

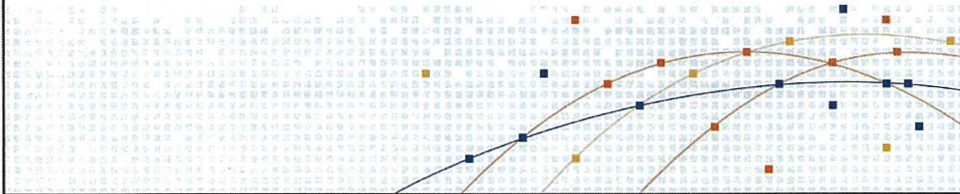
# Agreement Process - NExT

- Applications – SEP members and Federal employees are subject to Confidentiality in relation to NExT Applications. Conflict of Interest (COI) conditions do apply.
- CDA's (Confidential Disclosure Agreements) – Necessary when bringing in non-NExT staff and outside experts for additional review.
- Collaborative Agreements – A variety of mechanisms necessary to memorialize interactions between the applicant and the NExT program, will vary based on stage/type of project. (CBC Participant's agreement, MTA, CTA, Collaborative Agreement, CRADA).



## CDRD's Mission, Model and Milestones

March 2012



### The Need for CDRD

- Governments continue to increase investment in health research but returns have not been maximized
- Venture capital investments continue to decline
- A gap between academic discovery and commercialization by industry persists
- Global pharma faces patent expirations and escalating drug development costs

## Bridging the Gap Between Discovery and Commercialization



Discovery

Commercialization Gap  
Infrastructure, expertise, funding

Commercialization

- Academic research doesn't take discoveries to an 'investable' point
- Traditional granting sources and angel funds are not sufficient to fuel the growth of the life sciences industry given the lack of venture funds
- Commercialization gap exists between discovery and commercial opportunity

## The Centre for Drug Research and Development Mandate

**CDRD** was created to de-risk promising discoveries stemming from publicly-funded health research and transform them into commercially viable opportunities for the private sector....

The **Private Sector** is then responsible (and now much better positioned) to develop them into new treatments for patients....

And **Government** realizes the maximum economic and societal ROI on their research investment....and (hopefully) re-invests back into research.



## Vision and Mission

### Vision

*To transform the culture of scientific innovation and commercialization impacting human health*

### Mission

- *To be a global leader in translating academic discoveries into new medicines*
- *To bridge the commercialization gap between drug discovery and private investment by creating partnerships between academia, industry, foundations and government*
- *To provide the next generation of uniquely-trained highly qualified personnel to drive the development of the medicines of tomorrow*

## This Type of Translational Research Vehicle is Critical

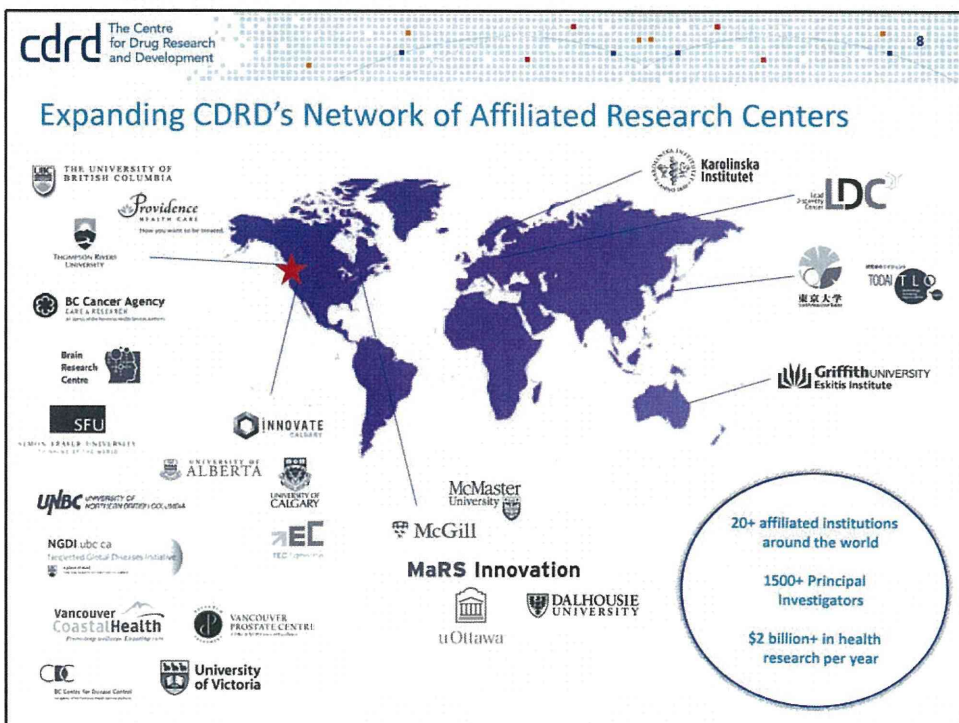
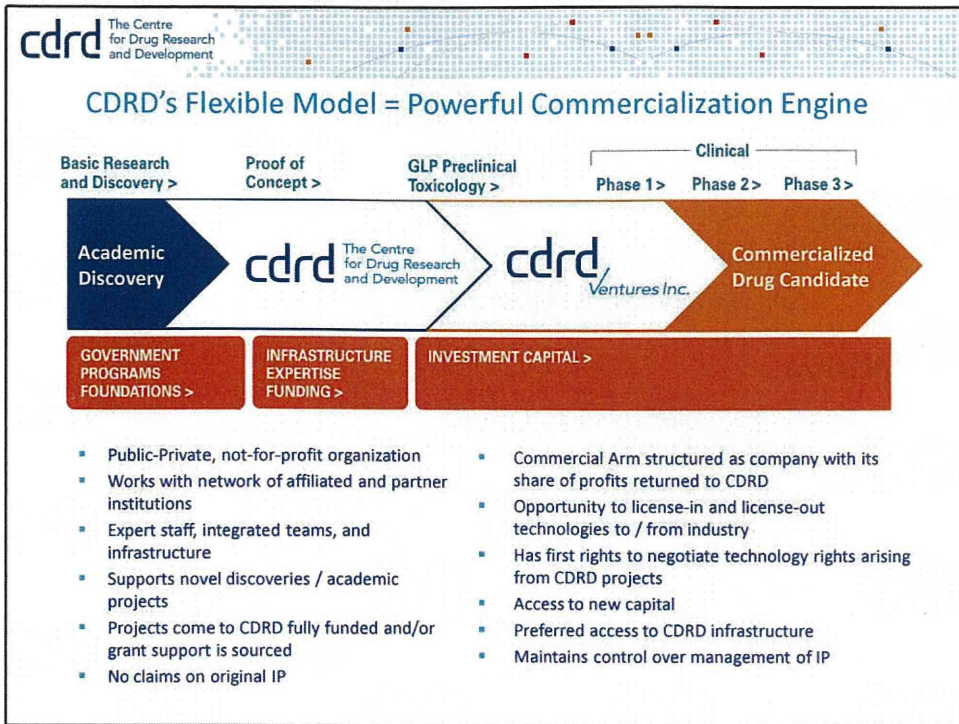
### Academia Needs

- Funding for proof-of-concept studies to the level required for validation
- Drug development and commercialization expertise
- Specialized equipment and resources such as screening facilities and libraries

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### Industry Needs

- Efficient access to innovative early-stage technologies
- An avenue to de-risk and validate those technologies
- Technology development to be managed by industry standards



## These Affiliated Institutions Feed CDRD's Project Pipeline

- Collaborate with principal investigators to identify projects
- Screened against rigorous scientific and business criteria for commercial potential
- Full drug development platform
- *Outcomes-focused drug development under professional project management is then undertaken.*



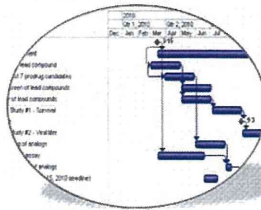
## CDRD's Key Success Factors

### Pipeline



- Extensive network of affiliate and partner institutions across Canada
- Dedicated search/evaluation team in targeted therapeutic areas
- Pipeline of novel targets / MOAs ("mechanisms of action")
- Expanding key strategic partnerships internationally

### Process



- High industry standards of project management applied to all CDRD projects
  - Clearly articulated go/no-go decision points
  - GANTT chart review of progress and budgets
- Rigorous commercial and scientific evaluation
  - Clear understanding of unmet medical need
  - Clinical input from KOLs
  - Development of target product profile
  - Identification of critical experiments
  - Development of technology and commercialization dossiers

### Partnerships



- Strategic Pharma Partners and Innovative Joint Development Funds



- Academic Institutions / Translational Centres / Centres of Excellence



- Local Biotech XENON



## Innovation and CVI Funds Raised with Partners



## CDRD Scientific Divisions



## Each With Access to Drug Development Platforms at CDRD and Partner Sites

- **CDRD headquarters** - UBC Campus
  - **CDRD animal facilities** - BC Cancer Agency and Centre for Disease Modeling, UBC
  - **CDRD scale-up chemistry laboratory** - Simon Fraser University
- 
- **Metabolomics Innovation Centre, Universities of Alberta and Victoria**
  - **Michael Smith Genome Sciences Centre, BC Cancer Agency**
  - **Eskitis Institute for Cell and Molecular Therapies, Griffith University (Natural Products Library)**
  - **Genome BC Proteomics Centre, University of Victoria**
  - **Centre for High-Throughput Biology, UBC**

## Project Selection

### Key requirements:

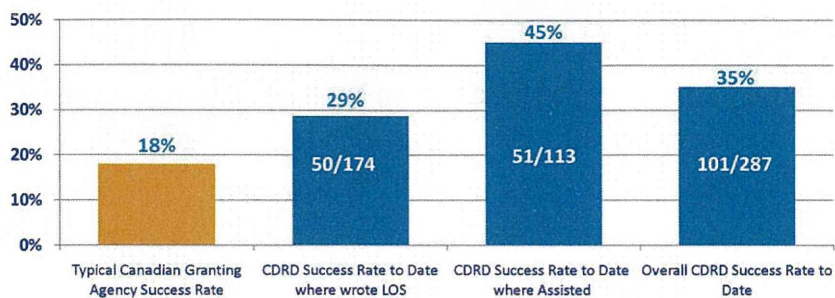
- ✓ Willing and engaged Principal Investigator(s)
- ✓ Excellent, innovative science
- ✓ The potential to address an unmet medical need
- ✓ The potential for a solid IP position
- ✓ The potential to be commercialized
- ✓ Critical question(s) / experiment(s) can be identified
- ✓ Fit with CDRD's capabilities and capacity
- ✓ Fit within the strategic vision of CDRD





## Grant Funding Success to Date

- Supported 287 grant applications that secured **a total of \$94M**
  - 35% overall success rate (101 successful applications)
  - Almost 2x the national average
  - 29% success rate where CDRD only supplied a letter of support
  - 45% success rate where CDRD played an active role in preparing the grant



## Benefits of Working with CDRD (PI Perspective)

- Access to infrastructure and expertise that complements PI
- Project results can enhance PI's ability to secure research grants
- Ability to leverage additional grant support, including non-traditional
- Provide students with greater learning opportunities
- Ability to continue to stay with technology as it advances towards commercialization
- Potential for greater return

## Benefits of Working with CDRD (Industry Perspective)

- One-stop, structured access to world class scientists and innovation pipeline in Canada and world-wide with access to:
  - NCEs
  - novel targets
  - novel mechanisms
  - validated data
  - discovery programs
- Transparency in use of funding and in progress of research
- Focused science with clear critical path to a product

## Benefits of Working with CDRD (Industry Perspective) cont'd

- De-risking of earlier-stage opportunities
  - Cost-effective use of resources, experience, and infrastructure
  - Value creation and risk sharing with minimal dilution to investors
  - Advantage of tax benefits/government incentives
  - Sophisticated management of projects that are milestone-driven and outcomes-focused
    - Timely interim reporting
    - Assembly of a final dossier/package to facilitate efficient technology transfer



## Highlights of Outcomes and Achievements to Date

### *Intermediates*

#### **Establishing Translational Research Infrastructure**

- ✓ Built 20,000 sq. ft. of lab space with state-of-the-art equipment

#### **Recruiting Talent**

- ✓ Attracted ~85 highly skilled personnel with strong industry experience

#### **Establishing and Expanding Provincial, National and International Affiliations**

- ✓ Established partnerships with 20+ affiliated institutions (4 continents)

#### **Building a Comprehensive Drug Development Platform for Small Molecules, and Building Competitive Advantage in Therapeutic Antibodies**

- ✓ Established new biologics platform to develop therapeutic antibodies

## Highlights of Outcomes and Achievements to Date

### *Endpoints*

#### **Advancing Project Development and Commercialization**

- ✓ Supported 80 technologies, engaged some 490 researchers
- ✓ Advanced 4 technologies to be out-licensed to the private sector or optioned by CDRD Ventures

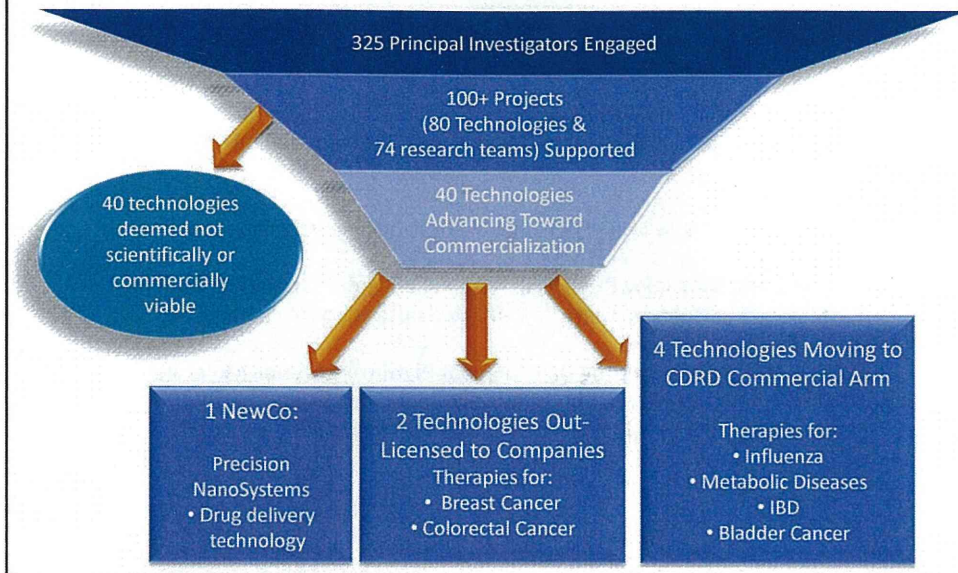
#### **Attracting Private Sector Investment to Canada**

- ✓ Attracted investment from top-tier global partners, Pfizer, Roche, J&J

#### **Addressing Shortage of Highly Qualified Personnel**

- ✓ Trained 83 Post-Doctoral Fellows, co-op students, and interns through our unique training program

## Advancing Projects Toward Commercialization



## CDRD's Unique Competitive Advantage

- Shared vision of government, industry and academia
- Commercialization as the single mandate – converting public investment in research into economic output and new therapies for patients
- National organization headquartered in BC, modernizing and innovating Canadian healthcare research
  - A Canadian Centre of Excellence for Commercialization and Research (CECR)
- Sole organization of its kind in Canada
  - The only fully-integrated centre with the expertise and infrastructure to source, evaluate, develop and commercialize new healthcare products
- Diverse number of global private and public sector partners
- Not-for-profit entity coupled with a commercial arm to support self-sustainability.

## In Conclusion...Factors for Success

People



Place



Projects



*Success requires an effective well-resourced interface between industry and academia with critical infrastructure, expertise and project pipeline.*

## Partnerships are Core to All of Our Success

The central logo is for **cdrr The Centre for Drug Research and Development**, with the text **Affiliates / Funders / Partners** below it. Surrounding logos include:

- UNIVERSITY OF CALGARY
- UBC
- THE UNIVERSITY OF BRITISH COLUMBIA
- SFU
- TEC Edmonton
- INNOVATE CALGARY
- Johnson & Johnson
- BC Cancer Agency CARE + RESEARCH
- University of Victoria
- ANGIOTECH
- MERCK
- COGAT
- uOttawa
- DALHOUSIE UNIVERSITY
- XENON
- QLT Inc.
- Pfizer
- McMaster University
- THOMPSON RIVERS UNIVERSITY
- BRITISH COLUMBIA
- Roche
- McGill
- Griffith UNIVERSITY Eskitis Institute
- NGDI ubc.ca
- LDC
- MaRS Innovation
- UNBC UNIVERSITY OF NORTHWESTERN BRITISH COLUMBIA
- Alberta
- PANAMP
- Canada
- Western Economic Diversification Canada
- VANCOUVER PROSTATE CENTRE
- Brain Research Centre
- Michael Smith Foundation for Health Research
- CIHR IRSC
- Women's Health Centre
- Provincial Health Services Authority
- Karolinska Institutet
- GenomeBritishColumbia
- Providence HEALTH CARE
- Vancouver Coastal Health
- CHILDREN'S HOSPITAL
- UNIVERSITY OF ALBERTA
- Canada Foundation for Innovation



**cdrd** The Centre  
for Drug Research  
and Development  
*Transforming Discovery into Opportunity*

For further information on The Centre for Drug Research and Development,  
please visit [www.cdrd.ca](http://www.cdrd.ca)

