

# INNOVATION: It's a Constant Process



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**I**nnovation drives Canada's pharmaceutical sector. It's a constant process and it's what propels us to find the next generation of treatments that save lives. Innovation is our ultimate goal – we are always striving to find healthcare solutions that help Canadians live longer and healthier lives.

Canada has world-class research facilities, scientists and researchers who have contributed to the numerous ground-breaking discoveries influencing global health. Canada is also a cost-competitive place to conduct research amongst developed countries.

We have a great cluster of life sciences companies and sources of investment capital in Canada. While Canada faces some hurdles with regards to intellectual property, regulatory and market access, the business environment in Canada is ripe to welcome more life sciences research.

Canada's pharmaceutical industry contributes to over \$6-billion in global exports. Here at home, Canada's innovative pharmaceutical sector directly employs over 12,000 people and creates over 21,000 indirect jobs.

For example, Sanofi Pasteur Limited has invested \$100-million to open a new vaccine manufacturing facility in Canada, which will serve as its North American

Centre of Excellence in global analytical and bioprocessing R&D. In addition, Hoffmann-La Roche Limited invested over \$190-million to establish a global Pharmaceutical Development in Canada, creating more than 260 jobs. This site is one of six the company has established around the world, and manages operations for all stages of global clinical trial research.

While we're making these great contributions to intramural R&D and manufacturing, our industry is moving towards newer types of R&D investment models, such as targeted financing and virtual research and open innovation models.

By partnering with academic/clinical research institutes, commercialization centres and virtual research centres, our industry is expanding its capacity to conduct R&D work in Canada. These numerous groups are powered by approximately \$10-billion in total funding to work with industry to drive innovation.

With targeted financing, our industry contributes, along with other public and private investments, to create "risk" capital funds, allowing the industry to gain access to promising technologies while sharing the financial risk. These funds offer \$1.5-billion dedicated to life sciences companies looking to partner with larger biopharmaceutical companies.

For example, our industry has sponsored \$6.7-billion in research funding to academic and clinical research institutes. We've made significant contributions to universities like the University of Toronto, McGill University and the University of British Columbia to partner on research discoveries.

Two of Rx&D's member companies, Hoffmann-La Roche Limited and Merck Canada Inc., are partnering with the Montreal Heart Institute to fund basic and translational research into cardiometabolic disease. Another two member companies, Janssen Inc. and

Pfizer Canada Inc., have partnered with the Ontario Institute for Cancer Research (OICR) to fund innovation, technology and translational research. This partnership is paying off – between 2009 and 2013, the OICR has filed for 31 licences on research discoveries.

We're also partnering with organizations to encourage commercialization of discovered-in-Canada therapies. Across the country, the NEOMED Institute, MaRS Innovation and the Centre for Drug Research and Development benefit from industry partnerships to work on commercializing new, potentially life-saving and life-changing therapies.

Industry is also stimulating R&D through venture capital funds that provide support for the advancement and development of promising technologies, while minimizing risk. Examples include in-house, corporate venture arms, such as those like the Novartis Venture Fund (NVF) or Lilly Ventures, and partnerships

such as GSK's venture capital firm SR One and the Life Sciences Innovation Fund in Canada.

But these new models of innovation in research and development aren't being recognized by Canada's Patented Medicines Prices Review Board (PMPRB). While over 28 years ago, Ottawa strengthened protection on new discoveries, our members committed to invest ten percent of annual sales revenues in pharmaceutical R&D. We've met that commitment over and over again, but these new models of research described above do not fit into the limited definition of what counts as scientific R&D.

It's clear the model for life sciences research and innovation in the twenty-first century has changed. We are investing in new, more collaborative initiatives with Canadian universities, hospitals, centres of excellence, early stage biopharmaceutical companies, and health charities.

We can do more to promote Canada's capacity for life sciences research. We must act urgently so that we can attract more global dollars and keep this high-quality research here at home.