

A TARGETED APPROACH TO TOXIC SUBSTANCES RESEARCH IN CANADA

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Introduction

The Toxic Substances Research Initiative (TSRI) is a Canadian Federal Government Initiative to invest \$40 million over four years (1998-2002) to promote scientific research into the links between toxic substances, environmental damage and adverse human health effects. The emphasis of the Initiative is to advance the knowledge base needed to define and reduce the risk of adverse effects of toxic substances on Canadians and their environment through collaborative research in targeted research areas. The TSRI addresses specific health and environmental issues by funding research in five priority areas: persistent organic pollutants, toxic forms of metals, endocrine disrupting chemicals, urban air pollutants, and cumulative effects of toxic substances. The following priority knowledge needs for EDCs were identified:

- 1) Identifying outcome measures that are predictive of adverse effects in ecosystems and humans exposed to various endocrine disrupting chemicals.
- 2) Investigating the linkages between ecological and human health effects resulting from exposure to environmental levels and mixtures of endocrine disrupting chemicals.
- 3) Developing screening tools to evaluate the potential physiological effects of endocrine disrupting chemicals in the environment.
- 4) Determining the sources of and sinks for endocrine disrupting chemicals in the environment and prioritizing substances for further testing.
- 5) Characterizing dose-response relationships for environmental and human health effects in order to determine risks associated with endocrine disrupting chemicals.
- 6) Determining mechanisms of action for endocrine disrupting chemicals and environmentally relevant mixtures where regulatory decisions are required.
- 7) Determining the pharmacokinetic and pharmacodynamic effects of endocrine disrupting chemicals where regulatory decisions are required.

The Initiative also meets a government commitment in the renewed Canadian Environmental Protection Act to conduct research on endocrine disrupting substances. Research has been funded in each of the priority research envelopes, involving researchers from government, university and industry, as well as some local communities. Results of the funding recommendations will be described, along with a description of the kind of research projects that have been funded and progress to date in the research areas for which there are EDCs related projects.

