

# Press Release

FOR IMMEDIATE RELEASE

## Renowned research scientist gives talk at Laurentian University

### Dr. Carlos Monreal introduces “Intelligent Fertilizers” nano-technology research

Sudbury, ON, March 2, 2009—Dr. Carlos Monreal of Agriculture and Agri-Food Canada spoke before an audience of students, professors and researchers at Laurentian University this past Thursday. He presented ground-breaking new research in the field of nano-technology and its applications to agriculture.

“The research aims to develop Intelligent Fertilizers that release nitrogen into the root system only at the opportune time in the growing season,” says Monreal. “The scale of these fertilizer particles we’re dealing with is unimaginably small, less than 100 nanometers on average.”

“We’re very honoured to host Dr. Monreal, he is a truly forward thinking scientist whose research deals in areas that modern science has scarcely begun to explore,” said Grame Spiers, Director of MIRARCO’s Centre for Environmental Monitoring. “We’re discussing some interesting potential collaborations between MIRARCO and Dr. Monreal in the field of bio-mining.”

The research in question is part of an Agriculture and Agri-Food Canada effort to make Canada a leader in food safety, innovation, and environmentally responsible agricultural production. His research into Intelligent Fertilizers is finding ways to make better use of various inorganic and organic nitrogen sources.

Monreal’s accomplishments are too numerous to list, but he was recently recognized for his contributions to climate change research. The President of Chile, Dr. Michelle Bachelet and her Government gave Monreal official recognition as a member of the multi-government scientific team to the Intergovernmental Panel on Climate Change (IPCC) of the United Nations which led to the joint Nobel Peace Prize with Al Gore in 2007.

**Dr. Carlos Monreal-** Dr. Monreal was born in Santiago, Chile and graduated as Agricultural Engineer from the Faculty of Agriculture of Concepción University in 1975. He obtained his Ph.D. in soil microbiology and biochemistry from the University of Alberta (1987) in Canada. He joined Agriculture and Agri-Food Canada (AAFC) in 1984 and has worked as a research scientist and science advisor since then. From 1990 to 2000, his research work focused on the science of soil carbon, soil quality, and Climate Change. As a Science Advisor, Dr. Monreal was part of the Canadian Government team negotiating international agreements on Climate Change. He provides scientific advice to policy makers and the Office of the Minister of Agriculture. He has managed and led national research and development (R&D) programs on renewable energy and environmental health. From 2004 to present, he leads multidisciplinary scientific efforts to develop nano-devices for Intelligent Fertilizers. In addition his work focuses on the use of nano and biotechnology for the development of innovative bioprocesses and bioproducts for the conversion of agricultural biomass. He has worked closely with private industry, and published 90 scientific articles and book chapters. Dr. Monreal is a Canadian scientist who shares the 2007 Nobel Peace Prize awarded jointly to the Intergovernmental Panel on Climate Change (United Nations) and Mr. Al Gore.

**MIRARCO**— Mining Innovation, Rehabilitation and Applied Research Corporation, founded in 1998, is a not-for-profit applied research and technical service company formed through collaboration between Laurentian University and the private and public sectors. MIRARCO is located in Sudbury, Ontario, Canada, and serves as an innovation bridge between researchers and industry. Visit [www.mirarco.org](http://www.mirarco.org) for more information.

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