

Secure an Innovation Supercluster in the Health and Life Sciences

(Fact Sheet 3)

Year in Review: ISED's website describes the prowess of Canada's Health and Life Sciences Sector in terms of the pharmaceutical, biologics, device and government, academic and industry partnerships. Despite this, there is no infrastructure to support it. With the inception of an innovation agenda, we'd like to see the Health and Life Sciences Sector in Canada united.

1. Many collaborators in the health and life sciences; no organizing framework or table



...and others.

2. Big collaborators are big R&D Spenders:

- Of Canada's top 100 R&D private sector spenders who spend 12.8B in total, about one quarter are health and life science companies.
- Canada's research hospitals contribute \$2.6B in total R&D spending ~ 10% of the total top 100 private sector R&D spenders in all sectors and about 25% of all R&D in universities.
- Between 2004 and 2013, hospital researchers were noted by STIC as the most frequent collaborators in the economy having co-authored 13% of all university publications.
- Clinical medicine, biomedical research and biology are high collaboration areas next further behind is aerospace.

3. Health and Life Sciences Puts Canada on the World Stage

- Canada conducts about 10% of the world’s active clinical trials; about 40% of these occur in research hospitals. About 10% of all medical device companies are spinoffs.
- Every research hospital has one or more Canadian or World “first” that has hit the media in the past five years
- Canada is the 10th largest world market for pharmaceuticals: 10 companies make up 50% of the market share in Canada. We have 2% of the world market for devices.
- Canada’s research hospitals have a total budget (R&D and otherwise) of \$45B about 6% of this is R&D.

4. Health and Life Sciences are stable employers and contributors to society

- Canada’s research hospitals employ over 650,000 Canadians including an estimated 66,000 people in R&D. Canada’s pharmaceutical companies employ an additional 33,000.
- Canada’s research hospitals treat 99% of the top 13 most rare and complex diseases, support 55,000 trainees, and 45,000 volunteers.

Recommendations:

- (1) A more coordinated health and life sciences research ecosystem and roundtable (Figure 1)
- (2) A supercluster for the health and life sciences to unite all partners and compete globally
- (3) Full recognition and independent application privileges for research hospitals

Figure 1: Proposal for a more coordinated health and life sciences research and innovation ecosystem

