its current heading.

Through this initiative, BHC has mobilized efforts to encourage British researchers from Centres of Excellence throughout the UK to participate in thematic workshops and public lectures organized with local partners. These events bring researchers together to discuss the latest developments in science and innovation and to generate scientific collaborations and networks. To date, a series of joint scientific workshops, symposiums and public lectures have been held across a broad range of topics including stem cells, infectious disease, regenerative medicine, medicinal chemistry, antimicrobial and cancer research. Today’s symposium is the latest event in the series.

The “UK-Malaysia Partners in Science” programme is managed by a dedicated Science and Innovation Officer in BHC, Kuala Lumpur, who works closely with the S&I team in Singapore to foster closer co-operation within the South East Asia region. For more information, please visit <http://ukinmalaysia.fco.gov.uk> or email ChingHeong.Lee@fco.gov.uk.