Math summit to sharpen pencils for disease

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Canadian and African mathematicians and researchers will gather in Africa next week to simulate infectious disease outbreaks and to test the effectiveness of programs intended to control and contain them.

The three-day event running Nov. 11-13 in Kampala, Uganda, was organized by British Columbia-based Mathematics of Information Technology and Complex Systems (MITACS), a research network.

Mathematicians, scientists and health officials from Canada, Uganda, Kenya, Botswana, Zimbabwe and South Africa, as well as The AIDS Support Organization (TASO), an African nongovernmental HIV/AIDS service, plan at the meeting to create mathematical models to track the transmission of pandemic diseases, such as HIV/AIDS and tuberculosis.

The spread of diseases such as AIDS is "one of the most pressing public health issues of our time," said Dr. Arvind Gupta, Scientific Director of MITACS.

"Now is the time to connect with our African colleagues to identify how mathematical modelling can shed new light on how we can more effectively prevent the spread of these devastating diseases."

Doctors will use the outbreak models created by the mathematicians to test the effectiveness of their response programs.

"Since we can't allow an outbreak of tuberculosis to take place in order to see what happens, mathematical modelling is a useful tool because it provides proper and accurate ways to decide who to quarantine and how effective your quarantine needs to be," Gupta said.

Nearly 40 million people worldwide are infected with HIV/AIDS and more than one million die each year from tuberculosis.

With files from the Canadian Press