
Federal Networks to Focus on Bioconversion, Pollination

U of G to serve as hub of two new strategic research networks funded by NSERC

BY LORI BONA HUNT

UOF G IS HOME to two new \$5-million federal strategic research networks. Here, world leaders will combine their knowledge and research expertise to help generate sustainable sources of renewable fuels and address the global pollinator shortage.

The Guelph networks were among nine that were unveiled last week, with each receiving about \$1 million a year for five years from the Natural Sciences and Engineering Research Council.

The U of G-based Bioconversion Network and the Canadian Pollination Initiative (CANPOLIN) will be led by Prof. Hung Lee and recently retired professor Peter Kevan, both of the School of Environmental Sciences.

"This is phenomenal news for Guelph," says Prof. Kevin Hall, vice-president (research). "The fact that we were chosen to host two of these important initiatives speaks volumes about the University's reputation in the life sciences and our ability to play a leading role in addressing global challenges such as our de-

pendence on fossil fuels and pollinator decline."

The Bioconversion Network aims to develop energy-efficient, commercially viable and environmentally sustainable biomass conversion processes. The ultimate goal is to produce new fuel, chemical and energy products.

"Society has an overreliance on petroleum, and it undermines long-term energy security and stifles economic growth," says Lee, a U of G faculty member since 1986. He'll be the network's scientific co-director

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Pollinator Decline a Serious Threat

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with Jack Saddler, dean of forestry at the University of British Columbia.

“We want to generate innovations that will benefit both the environment and the economy, and help Canada make the transition from a petroleum-based economy to a biobased one.”

Plant biomass is a carbon-neutral source of energy, and most of the substrates for bioconversion can be obtained from dead plants, making it more environmentally friendly. It's also readily available and renewable.

The Bioconversion Network will bring together a core team of 12 researchers from five universities. Together with industry partners, they will work to overcome the various scientific and technical barriers standing in the way of turning Canada's vast quantities of forest waste residues into fuels and chemicals. Specifically, they want to focus on ways to improve process efficiency and lower production costs.

CANPOLIN includes 44 researchers from 26 institutions and is directed by Kevan, who's been studying pollinators for more than 30 years and was just elected a Fellow of the Royal Society of Canada.

The diversity and abundance of insect pollinators are in a global state of decline due to such factors as disease, pesticide exposure, malnutrition, habitat loss and climate change. In Canada, 28 species of butterflies and moths and two bee species are known to be at risk. In the United States, honeybees have declined 30 per cent in the past 20 years.

This represents a serious threat to natural ecosystems and crop production, researchers say. It also has an economic toll because the value of insect pollination to Canadian agriculture is an estimated \$1 billion.

CANPOLIN researchers will examine all aspects of pollination, including pollinator health and conservation, plant gene flow, the impact of climate change, economics and future management needs.

NSERC created its strategic network grants program in 2005 to boost research in targeted areas that could strongly enhance Canada's economy, society and environment. It funds large-scale projects that bring together university researchers, industry, government and other agencies to accelerate research and training.