

## In memory of Dr Roland Brousseau

Employees at the NRC Biotechnology Research Institute (NRC-BRI) are mourning the loss of Dr Roland Brousseau, a valued colleague and respected researcher who passed away suddenly on May 26<sup>th</sup> in Montréal.

Dr Brousseau's career at NRC spanned more than three decades. In 1977, after obtaining his PhD in Chemistry at Harvard under the Nobel Prize laureate Dr. Robert Woodward, Roland joined the NRC Institute for Biological Sciences (NRC-IBS) as a research officer. While at NRC-IBS, he helped to create the first synthetic human insulin gene with Dr Saran Narang.

In 1985, he headed the DNA Synthesis Group at NRC-BRI, and later went on to become Leader of the Environmental Genomics Group. In 1986 he helped to form the Biocide network, a consortium of Canadian universities, NRC and the Canadian Forestry Service.

His research focused on the area of bacterial pathogens, including insecticidal pathogens of interest in biological control and the identification/characterization of complex microbial communities in human health and the environment using DNA microarrays. Roland was one of the early pioneers in mode of action studies with Bt toxins.

When Jean-Louis Schwartz joined his team in 1991, together they started to characterize some of the initial steps in the binding, integration and pore-forming abilities of Bt toxins. Along with the crystallography group at his institute, Roland formed part of the team that determined the atomic structure of the first lepidopteran Bt cry protein, a major step in advancing our knowledge of the physiology of these insecticidal proteins.

Due to his expanding interest in DNA microarray technology, Roland developed the CryArray DNA chip allowing the screening of all known classes and subclasses of *cry* genes in Bt isolates. Another exciting feature of the chip was that it was

designed to discover unknown genes having only partial similarities to known gene classes.

Apart from his interest in toxin structure, Roland was also interested in the genetic responses of lepidopteran insects to Cry toxins which lead to the development of a *Choristoneura fumiferana* stress gene chip.

While attending Biocontrol Network conferences, discussions with Dave Theilmann and Martin Erlandson led to Roland expanding his DNA chip expertise to include designing a baculovirus genomic chip in order to follow temporal gene expression during infection.



**Dr Roland Brousseau**

Roland was an active member of the Biocontrol Network and served on the organizing committee for the 2007 SIP Annual Meeting in Quebec City.

He co-authored more than 100 peer-reviewed research articles.

Roland Brousseau is survived by his wife Ann Marie and son Patrick.