



Canadian  
Partnership for  
**Tomorrow**  
Project



**Canada's Largest Population Health Cohort**

**Paula Robson, Ph.D. RNutr (UK)  
Ma'n H. Zawati, LL.B., LL.M.**

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# Objectives

To provide a high level overview of:

1. The Canadian Partnership for Tomorrow Project (CPTP)
2. Types of data and biosamples available for request from CPTP
3. The CPTP Portal that provides detailed descriptions of available data
4. The CPTP access process, and what CPTP can do to help you create an application to CIHR

# Population Health in Canada: Cancer and Chronic Disease

- Incidence of cancer and chronic diseases in Canada differs from other countries, and across the country
- Modifiable (e.g., diet, exercise, environmental exposure) and non-modifiable (e.g., genetic) risk factors likely contribute synergistically to disease, but how not fully known
- Understanding the complex interplay among risk factors requires access to large datasets, and is expected to lead to better prevention strategies, more effective treatments, and improved outcomes for Canadians

# Vision & Mission of the Canadian Partnership for Tomorrow Project (CPTP)



**Vision:** Improve population health through a better understanding of the causes of cancer and other chronic diseases.



**Mission:** To create and sustain a pan-Canadian population health platform that promotes and supports high quality, innovative population and health research.

# The Canadian Partnership for Tomorrow Project (CPTP)

- CPTP is Canada's largest cohort for health research
  - >**300,000** participants aged 30-74 years
  - A **variety** of biological samples
  - Longitudinal data collection strategy
- It will continue to add depth over time through planned enrichment:
  - Passive (e.g., linkage to administrative data)
  - Active (e.g., additional questionnaires, data derived from biosamples)

# CPTP: Regional Cohorts



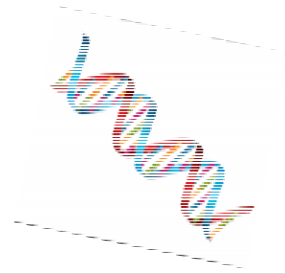
# CPTP: Resources


**CPTP is a versatile and powerful research platform that is poised to *grow* in value.**

**Its resources include:**

- A collection of harmonized data and biosamples
- Participant consent for use by *bona fide* researchers
- Participant consent for linkage with health administrative data
- Participant consent for re-contact and follow-up
- Access infrastructure to facilitate research

# CPTP: Data & Biosamples



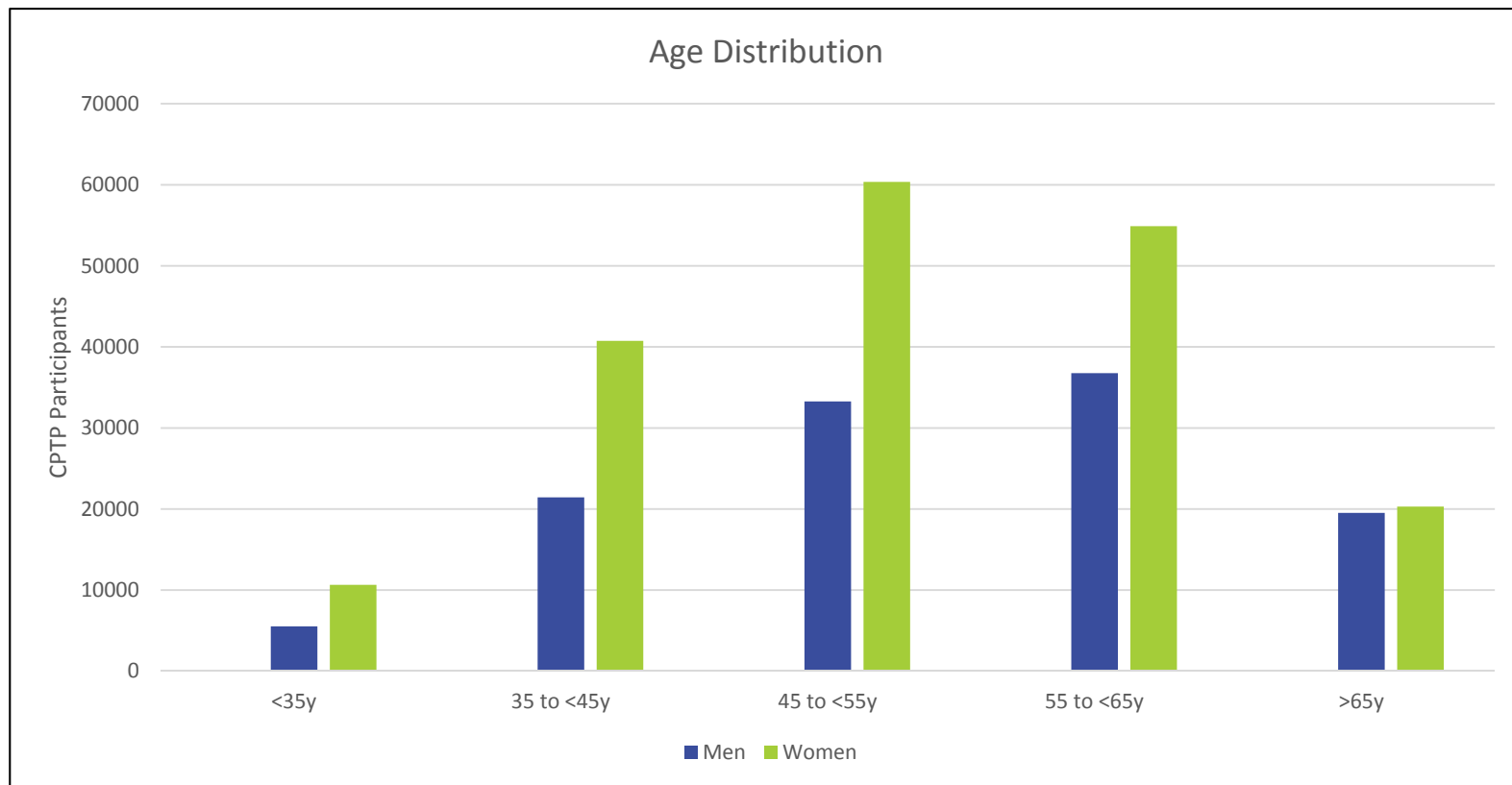
Questionnaire data	DNA containing samples	Physical measures	Urine samples	Toenail clippings
<ul style="list-style-type: none"> <li>• 303,432 participants</li> <li>• Demographics</li> <li>• Lifestyle</li> <li>• Risk factors</li> <li>• Health history</li> <li>• Follow-up questionnaires in progress</li> </ul>	<ul style="list-style-type: none"> <li>• Venous blood (144,264)</li> <li>• Blood spots (31,597)</li> <li>• Saliva (18,064)</li> </ul>	<ul style="list-style-type: none"> <li>• 90,954 participants</li> <li>• Height</li> <li>• Weight</li> <li>• Waist &amp; hip circumferences</li> <li>• Grip strength</li> </ul>	<ul style="list-style-type: none"> <li>• 101,379 participants</li> </ul>	<ul style="list-style-type: none"> <li>• 30,418 participants of Atlantic PaTH</li> </ul> 



# CPTP: Baseline Questionnaire Domains

- Demographics (incl postal code)
- Education
- Medical check ups and screening
- Women's reproductive health
- Personal medical history
- Use of prescribed medication (past year)
- Family health history
- Sleep
- Sun exposure
- Alcohol use
- Tobacco use and second hand smoke exposure
- Physical activity
- Ethnicity, country of birth (participant, parents, grandparents) and first language
- Employment – status, job title, business type, working schedule (shifts)
- Income
- Height, weight & waist/hip circumferences

# CPTP: Participant age and sex



# CPTP: Self-reported history of cancer and chronic disease

Individual Disease History	Total Reported (n, %)
Cancer	29228 (9.6%)
Diabetes	21949 (7.2%)
Hypertension	68697 (22.6%)
Stroke	3126 (1.0%)
Myocardial infarction	5993 (2.0%)
Arthritis	67588 (22.3%)
Asthma	36709 (12.1%)
Chronic hepatitis	1798 (0.6%)
Multiple sclerosis	1743 (0.6%)

## CPTP: Current enhancement initiatives

- Follow-up questionnaire (planned for early 2017)
  - updates on health history, use of prescribed medications, screening, alcohol, tobacco, e-cigarettes, demographics, weight, waist and hip circumferences
- MRI and additional environmental data on a subset (see Anand *et al*, BMC Public Health 2016)
- Genotyping on a subset
  - Affymetrix Axiom
- Sample analysis on a subset
  - Lipid panels, HbA1c, plus other markers

# Examples of large grants obtained for research using CPTP data & biosamples

- Two large CIHR grants awarded in 2015-16:
  1. Determining the genetic and environmental factors associated with metabolic phenotypes across Canada; \$1.93 million over 5 years (PIs: Awadalla P, Dummer T, Spinelli JJ)
  2. CANadian Urban Environmental (CANUE) Health Research Consortium; \$4.16 million over 5 years (PIs: Brook JR, Steib DM, Awadalla P, Brauer M, McGrail KM, Subbarao P)

# CPTP: Linkage with administrative health data

- Currently managed at the level of regional cohorts
- Working towards a CPTP wide strategy in the longer term
- CPTP Access Office can coordinate contact with regions to determine feasibility of studies using linked data (e.g. health services utilization, health outcomes etc.)

# CPTP Portal



The screenshot shows the CPTP Portal homepage. At the top right, there are links for 'News', 'EN FR', and 'Register | Log in'. The main navigation bar includes 'HOME', 'COHORTS', 'DATASETS', 'BIOSAMPLES', and 'ACCESS'. A blue banner below the navigation bar contains the text: 'The Canadian Partnership for Tomorrow Project (CPTP) Portal provides information to help the research community identify data and biosamples of interest to answer innovative research questions and request access to the CPTP resources.'

The main content area features four columns, each with an icon and a 'Read more' link:

- Cohort design**: Icon of a network diagram. Text: 'Find out more about the five regional cohorts of the CPTP. [Read more](#)'
- Datasets**: Icon of a downward arrow over a stack of papers. Text: 'Find out more about the CPTP datasets and data harmonization approach. [Read more](#)'
- Biosamples**: Icon of a flask with bubbles. Text: 'Find out more about the CPTP biosamples collection and its upcoming availability. [Read more](#)'
- Access**: Icon of a checklist with three checkmarks. Text: 'Find out more about the CPTP Access policies and procedures. [Read more](#)'

Below the columns, there is a 'Welcome to CPTP Portal!' message and a 'More information' section with links to the CPTP web site and the Access Office.

On the right side, there is a 'Data available (April 1, 2015)' section stating that researchers can request access to CPTP Health and Risk Factor questionnaire data (202,404 participants) and a link for more information. Below that is a 'Future data releases' section stating that data for additional participants will be made available in 2015-2016.

<https://portal.partnershipfortomorrow.ca/>

# CPTP Portal: Browse Datasets

## Datasets

 [Search Variables](#)

This first release of CPTP harmonized data includes information from Health and Risk Factor Questionnaires collected at baseline (307,830 participants) and comprises a total of 709 variables.

Additional data releases will include physical measures data and biosamples data.

### Data Harmonization

The CPTP datasets are generated using a rigorous harmonization process achieved in collaboration with Maelstrom Research. To learn about the harmonization methods and software used to harmonize data across the CPTP cohorts, click [here](#).

### Health and Risk Factor Questionnaire Data

CoreQx Release 1 questionnaire data collected at baseline (709 variables) – *Currently available*

### Physical Measures Data

Physical measures collected at baseline in evaluation clinics, including height, weight, waist and hip circumference, blood pressure and resting heart rate, body mass index (BMI), body composition, and grip strength – *Accessible at a later date in 2015-2016*

### Biological Samples Data

Data related to biosamples collected at baseline – *Accessible at a later date in 2015-2016*



# CPTP Portal: Browse Data

← Start searching by selecting a facet

**Variables (709)** 50 [dropdown] [filter icon]

Name	Label	Dataset
A_ADM_QX_COMPLETION	Date of questionnaire completion	CoreQx
A_ADM_QX_FORMAT	Questionnaire administration format	CoreQx
A_ADM_QX_LANGUAGE	Questionnaire administration language	CoreQx
A_ADM_QX_VERSION	Questionnaire version	CoreQx
A_ADM_STUDY_DATASET	Regional cohort dataset name	CoreQx
A_ADM_STUDY_ID	Regional cohort ID	CoreQx

Domains      Variables      Description

# CPTP Portal: Keyword Search

Areas of Information -

- ▼ Socio-demographic and economic characteristics
  - Other socio-demographic and economic characteristics 1
  - Marital/partner status 1
  - Residence 1
  - Sex/gender 1
  - Twin 1
- ▼ Lifestyle and health behaviours
  - Sleep 4
  - Tobacco 45
  - Physical activity 60
  - Other information on

[More](#)

Variables where Variables match Cancer

ⓘ Tips: click on a criteria to remove it, click on AND/OR to switch it.

Variables (200) 50 ▼ **Cancer** ⓘ

Name	Label	Dataset
A_DIS_CANCER1	Cancer 1: Type	CoreQx
A_DIS_CANCER1_AGE	Cancer 1: Age at first diagnosis	CoreQx
A_DIS_CANCER1_OTSP	Cancer 1: Type, other specify	CoreQx
A_DIS_CANCER1_TX	Cancer 1: Ever treated	CoreQx
A_DIS_CANCER1_TX_CHEMO	Cancer 1: Ever treated with chemotherapy	CoreQx

Search pulls up all variables tagged with cancer

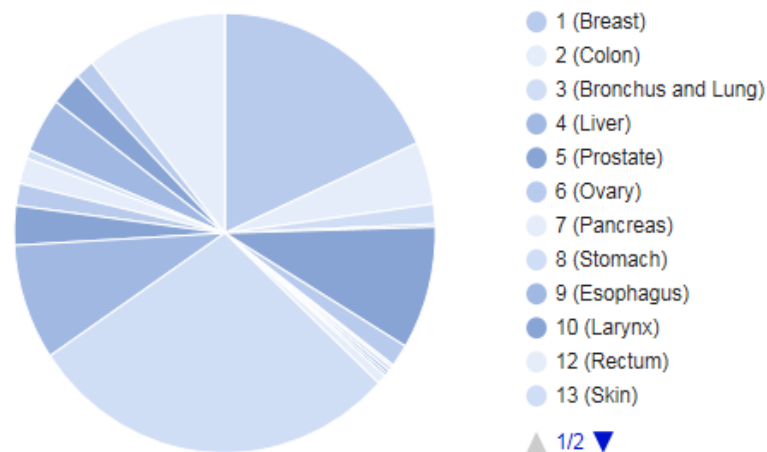
# CPTP Portal: Variable Information

## Statistics

Cumulative summary of all studies:

Value	Frequency
<b>Valid Values</b>	
1 Breast	5116 1.7% (18.3%)
2 Colon	1285 0.4% (4.6%)
3 Bronchus and Lung	407 0.1% (1.5%)
4 Liver	61 0.0% (0.2%)

Valid values frequencies



...including its relative representation in the cohort

# CPTP Portal: Area of information search

Areas of Information -

- ▼ Socio-demographic and economic characteristics
  - Other socio-demographic and economic characteristics 1
  - Marital/partner status 1
  - Residence 1
  - Sex/gender 1
  - Twin 1
  - More
- ▼ Lifestyle and health behaviours
  - Physical activity 60
  - Sleep 4
  - Tobacco 45
  - Other information on lifestyle 1
  - Nutrition 6
  - More
- ▼ Health status and functional limitations
  - Perception of health 1
- ▼ Diseases
  - Nervous system (G00-299) 9

Variables where Lifestyle and health behaviours is Physical activity

Tips: click on a criteria to remove it, click on AND/OR to switch it.

## Variables (60)

50

Name	Label	Dataset
A_PA_SIT_AVG_TIME_DAY	Average sitting time per day	CoreQx
A_PA_SIT_TIME_WKDAY	Average sitting time on week day	CoreQx
A_PA_SIT_TIME_WKEND	Average sitting time on weekend day	CoreQx
A_PA_TOTAL_SIT_TIME	Total sitting time per week	CoreQx
S_PA_CYCLING	Cycling MET-minutes/week for transport	CoreQx
S_PA_CYCLING_FREQ	Frequency of cycling for transport	CoreQx
S_PA_CYCLING_TIME	Average time of cycling for transport	CoreQx
S_PA_GARDEN_MOD	Moderate MET-minutes/week yard chores	CoreQx
S_PA_GARDEN_MOD_FREQ	Frequency of moderate activity doing garden or yard chores	CoreQx
S_PA_GARDEN_MOD_TIME	Average time of moderate activity doing garden or yard chores	CoreQx

Variables can be searched by theme

# ■ CIHR Grant

Call has three areas of focus:

1. Targeting High Fatality Cancers (cancers with a mortality rate/incidence rate of >75%)
2. Health Economics and Health Services Research in Cancer Control
3. Redressing Cancer Risk Factor Disparities and Prevention Service Inequities

# High Fatality Cancers

Based on 2015 Canadian Cancer Society Estimates\*:

Cancer Type	Incidence Rate (I)	Mortality Rate (M)	M/I
Pancreas	9.3	8.7	93.5
Esophagus	4.2	3.9	92.9
Lung	51.9	40.2	77.5
Brain/CNS	6.9	4.4	63.8
Stomach	6.6	3.9	59.1
Ovary	10.8	6.2	57.4
Multiple myeloma	5.1	2.6	51.0
Liver	4.4	2.2	50.0

\*Computed by G. Lockwood

# Health economics & health services research

- Participant consent permits linkage with administrative health data
- CPTP Access Office can coordinate contact with regions to determine feasibility of studies using linked data (e.g. health services utilization, health outcomes etc.)

# Risk factor disparities/prevention service inequities

- CPTP captures a range of data related to risk factors and screening behaviours
- Data could be paired with pre-existing indices of deprivation/socioeconomic inequality (6 digit postal codes allow geocoding)



# ■ The Access Process

- National Access Infrastructure
- Starting off
- How the process works
  - Feasibility/Queries
  - Access Application Process
- Placing an access request
- Supporting the CIHR grant

# Access Infrastructure to Facilitate Research

## National Access Infrastructure:

- Access Office:
  - Single point of contact for access requests
  - Aims to facilitate access while respecting the participants consent
  - Implements approved Access Policies and Procedures
- Independent Access Committee:
  - Accountable for requests approvals and oversight on access activities

# Starting off

The Canadian Partnership for Tomorrow Project (CPTP) Portal provides information to help the research community identify data and biosamples of interest to answer innovative research questions and request access to the CPTP resources.

## Cohort design



Find out more about the five regional cohorts of the CPTP.

[Read more](#)

## Datasets



Find out more about the CPTP datasets and data harmonization approach.

[Read more](#)

## Biosamples



Find out more about the CPTP biosamples collection and its upcoming availability.

[Read more](#)

## Access



Find out more about the CPTP Access policies and procedures.

[Read more](#)

**Welcome to CPTP Portal!** The portal includes comprehensive information on the cohort design, data harmonized across the five regional cohorts, collected biosamples, and CPTP access procedures.

## More information

Visit the [CPTP web site](#) to learn more about the Project.

For inquiries about data, biosamples and access, create a CPTP Portal [User account](#) to contact the [Access Office](#).

## Data available (April 1, 2015)

Researchers can request access to CPTP Health and Risk Factor questionnaire data (307,830 participants). Click [here](#) for more information on the CPTP harmonized datasets.

## Future data releases

Physical measures data and other types of data, as well as information related to biosamples, will be made available to the research community in 2015 – 2016 and as more data is collected and harmonized.

## Create an account

# Starting off

## My Access Requests

- My Access Requests
- Access Process

[+ New Access Request](#) [? Questions? Contact the CPTP Access Office](#)

Showing 0 to 0 of 0 entries

Search:

ID	Applicant	Title	Last Update	Submission Date	Status	Actions
No data available in table						

Initiate Access Requests directly online

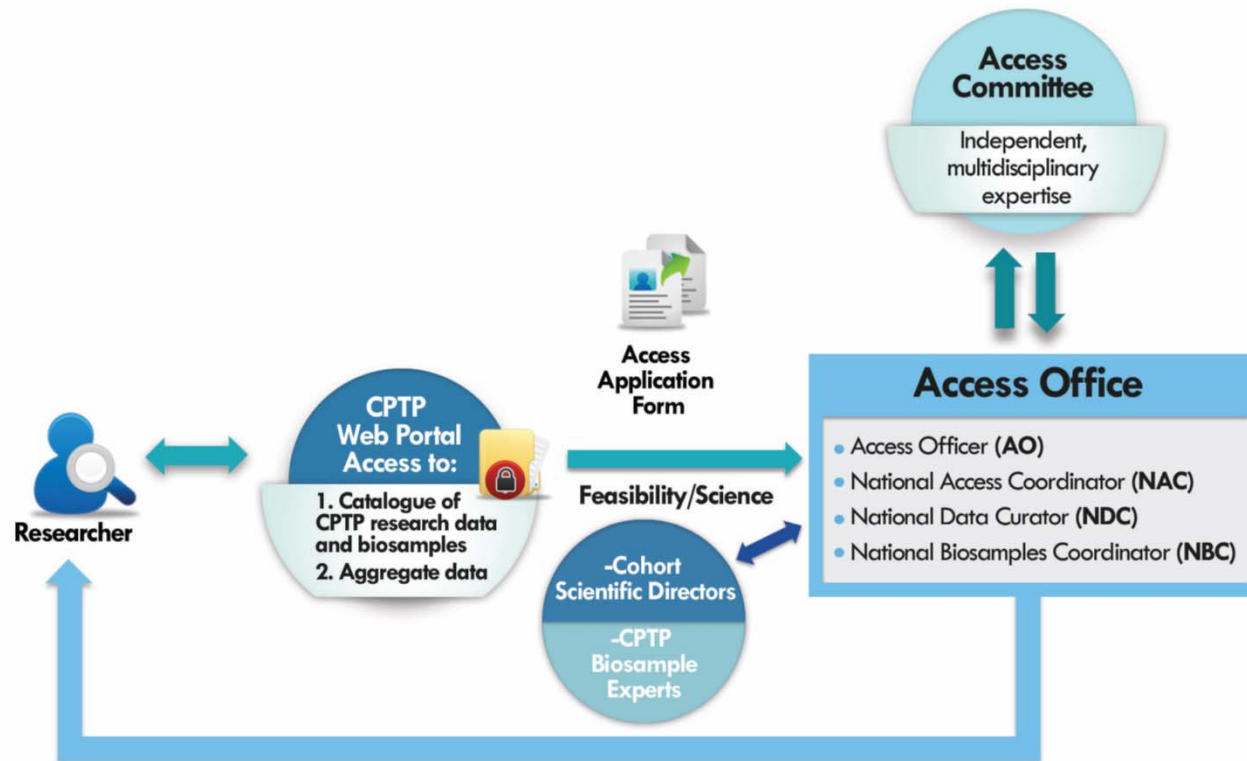
# How the Process Works: Feasibility/Queries

## CPTP FEASIBILITY QUERIES (PRIOR TO ACCESS APPLICATION)



# How the Process Works: Access Application Process

## CPTP ACCESS APPLICATION PROCESS



# Placing an Access Request

## My Access Requests

My Access Requests  
Access Process

[+ New Access Request](#)

Questions? [Contact the CPTP Access Office](#)

Showing 0 to 0 of 0 entries

Search:

ID	Applicant	Title	Last Update	Submission Date	Status	Actions
No data available in table						

# Placing an Access Request

## Access Request

### ◀ New Access Request

Cancel Save Validate

This application form is for requests for access to the controlled research data of the Canadian Partnership for Tomorrow Project (CPTP). To obtain access, applicants must complete this entire application form and attach the required documentation including: research protocol; proof of funding (e.g. decision letter from funding body), *if available*; proof of scientific peer-review, *if available*; decision letter from a Research Ethics Board and a 2-page CV of the principal applicant.

Upon approval of an access request by the Data Access Oversight Committee, access to CPTP research data will be granted for the timeframe agreed upon in the Data Access Agreement (starting from the date of signature of the Agreement). An Annual Report must be completed to access/use CPTP research data beyond a one-year period.

Moreover, the names, institutions, and lay summaries of the scientific abstracts of all Approved Users will be added to its publicly available access registry

[Contact Access Office](#)

## I - Contact and Research Project Information

### A. Name, institution, and contact details of the Applicant (Principal Applicant)

Please ensure that a full postal address and a valid institutional e-mail address are included. In case of more than one affiliation, applicants are asked to only provide their contact information pertaining to the institution they are affiliated with for the purpose of this research project.

Name \*

Title \*

Position \*

Institution \*

Institutional E-mail Address \*

Alternate E-mail Address

Telephone Number \*

Mailing Address \*



# Supporting the CIHR Grant

- The Access Office will review requests for Letters of Support to support grant applications.
- For submissions: [access@partnershipfortomorrow.ca](mailto:access@partnershipfortomorrow.ca)
- Documents needed: scientific background of your submission (extra information if biosamples will be needed).

# Supporting the CIHR Grant

- Elements that CPTP will be assessing:
  - Alignment with the Vision, Mission (slide 4) and Guiding Principles of CPTP;
  - The proposed study data variables and biosample type(s) are available from CPTP;
- A LoS does not guarantee access

# Supporting the CIHR Grant

- Guiding Principles of CPTP (from the Access Policy)
  - **Promoting the common good** by maximizing collaborative research for the benefit of all;
  - Ensuring the **generation of high quality research**;
  - Making data and biosamples available to the research community **to advance scientific knowledge**;
  - **Respecting the legal rights and legitimate interests** of all stakeholders involved (e.g. families, populations, researchers and funders);
  - **Protecting the privacy** of its Research Participants and the **confidentiality** of their data;

# Supporting the CIHR Grant

- Guiding Principles of CPTP (from the Access Policy) (continued):
  - Promoting **transparency, responsibility, interoperability and fairness**;
  - **Ensuring accountability and oversight**;
  - **Enriching the content of the CPTP database**, including through the **return of quality derived data** by researchers; and
  - Managing access to CPTP biosamples to **balance current and future needs**.

# Thank you

BC Generations Project

**Dr. Trevor Dummer  
Dr. Nhu Le**

Alberta's Tomorrow Project

**Dr. Paula Robson**

Ontario Health Study

**Dr. Philip Awadalla**

Atlantic PATH

**Dr. Louise Parker  
Dr. Trevor Dummer**

CARTaGENE

**Dr. Anne-Monique Nuyt  
Dr. Sébastien Jacquemont**

National Coordinating  
Centre

**Dr. Céline Moore**

ELSI

**Dr. Bartha Knoppers**

Data Harmonization

**Dr. Isabel Fortier**

Biosamples

**Dr. Anne-Marie Mes-Masson**

## CPTP Sponsors



# ■ Questions?

Data, biosamples or access related questions:  
[access@partnershipfortomorrow.ca](mailto:access@partnershipfortomorrow.ca)

CPTP Website: <http://www.partnershipfortomorrow.ca/>

CPTP Portal: <https://portal.partnershipfortomorrow.ca/>

Twitter: [@cptproject](https://twitter.com/cptproject)