

#SupportTheReport #FundTriCouncil for Canada's future

- **Canadian science is in crisis.** Federal research funding fell by 35% over a decade.¹ The current government has only made up 3% of that so far. Outstanding research proposals are being turned down by Canada's TriCouncil funding agencies for lack of funds.
- **Canada is falling behind other countries.** While other countries are ramping up for the future by investing in research, Canada has fallen out of the top 30 countries.¹
- **#FundTriCouncil for jobs.** Large portions of research grants are used to pay staff and students.² Scientists are laying off their staff.
- **#FundTriCouncil to train the next generation of innovators,** the engine of a sustainable, knowledge-based economy. Bright students are stepping away from research or are being turned down by professors who can't afford to support them.
- **#FundTriCouncil for business.** Research helps local economies.³
- **#FundTriCouncil to invest in our future.** Multiplier effects of fundamental research and research institutes range from 2.2 to 2.5, meaning that every \$1 invested results in \$2.20 to \$2.50 in direct and indirect economic activity.^{4,5} Estimates of the annualized return on fundamental research investment range from 20% to 67%.⁴ Health research has been shown to pay for itself and start saving Canadian health care dollars within 5 years.⁶

Tell **@Bill_Morneau** & his parliamentary secretary **@JoelLightbound** to please **#FundTriCouncil for Canada's future:**

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¹Naylor et al., *Gov Canada*, 2017 ²Weinberg et al., *Science*, 2014 ³Goldschlag et al., *NBER*, 2017

⁴Macilwain, *Nature*, 2010 ⁵Umbach, *AFMC*, 2014

⁶de Oliveira, *CMAJ Open*, 2013

The broadband internet that many Canadians enjoy is thanks to **fundamental research** in fibre optics. This field of research is now leading to sensors that can better detect problems in bridges or in pipes carrying oil and gas to **keep Canadians safer.**

Canadians are more likely to survive a car crash these days partly thanks to materials scientists, who have created materials that absorb more energy in a crash. Researchers in this area continue to develop better and less expensive materials to make **safer** cars and windows, **better** medical treatments, **less expensive** housing materials, **cleaner** energy, and many **useful** products.

Researchers in the arts and humanities help Canadians find meaning. Canadian researchers and artists developed a play, "Cracked: New Light on Dementia," whose sold-out shows are helping Canadians **see dementia in a new light, and live** with their disease or with that of a loved one.

In agricultural research, Canada is a world leader in crop development and research on plants that help with ground cover and soil stability. Continued research will help Canada maintain a **safe food supply in a changing environment.**

Artificial intelligence is now a **growing sector of the Canadian economy** that may not have existed here if it weren't for research investments that the government of Canada made decades ago in mathematics, computer science, and other fields.

Research in Canada led to the discovery of insulin, which has **transformed the lives** of people with type 1 diabetes. This type of diabetes, caused by a malfunctioning immune system, used to be a death sentence for children and adults. Health researchers in Canada continue to make advances that **improve the lives of Canadians** with health conditions.

Fundamental research **helps avoid tragedy in Canadian families.** Basic research decades ago has led to **new treatments** like immunotherapy for cancer. Research in animal models has led to a **30% lower risk of death for premature babies** and a 50% lower risk of developmental delays.

Researchers in education and social sciences are finding new ways to combat discrimination and bullying in elementary schools. Research like this helps to **keep Canadian kids safer** now and builds a **better Canada for the future.**

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