cancer research malaysia
Formerly known as Cancer Research Initiatives Foundation

PRESS RELEASE

Unravelling genetic changes in Oral Cancer

KUALA LUMPUR, [30 APRIL 2009] –The Cancer Research Initiatives Foundation (CARIF), in collaboration with the Oral Cancer Research & Co-ordinating Centre (OCRCC), University Malaya; Oral Health Division, Ministry of Health Malaysia; National Institutes of Health, United States of America and University of Bristol, United Kingdom has completed a comprehensive study on genes that are associated with oral cancer.

Their research findings in relation to identifying genes causing oral cancer was recently published in an international oral cancer research journal entitled "Oral Oncology"

Oral cancer is the second leading cause of death due to cancer among Malaysia males. In Malaysia, the OCRCC is currently conducting a 5- year survival study on oral cancer, with preliminary data showed that only 42% survived 1 year after being diagnosed with this cancer.

The survival rate for oral cancer patients is low because it is frequently detected at a late stage, when it has spread to the neck. One of the reasons for the cancer remaining undiscovered is that in its early stages, it is not noticeable and can grow without producing any pain. The location of the cancer, hidden deep in the mouth, makes it undetectable until swelling begins to disrupt mouth functions such as not being able to speak or open their mouth. Studies have also found that patients often delay seeking professional advice for up to 3 months after having been aware of the symptoms.

Most oral cancers can be largely prevented by avoiding risk factors such as smoking, drinking alcohol and chewing betel quid. In Malaysia, a study was conducted in a small group of oral cancer patients and found that 85% are betel quid chewers, 55% consume alcohol and 29% are smokers.

The study focused on unravelling the genetic changes in oral cancer to better understand how these changes contribute to oral cancer development. The oral cancer team in CARIF and their collaborators analysed a total of 22,000 genes. The study looked at two different groups of oral cancer patients who were exposed to different risk factors: those who chew betel quid and those who smoked. Interestingly, the results revealed that the genes that were altered in oral cancer arising from patients who chewed betel quid are different from those who smoke. This strongly suggests that the genetic changes that lead to oral cancer development between the two groups are distinct. These genes will now be studied further to determine their biological relevance in the initiation and development of oral cancer.

According to Dr. Teo Soo Hwang, Chief Executive of CARIF, "This knowledge will help us to have a clearer picture of genetic risk factors, which will contribute to efforts to develop biomarkers that can be used to measure the progress of the disease and the effects of treatment in cancer, for clinical use in the longer term."

Early detection is the key to improve the prognosis and survival rate in oral cancer. From these studies, the Oral Cancer team in CARIF led by Dr. Cheong Sok Ching is currently developing early detection

biomarkers and developing targeted therapy in oral cancer through collaborative work with the National Institutes of Health in the United States of America, University of Tokyo in Japan and the OCRCC.

"Understanding the genetics underlying oral cancer development can us help identify individuals that are at risk or help us design 'smart drugs' that can home-in on the cancer. This is already possible with several types of cancer such as the drug Herceptin for the treatment of breast cancer. This knowledge will help both doctors and patients determine the best approaches to patient care, be it preventative, diagnostic or therapeutic," added Dr. Teo.

In conjunction with this research effort, CARIF, University Malaya, the Ministry of Health and Ministry of Science, Technology and Innovation (MOSTI) hosted a seminar entitled "Understanding Oral Malignancies". A key speaker at the event was Professor Stephen Prime, a world-renowned figure in oral cancer research from the Department of Oral & Dental Science, University of Bristol. Professor Prime provided insights on new findings in the context of the development of new diagnostic and therapeutic biomarkers for cancer.

Professor Prime's visit was part of MOSTI's Brain Gain programme which acts as a fast track mechanism for human capital development across the value chain for research, development and commercialisation in Malaysia. This national programme looks at innovative ways to tap into the expertise of top international scientists without physically relocating these individuals into the country.

If you would like to contribute to by taking part in oral 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 Cancer Research Malaysia
Cancer Research Malaysia (formerly known as Cancer Research Initiatives Foundation) is the first independent cancer research organization in Malaysia. Cancer Research Malaysia conducts research to identify better ways to prevent, detect and cure cancer for Malaysians. Cancer Research Malaysia is committed to ensuring that at least 90% of funds received are spent on research. Cancer Research Malaysia researchers work closely with experts worldwide to fight cancers that occur in Asia as well as globally.

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