

ADAPTING NEW TECHNOLOGY TO LOCAL NEEDS – A SE ASIAN INITIATIVE

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With each new advancement, the technological divide between developed and developing countries appears to widen. Nevertheless, the important contribution biotechnology can make to national development is widely recognized, and developing nations are exploring ways to benefit from the current biotechnological revolution.

In SE Asia, tuberculosis, Malaria and Dengue fever are still major public health problems and national priorities for scientific research. For the control of these infectious diseases, better drugs and vaccines are essential. Unfortunately these are neglected diseases that do not attract heavy investment by drug and vaccine producers in industrialized countries. Concerned countries in the region have to become self-sufficient and they are moving towards this goal by investing in research and development, and adopting and adapting appropriate technologies to local needs.

At the University of Malaya, a regional study was initiated a year ago to gather information on the occurrence and spread of TB and MDRTB in Malaysia, Myanmar, Indonesia and the Philippines. Similarities and differences in spoligotype patterns have been observed and further work to differentiate cluster strains by RFLP and RAPET are on schedule. The sputum smear was evaluated and found to be a satisfactory source of DNA for TB detection by PCR and for spoligotyping and resistotyping. The second phase of the regional collaborative effort will include the use of microarray technology to study genetic influence on susceptibility to disease and response to drug treatment. The information gathered will be valuable for the development of more effective drugs and vaccines.

It is hoped that this TB study will be the forerunner for other collaborative efforts leading to the establishment of a regional network of health care workers with interest and expertise in medical research, who will help to set up common databases, organism or specimen banks and other shared capacities that will ultimately impact on the control of infectious diseases prevalent in the region. In this endeavour, scientists in the region need to form partnerships with established researchers in developed countries who can provide training in areas such as study design, research methodology, data analysis and quality assurance. Together, developed and developing countries can work towards total eradication or effective control of diseases.

