

## TORONTO REGION: A LEADER IN BIO LIFE SCIENCES

### THE TORONTO REGION IS....

- One of North America's largest health sciences complex:
  - 60 hospitals including 12 research hospitals affiliated with medical schools at the **University of Toronto** and **McMaster University** (Hamilton)
  - 37 medical institutions
  - 8,200 physicians
  - 54,000 health professionals
- The location of one of North America's largest biomedical sectors:
  - More than 1,200 life sciences firms
  - 140,000 employees
  - \$8 billion in pharma revenues in Ontario (ethical, generic and OTC)
- A global research centre with sophisticated resources such as:
  - **Structural Genomics Consortium**, a \$30 million partnership between the University of Toronto, Oxford University, Karolinska Institute, Merck, Novartis and GlaxoSmithKline
  - **Toronto Centre for Phenogenomics**: a \$69 million state-of-the-art research facility studying mouse models of human disease, is the most advanced of its kind in the world
  - **Terrence Donnelly Centre for Cellular & Biomolecular Research** at the University of Toronto: centre for integrative biology, disease modeling, and functional imaging
- Home to **MaRS Innovation**, a partnership of 14 Toronto-based academic research institutions to accelerate the commercialization of promising research from its members

### MEDICAL & ASSISTIVE DEVICES

- A dynamic cluster of more than 360 innovative companies in 8 sub-regional hubs offering a wide range of products and services, including: diagnostics, monitoring and imaging equipment, surgical equipment, medical technologies, implants, and assistive products.
- **McMaster University** and **University of Toronto** serve a strong focal point for research:
  - More than 50 academic programs related to medical devices and biomedical engineering
  - 20 Canada Research Chairs
  - \$52 million in research funding (1998-2008) from granting councils

### ONCOLOGY

- More than 620 clinical trials in progress, drawing from broad catchment area of 7.2 million residents (1,100 clinical trials across Ontario)
- **Ontario Institute for Cancer Research** (Toronto) received \$347 million over five years from the Ontario government and serves as the Secretariat for the newly-formed **International Cancer Genome Consortium**
- Comprehensive range of research activity: basic, drug discovery and development, and clinical



## STEM CELLS & REGENERATIVE MEDICINE

- Stem cell research activity in the Toronto Region is comparable to Boston and California
- 78 scientists and principal investigators focus on five broad areas: cancer stem cells, adult stem cells, embryonic stem cells, regenerative medicine, and bioengineering/tissue engineering
- Significant strategic developments in this research sector based at five major institutions:
  - **Stem Cell and Cancer Research Institute**, McMaster University (Hamilton);
  - **McEwen Centre for Regenerative Medicine**, University Health Network (Toronto);
  - **Cancer Stem Cell Consortium**, Ontario Institute for Cancer Research (Toronto);
  - **Institute of Biomaterials and Biomedical Engineering**, University of Toronto;
  - **Developmental and Stem Cell Biology Program**, Hospital for Sick Children (Toronto)
- Foundational research proving the existence of stem cells conducted at Toronto's Princess Margaret Hospital in 1961 by Drs James Till and Ernest McCullough

## IMMUNOLOGY & VACCINES

- **sanofi pasteur**, the world's largest company devoted entirely to human vaccines, is based in the region with 1 of 2 global research centres, and 1 of 3 global vaccine process development and production centres
- Foundational research in identifying and cloning T-cell receptor genes conducted at Toronto's Ontario Cancer Institute in 1984 by Dr. Tak Mak

## NEUROLOGY & PSYCHIATRY

- **Centre for Addiction and Mental Health** (Toronto): largest health sciences centre devoted to mental illness and addiction in Canada; more than 100 full-time scientists
  - New \$250 million campus currently under construction will house R&D and patient care
- Internationally-recognized research institutes: **Krembil Neuroscience Centre**, part of the University Health Network (Toronto), and **Rotman Research Institute** at Baycrest Centre (Toronto)

## TRRA OFFERS R&D INVESTORS:

- Key information about the region, including population and business data
- Intelligence about critical location factors
- In-depth analysis and understanding of research and innovation issues
- Quick access to regional leadership (governments, business and institutions)
- Reliable navigation and introductions to the most relevant regional resources

For more information, please contact:

Sam Lee, PhD  
Director, Life Sciences  
[slee@trra.ca](mailto:slee@trra.ca)

