

Genetic screening technology for infectious diseases

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Genetic screening technology has now expanded to include screening for infectious and communicable diseases.

Microarrays and broad-spectrum assays can identify specific pathogenic bacteria, viruses, fungi and parasites that cause infection. Identification of specific pathogenic genetic signatures would assist in differentiating pathogens from closely related, but harmless, spe-

cies. [*BMC Microbiol* 2011;11:132]

This technology involving specific assays and microarray was designed to detect infectious and communicable diseases that commonly afflict Asians and is, therefore, relevant in Malaysia, said Dr. Stephen Rudd, chief scientific officer of the Malaysian Genomics Resource Centre Berhad (MGRC).

Specific oligonucleotide probes are used in conjunction with computer software designed to detect

the genetic material of these microbes.

Pathogenic material will specifically bind to these oligonucleotide probes and allow for the identification of the pathogen. [Using DNA Microarrays to Study Host-Microbe Interactions, www.cdc.gov/ncidod/eid/vol6no5/cummings.htm Accessed on 8 August]

This technology may prove useful in determining the cause of epidemic outbreaks. The Malaysian Nipah virus outbreak of

1999 and the Asian severe acute respiratory syndrome (SARS) outbreak in 2003 are examples of such epidemics. Recent outbreaks of antibiotic-resistant bacteria have increased the need for technologies capable of differentiating rapidly evolving pathogens ie, the German E. coli infections [www.nature.com/news/2011/110602/full/news.2011.345.html Accessed on 11 August, US cases of salmonella food poisoning. www.cdc.gov/salmonella/heidelberg/080411/ Ac-

cessed on 11 August]

MGRC's new infectious disease screening services will be available via hospitals and primary care facilities throughout Malaysia. Healthcare professionals will be able to use these services to identify infectious and communicable diseases not detectable via the more traditional means of testing.

Rudd was speaking at the launch of MGRC's genetic screening services held in Kuala Lumpur recently.