



Canadian scientists headed for Botswana to teach up-and-coming

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Burnaby, BC - Two of Canada's top mathematicians are heading to Botswana this week to teach 25 Canadian and African grad students how to control the spread of infectious diseases using equations and formulas.

The Canadian mathematicians - Dr Abba Gumel, professor of mathematics at the University of Manitoba in Winnipeg and Dr Troy Day, associate professor of mathematics, statistics and biology, from Queen's University in Kingston - are members of Mitacs, a national math research network that brings together researchers, companies and governments in a collaborative effort to solve problems of key importance to society and industry.

Drs Gumel and Day will link up with colleagues from Makerere University in Uganda, the National University of Science and Technology in Zimbabwe and University of Botswana, to lead the grad students - from the University of Guelph, Queen's University, University of Western Ontario, University of Ottawa, South Africa Nelson Mandela University and National University of Science and Technology of Zimbabwe - through an intense two-week workshop that will teach them the latest math tools and techniques to help predict outbreaks of diseases like malaria and tuberculosis and control their spread.

As Dr Gumel explains, by the end of the workshop - which runs August 19-29 - the students should have an in-depth understanding of the role that mathematics can play in major public health crises, such as the SARS outbreak of 2003, in which Mitacs played a key role by establishing a research team to model the spread of outbreak, and providing public policy recommendations to the Canadian government.

"The goal of this workshop is to equip these math students with the research skills so that they will be in a position to play integral roles in the control of diseases such as HIV/AIDS, malaria and tuberculosis," he said.

"Collaborating across international borders and building a critical mass of highly-skilled researchers with international connections will help to develop coordinated world-wide responses to public health challenges," said Dr Arvind Gupta, scientific director of Mitacs.

"Infectious diseases are a global problem; viruses and bacteria do not require visas to enter countries, and do not remain within geographical borders," said Rolina van Gaalen, a University of Western Ontario mathematical biology grad student who will attend the Botswana workshop. "Mathematical modelling has the power to play a role in developing new solutions to these critical health challenges," she added.

This event, co-funded by Industry Canada through the International Partnership Initiative, is part of a series of activities of the Mitacs Canada-Africa Biomath Network - formally launched in Uganda in November 2007 - which aims to foster collaboration between mathematical and public health scientists from Canada and Africa in areas pertaining to the use of mathematical sciences to combat the spread of emerging and re-emerging diseases of public health importance.

"Mitacs recognizes that the globalization of the modern world makes every country, including Canada, vulnerable to diseases emerging and spreading in other parts of the world," said Dr Gupta. "It is crucially important for Canada to participate in a concerted effort to develop training and research programs aimed at finding effective methodologies to combat the spread of diseases around the world and also help build and sustain a strong, local research capacity to handle such tasks."